Nepal Trade Integration Strategy 2010

Background Report

Government of Nepal
Ministry of Commerce and Supplies

Kathmandu
June 2010

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Government of Nepal
Ministry of Commerce And Supplies
SINGHA DURBAR
KATHMANDU, NEPAL

Foreword

Poverty alleviation and improvement in the living standard of people have remained prime agendas in the national development plans of Nepal since they were first launched in 1956. The development focus in the changing political and social settings relies on sustained and inclusive growth with wider participation of people from all segments of society. Export orientation of various sectors is very important to drive the economy to export-led growth and reach out to the rural population for sharing the benefits of trade. Recognizing the role of trade in economic growth, the Government of Nepal (GoN) brought out a new trade policy in 2009, which aims at making export trade competitive, pursuing, among others, the measures of product development, export promotion, and trade facilitation.

Nepal's exports growth remained below satisfactory level last decade despite continued efforts to harness benefits from the regional and multilateral trading systems. Major exportable items have witnessed sharp decline, thereby steadily raising the trade deficit. Political instability and continued conflict further eroded Nepal's export performance during the period. A silver lining in the deteriorated export performances can be traced in the ongoing peace and constitution-building process, which has unlocked prospects for building of New Nepal. However, to make it happen, the trade sector should get high priority on the country's development agenda. Hence, addressing the 'supply-side constraints' is imperative for achieving the desired economic growth through export orientation.

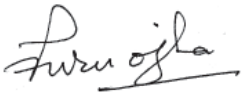
It is pertinent to note that the study undertaken for developing Nepal Trade Integration Strategy (NTIS) will create a base for the removal of the constraints and seize the opportunities of trade liberalization and integration of the Nepalese economy at regional and multilateral level. The NTIS 2010 is a follow-up to the earlier Nepal Trade and Competitiveness Study 2004, as substantial changes are taking place in the international trading regimes and the country has faced new challenges to streamline its trading practices. The accession of Nepal to the multilateral and regional trading systems during the mid 2000s has necessitated profound transformation of the trade sector in order to benefit from integration of the Nepalese trade and economy. The study charts out a course of action for the development of the country's export sector over the next three to five years, continued with capacity development actions and selected short- to medium-term priorities that are supportive of 'inclusive growth'.

I would like to thank the various institutions that put their sincere efforts to bring out this strategic document. The United Nations Development Programme, the Government of Finland, the UK's Department for International Development, the International Finance Corporation, and the International Trade Centre deserve special appreciation for their financial and substantive support in the preparation of the NTIS 2010. The private sector organizations and academia also deserve special appreciation for their support and feedback during the preparation of this strategy.

I am also thankful to all NTIS contributors and all the officials of the GoN who were involved in its preparation. Finally, I appreciate the hard work of my colleagues in this initiative, particularly Mr. Chandra Kumar Ghimire, Joint Secretary, Mr. Jib Raj Koirala, Under Secretary, Mr. Hemlal Devkota, Section Officer, MoCS, and Mr. Shiv Raj Bhatt, National Programme Manager of the Enhancing Nepal's Trade Related Capacity (ENTReC) Programme.

The GoN expects active participation of development partners, private sector organizations, and other stakeholders in the implementation of this strategy.

June 2010



(Purushottam Ojha)
Secretary

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Abbreviations and Acronyms

AAS	Atomic Absorption Spectrometer
AEC	Agro Enterprise Centre
AfT	Aid for Trade
ANROPI	Association of Nepalese Rice, Oil and Pulses Industries
APLAC	Asia Pacific Laboratory Accreditation Cooperation
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BoI	Board of Investment
BOPP	Bio- Oriented Poly-Propylene
BPO	Business Process Outsourcing
CB	Certification Body
CFB	Corrugated Fiber Board
CIS	Commonwealth of Independent States
CITES	International Convention on Trade in Endangered Species
CMMI	Capability Maturity Model Integration
CoC	Code of Conduct
CODEX	Usual designation given to the food standards setting body run jointly by the FAO and WHO
CoP	Code of Practice
CTC	Crush Tear Curl
DADO	District Agriculture Development Office
DDA	Department of Drug Administration
DFID	Department For International Development
DFTQC	Department of Food Technology and Quality Control
DoA	Department of Agriculture
DoB	Department of Botany
DoLS	Department of Livestock Services
EC	European Commission
EIA	Environmental Impact Assessment
EIF	Enhanced Integrated Framework
EMS	Environmental Management System
ENTReC	Enhancing Nepal's Trade-related Capacity
ESCAP	Economic and Social Council of Asia and Pacific
EU	European Union
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FEC	Forward exchange contract
FHAN	Federation of Handicraft Association of Nepal
FNCCI	Federation of Nepalese Chamber of Commerce and Industry
FNCSI	Federation of Nepal Cottage And Small Industries
FOS	Food Safety
FSC	Forest Stewardship Certificate
FTE	full-time equivalent
GAP	Good Agricultural Practice
GC/MS	Gas Chromatography and Mass Spectrometry
GDP	Gross Domestic Product
GI	Galvanised Iron
GIs	Geographical Indications
GMPs	Good Manufacturing Practices
GoN	Government of Nepal
GTZ	Gesellschaft für Technische Zusammeenarbeit (German Aid)
HACCP	Hazard Analysis and Critical Control Point
HDPE	High Density Polyethylene
HIMCOOP	Himalayan Tea Producers Co-operative Ltd.
HMF	hydroxy methyl furfural
HOTPA	Himalayan Orthodox Tea Producers' Association Nepal
HPLC	High Pressure Liquid Chromatography
HS	Harmonized System
IEC	International Electric Commission
IEE	Initial Environmental Evaluation
IFC	International Finance Corporation
IFEAT	International Federation of Essential Oils and Aroma Trade
IFOAM	International Federation of Organic Agriculture Movements
ILO	International Labour Organization
IP	Intellectual Property
IPM	Integrated Pest Management
IPPC	International Plant Protection Convention
IPR	intellectual property rights
ISEAL	International Social and Environmental Accreditation and Labeling
ISI	Indian Standards Institute
ISO	International Standards Organization
IT	Information Technology
ITC	International Trade Centre
JABAN	Jadi Buti Entrepreneurs Association of Nepal
JICA	Japan International Cooperation Agency
LCEAN	Large Cardamom Entrepreneurs Association
LDCs	Least Developing Countries
LDPE	Low Density Polyethylene

LoD	Limit of Detection
M&E	Monitoring and Evaluation
MFA	Multi-Fibre Agreement
MFSC	Ministry of Forests and Soil Conservation
MoAC	Ministry of Agriculture and Cooperatives
MoCS	Ministry of Commerce and Supplies
MoEST	Ministry of Environment, Science and Technology
MoFSC	Ministry of Forests and Soil Conservation
MoFSC-ED	Ministry of Forests and Soil Conservation, Environment Division
MoH	Ministry of Health
MoHFP	Ministry of Health and Family Planning
MoI	Ministry of Industry
MoICS	Ministry of Industry, Commerce and Supplies
MRLs	Maximum Residue Levels
NARC	Nepal Agricultural Research Council
NASSA	National Association for Sustainable Agriculture, Australia
NBF	Nepal Business Forum
NBSM	Nepal Bureau of Standards and Metrology
NDF	Nepal Development Forum
NDP	Nepal Development Plan
NEPLAS	Nepal Laboratory Accreditation Scheme
NGO	Non-Governmental Organization
NIAs	National Implementation Arrangements
NIU	National Implementation Unit
NR	Nepalese Rupee
NS	Nepal Standard
NSC	National Steering Committee
NSC	Nepal Standards Council
NTBs	Non-Tariff Barriers
NTCDB	National Tea and Coffee Development Board
NTDA	National Tea Development Alliance
NTFP	Non Timber Forest Products
NTIS	Nepal Trade Integration Strategy
NTPA	Nepal Tea Planters Association
ODA	Overseas Development Assistance
OECD	Organization of Economic Cooperation and Development
OIE	Office International des Epizooties (World Organization for Animal Health)
PACT	Project for Agriculture Commercialization and Trade
PCE	Phytosanitary Capacity Evaluation
PCR	Polymerase Chain Reaction
PE	Polyethylene
PET	Polyethylene tetraphthalate
PFA	Prevention of Food Adulteration
POPs	Persistent Organic Pollutants
PP	Poly propylene
PPD	Plant Protection Directorate
PRA	pest risk assessment
PRP	Pre Requisite Programs
PTB	Physikalisch-Technische Bundesanstalt (the National Metrology Institute of Germany)
PVA	Polyvinyl acetate
PVC	Polyvinyl chloride
PVS	Performance of Veterinary Services
QI	Quality Infrastructure
QMS	Quality Management System
R&D	Research and Development
RoOs	Rules of Origin
RTA	Regional Trade Agreement
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asian Free Trade Area
SEZ	Special Economic Zone
SMTQ	Standards, Metrology, Testing and Quality
SNV	Netherlands Development Organization
SPS	Sanitary and Phytosanitary Standards
TAHC	Terrestrial Animal health Code
TBT	Technical Barriers to Trade
EP	Enquiry Point
TEPC	Trade and Export Promotion Centre
TIA	Tribhuvan International Airport
TPC	Third Party Certification
TRIPS	Trade-Related Intellectual Property Rights
TRTA	Trade-Related Technical Assistance
TSIs	Trade Support Institutions
TSN	Trade Support Network
UAE	United Arab Emirates
UK	United Kingdom
UN/ESCAP	United Nations/Economic and Social Commission for Asia and Pacific
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
US$	United States Dollar
USA	United States of America
USAID	United States Agency for International Development
WAHID	World Animal Health Information Database
WB	World Bank
WHO	World Health Organization
WTO	World Trade Organization

EIF National Steering Committee

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Secretary, Ministry of Foreign Affairs	Member
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Member Secretary, Secretariat of the National Planning Commission	Member
Deputy Governor, Nepal Rastra Bank	Member
President, Federation of Nepalese Chambers of Commerce and Industries	Member
President, Confederation of Nepalese Industries	Member
President, Nepal Chamber of Commerce	Member
Joint Secretary, Planning & International Trade Cooperation Division, MoCS	Member Secretary
Representative, UNDP Nepal-EIF Donor Facilitator for Nepal	Invitee Member

Agencies and Individuals Consulted

National Planning Commission, Ministry of Finance, Ministry of Agriculture and Cooperatives, Ministry of Industry, Ministry of Tourism and Civil Aviation, Ministry of Labour and Transport Management, Ministry of Information and Communication, Ministry of Law and Justice, Ministry of Education, Ministry of Health and Population, Ministry of Forest and Soil Conservation, Ministry of Federal Affairs, Constituent Assembly, Parliamentary Affairs and Culture, Ministry of Energy, Nepal Rastra Bank, Office of Attorney General, Nepal Bureau of Standards and Metrology, Department of Industry, Department of Food Technology and Quality Control, Department of Commerce, Department of Customs, Federation of Nepalese Chambers of Commerce and Industries, Confederation of Nepalese Industries, Nepal Chamber of Commerce.

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Chapter 1
Trading Environment, Export Potentials and Attractive Markets

NTIS 2010

1.1 Introduction

With more than 30 per cent of Nepal's population living below the poverty line and despite recent improvements, poverty reduction remains the greatest challenge for national development. Poverty reduction will require 'inclusive growth', which is predicated in part on improvements in political stability and governance. But 'inclusive growth' is itself a prerequisite to consolidating peace and security.

Using a broad definition of exports, to include not only export of goods and services, as traditionally measured, but export of labour services (captured under 'remittances') as well, the value of exports in 2008 was close to 45 per cent of GDP, with remittances representing three-fifths of the export base so defined (more on this below). This number points to the very high degree of trade integration of the Nepalese economy. Looking forward, it also points to the fact that future trade integration and expansion have to be one of the key drivers of 'inclusive growth' in Nepal. 'Building a New Nepal' will require generating new jobs and new income for all, and most importantly among the most disenfranchised populations and regions. Nepal's strategy for the development of its export sector over the next five to ten years must be geared at meeting this pressing need for inclusive growth.

Nepal Trade Integration Strategy 2010 (NTIS 2010) charts a possible course for the development of the country's export sector over the next three to five years, together with possible **capacity development Actions** and selected **short- to medium-term priorities** that are supportive of 'inclusive growth'. It is the product of an effort led by the Ministry of Commerce and Supplies (MoCS), with financial and substantive support from the United Nations Development Programme (UNDP), the Government of Finland, the United Kingdom's Department for International Development (DFID), the International Finance Corporation (IFC), and the International Trade Centre (ITC).

NTIS 2010 is a follow-up to the earlier *Nepal Trade and Competitiveness Study 2004*, which, in a like manner, sought to identify priority actions for the mid and late decade. The 2004 study was prepared at a time when domestic and international conditions were quite different. When the study was completed, Nepal was not yet a member of the World Trade Organization (WTO) and, surely, the mid and late decade turned out to be a period of profound transformation for the country to an extent no one could have predicted.

Finally, *NTIS 2010* is a critical building block in the Government of Nepal's (GoN) effort to strengthen its ability to coordinate and manage Trade-Related Technical Assistance (TRTA) and Aid for Trade (AfT) by implementing the mechanisms of the Enhanced Integrated Framework. Objectives and Actions identified in *NTIS 2010* will be closely aligned with those identified in Nepal's forthcoming three-year Development Plan. In addition, once adopted by the GoN (Council of Ministers), the Strategy will serve as a single, shared strategy to guide the efforts of the GoN, the Nepalese private sector, development partners (DPs) and all other stakeholders to develop an 'inclusive' trade sector for the future.

1.2 Four Capacity Development Objectives

Building a successful, competitive export sector in Nepal will require addressing four major challenges at once:

1. Ensuring proper market access. Increasingly, this will require Nepalese negotiators to address issues related to non-tariff barriers (NTBs) and related regulatory and business environment issues that may affect Nepalese exports in importing markets. The importance of tariff negotiations will continue to decline as tariffs shrink for goods and are not relevant for fast growing service exports;
2. Building domestic support institutions that can create a more friendly business environment and help Nepalese exporters address the challenges of NTBs;

3 Taking steps to strengthen the supply capacity of exporters, especially in sectors where they can enjoy a competitive advantage, be it in terms of production costs, quality of products, and/or productivity;
4 Mobilizing Overseas Development Assistance (ODA) to assist in developing pertinent capacity.

NTIS 2010 identifies four objectives to respond to these capacity development challenges for the coming years:

1 **Objective 1: Strengthen trade negotiations (especially bilateral).** The study identifies 19 possible priority export potential sectors—goods and services—and priority attractive markets for such export potentials. Nepalese trade negotiators need to ensure that proper market access conditions for such export potentials prevail in their respective attractive markets. Bilateral market access negotiations are likely to be required in quite a few cases, though negotiations with and within regional groupings are also likely to play an important role. Some strengthening of policy research capacity especially in relation to trade negotiations may be required.

2 **Objective 2: Strengthen the technical capacity of domestic non-tariff barrier (NTB) and other business environment supportive institutions.** Building a competitive, exportable supply capacity of goods and services from Nepal is becoming increasingly dependent upon the ability of the country's producers to meet the NTB market entry requirements of importing countries. Doing so requires putting in place a supportive domestic support infrastructure in a number of trade-related areas. Specific such areas covered by the study include investment environment, trade facilitation, technical standards, sanitary and phytosanitary standards, intellectual property rights, and domestic service regulations.

3 **Objective 3: Strengthen the export capacity of 'inclusive' export potential goods and services.** Nepalese policymakers might want to prioritize their attention on the 19 goods and services sectors identified as potential export sectors and ensure their success in their current or potential attractive destination markets. Doing so may require deepening the individual sector analyses presented in the NTIS and ensure those sectors benefit from proper sector-specific supportive measures. This, in turn, suggests that the Government's and private sector's initial focus under Objectives 1 and 2 will also need to target areas of trade negotiations, trade-related policy reform, or NTB institution-building that are most immediately pertinent to supporting those export potentials.

4 **Objective 4: Strengthen GoN's capacity to coordinate and manage Trade-Related Technical Assistance (TRTA) and Aid for Trade (AfT) and to implement NTIS.** Progressing on Strategic Objectives 1, 2, and 3 will require resources from both the GoN and DPs. Under the terms of the 2005 Paris Declaration on Aid Effectiveness and the 2008 Accra Agenda for Action, much of the leadership for aid coordination and management is being shifted to the governments of beneficiary countries. This applies to TRTA and AfT as well. MoCS, on behalf of the GoN, needs to put in place a set of 'implementation arrangements' that will assist in formulating projects in support of the NTIS' objectives, in securing, coordinating, and managing TRTA resources, and in monitoring results. MoCS has secured resources from the Enhanced Integrated Framework's Tier 1 funding to support the establishment of such arrangements. Coordination and management of aid in the trade sector are quite complex as they involve not simply coordinating and managing with and among DPs but also among various line Ministries and agencies directly or indirectly involved in trade development. Experience from other least developed countries (LDCs) suggests that the shift to the new paradigm of aid coordination and management requires a large amount of capacity-building in the new implementation arrangements and that this need should not be underestimated.

These four Objectives are each supported by a set of Capacity Development Actions discussed in the next section.

1.3 Capacity Development Actions and Proposed Short- to Medium-term Priorities

Actions identified by the NTIS team to support the four capacity development objectives are consolidated in the Action Matrix (Part I and Part II) presented in this study immediately after Chapter 12 and reproduced in the Executive Summary as well.

As suggested by the Action Matrix, the business of developing a competitive export supply for the future can be wide-ranging and demanding. Many areas of capacity development are needed. But capacity development takes time and can be resource (human and financial) -intensive. Furthermore, the resources needed to develop capacity–be they domestic or from ODA–are limited, and their use must be prioritized. The multiplicity of required actions may lead to confusion as to where to begin. And the risk is that confusion may lead to inaction. And, yet, policymakers are under pressure to respond to short-term needs of income and job creation.

Ultimately, it is for Nepalese policymakers to chart a course through a rather rich agenda of actions, weighing in some of those factors and others as well. Nevertheless, the background studies prepared under the NTIS do suggest a possible short- to medium-term strategic course that would prioritize some key actions or areas of actions, as follows:

1. Nepal should focus its short- to medium-term efforts on the proposed list of 19 export potential goods and services--and among those, possibly even more so, on the groups of agro-food exports and service exports;

2. Nepalese trade negotiators should take deeper knowledge of the attractive destination markets identified for each of the 19 export potentials in the NTIS and ensure favourable market access conditions in those markets. In most cases, this would include enhanced bilateral negotiations (possibly regional also). An appropriate agenda for such would need to be developed, with supportive analytical work as required. India, other SAARC countries, China, selected Gulf and Middle East countries should be priority targets;

3. Efforts to build a competitive export supply capacity in agro-food could focus initially on setting up a number of Good Agricultural Practice (GAP), Integrated Pest Management (IPM) and Quality Management System (QMS) in selected agricultural commodities to be accompanied by Third Party Certification (TPC) programmes to enhance the quality and quantity of supply and lower the current burden of Sanitary and Phytosanitary (SPS) certification for exports. NTIS 2010 proposes four sectors that could become initial targets for such programmes: tea, lentils, cardamom, and ginger. Such efforts could be supported by the introduction of Geographical Indications (GIs) for some of those commodities. Progress on regulations under the new Plant Protection Act, on amending the current Food Act, on reviewing the Pesticides Act and Pesticides Rules should also be accelerated;

4. The creation of a Board of Investment should be accelerated. Nepal is missing out on opportunities to attract FDI, including the FDI aimed at potential export sectors. There should be some alignment between targeted sectors for investment campaigns and potential export sectors promoted under the NTIS;

5. Except for the businesses located in Kathmandu valley, trade information and trade support services trickle down rather poorly to businesses in most regions, including those in the export potential sectors that should be targeted. A Trade Support Network (TSN) should be organized and developed with an initial strong focus on building the capacity of product associations in the export potential sectors. A re-definition of Trade and Export Promotion Centre's (TEPC) functions and mission and its restructuring should be accelerated as part of this effort;

6. To further build up export potential in the services sectors, efforts could focus on consolidating the gains from export of temporary labour services, including through strengthened agreements with labour importing countries, as well as capturing opportunities to move up the value chain by expanding supply capacity in the areas of information technology (IT) and business process outsourcing (BPO) services, engineering services, education and health services. This could be done by implementing a number of the recommendations suggested in the individual profiles for those sectors. These efforts should be deployed in addition to the efforts currently underway in tourism, including Nepal's 2011 Year of Tourism campaign--a critical component of Nepal's export base. Establishment of a 'service export champion', currently sorely lacking, should also be considered;
7. Nepal Business Forum should be established as soon as possible and its proposed Trade Sector Working Group used as an accountability mechanism for the GoN and the Nepalese business sector to monitor the implementation of the NTIS and the effectiveness of its results;
8. Mechanisms for strengthened coordination and management capacity of AfT and TRTA should be put in place in the GoN to ensure more effective mobilization and management of the ODA resources for trade. Commitment of the GoN to the NTIS objectives should be reflected in the forthcoming Nepal Development Plan (NDP) and Nepal Development Forum (NDF) and endorsed by the Council of Ministers. NTIS should be recognized by the GoN, the Nepalese business sector and DPs as a shared strategy to be used as a basis for future technical assistance support.

Initial actions that could be prioritized to support this short- to medium-term strategic course are highlighted in YELLOW in the action matrix.

1.3 Background. The 2000s: A Decade of Change

The decade just ending has been witness to a profound transformation in Nepal's trade sector, one resulting partly from extensive changes in the terms of global trade and partly from the political crisis that affected the Nepalese society during the mid-2000s.

Successive rounds of trade liberalization under the aegis of the World Trade Organization (WTO), including the end of the Multi-Fibre Agreement (MFA), extensive bilateral and regional trade liberalization, the emergence of Asia as a driving force in world trade–both as exporter and as importer, the opening of the Middle-East and Gulf markets, or even the most recent opening of the Confederation of Independent States (CIS) countries and African markets are creating new trading opportunities every day. At the same time, domestic political challenges have put extreme pressure on a number of traditional Nepalese exports, especially those of semi-processed or processed goods dependent on tariff preferences, requiring access to an organized labour force, steady supply of energy, and reliable transport. And yet, despite it all, Nepalese entrepreneurs have discovered new opportunities for export of both goods and services, possibly some that are less affected by civil unrest, troubled labour relations, or energy shortages.

Tables 1.1 and 1.2 capture some of the major shifts that have been underway during the closing decade. In terms of exports, table 1.1 shows the growing importance of traditional services and labour services ('remittances') in Nepal's export basket.[1] In terms of imports, Nepalese policymakers have become increasingly concerned about the growing trade deficit in goods. From a Balance of Payment's (BoP) current accounts perspective, however, Nepal has roughly been in balance in recent years due in no small part to the fast-growing remittances of temporary Nepalese migrant workers.

[1] Central Bank statisticians view 'remittances' as 'transfers', not exports or imports. The real issue in classifying remittances properly stems from the lack of robust statistical survey instruments to distinguish remittances of temporary migrant workers from remittances of foreign residents. The former represent sales of a service by a resident (in this case, a resident of Nepal) to a non-resident and falls, *stricto sensu*, within the definition of an export regardless of whether the production and sale of that service take place in Nepal or abroad. Sale of a service by the latter (in this case a Nepali who is a legal resident of another country) is not an export and should indeed be counted as a transfer. In the case of Nepal, it can safely be assumed that a large share of remittances is of the first kind.

Table 1.1

Balance of Payments, Current Accounts, 2002/03-2008/09, in US$ millions

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	% change 2002-08
Goods exports, fob	655	751	106	854	876	958	913	39.3
Service exports	342	467	362	368	457	653	690	101.6
Net remittances	699	797	913	1,357	1,427	2,205	2,738	291.4
Total	1,697	2,015	1,381	2,578	2,759	3,816	4,340	155.8
Goods imports, cif	1,562	1,808	2,057	2,383	2,713	3,369	3,645	133.4
Service imports	251	343	390	448	576	824	826	229.0
Total	1,813	2,152	2,448	2,831	3,289	4,193	4,472	146.6
Source: Nepal Rastra Bank, Annual Reports								
Other net transfers (small) not shown								

Table 1.2 shows changes that have occurred in the basket of exported goods. Garment exports, which in 2004 still represented 26 per cent of all goods exports (though already in sharp decline from earlier years), were down to 11.5 per cent by 2008. Only a few HS-6 items have survived or even prospered in that sector (e.g. *pashmina*, wool products) in view of sharp changes in market access conditions. Carpets, a traditional Nepalese export, also have been sharply affected by the changing conditions. And yet new goods export sectors have emerged during the period, including iron and steel products, plastic articles, coffee-tea-spices, and vegetables.

Table 1.2

Main Nepalese Goods Exports, 2004-08, in US$1,000 by HS-2, HS-4 and HS-6 Codes

Product	HS-codes	Exported value 2004	Exported value 2008	Share 2008	% Annual Growth 2004-08
All goods exports		681,380	962,459	100.0%	9.0%
Shown here		564,755	850,860	88.4%	10.8%
Iron and steel products	72, 73	27,581	149,430	15.5%	52.6%
Carpets	57	105,645	116,776	12.1%	2.5%
Garments	61, 62	178,408	110,162	11.4%	-11.4%
Pashmina	621410, 621420, 621490, 630120	18,691	22,074	2.3%	4.2%
Wool products	611011, 611012, 611691,611710, 650590	9,411	16,450	1.7%	15.0%
Plastics and articles thereof	39	37,039	66,057	6.9%	15.6%
Artificial staple fibres	55	25,118	52,457	5.5%	20.2%
Coffee, tea, spices	09	19,797	47,718	5.0%	24.6%
Large cardamom	090830	11,699	21,329	2.2%	16.2%
Tea	0902	4,896	16,805	1.7%	36.1%
Ginger	091010	2,518	8,130	0.8%	34.0%
Vegetables	07	Not available	Not available		
Lentils	071340	22,884	22,258	2.3%	-0.7%
Textile articles, sets, worn clothing, etc.	63	12,426	29,073	3.0%	23.7%
Copper and articles thereof	74	12,605	27,248	2.8%	21.3%
Beverages, spirits and vinegar	22	9,227	26,783	2.8%	30.5%
Artificial filaments	54	9,682	25,643	2.7%	27.6%
Animal, vegetable fats and oils, cleavage products, etc.	15	21,403	22,899	2.4%	1.7%
Essential oils, perfumes, cosmetics, toiletries	33	32,670	15,623	1.6%	-16.8%
Essential oils, nes	330129	259	1,001	0.1%	40.2%
Miscellaneous chemical products	38	4,896	14,672	1.5%	31.6%
Aluminium and articles thereof	76	5,961	14,624	1.5%	25.2%
Wadding, felt, nonwovens, yarns, twine, cordage, etc.	56	10,088	14,165	1.5%	8.9%
Residues, waste of food industry, animal fodder	23	5,576	13,783	1.4%	25.4%
Animal feed preparations, nes	32	3,681	12,199	1.3%	34.9%
Vegetable textile fibres, nes, paper yarn, woven fabric	53	15,563	11,894	1.2%	-6.5%
Instant noodles	1902	2,955	10,390	1.1%	36.9%
Electrical, electronic equipment	85	6,709	10,309	1.1%	11.3%
Pearls, precious stones, metals, coins, etc	71	7,619	10,252	1.1%	7.7%
Other export potential goods					
Medicinal herbs (combined with essential oils in other tables)	121190	1,604	2,991	0.3%	16.9%
Handmade paper (shown data do not cover all exports; see text)	481210	711	561	0.1%	-5.8%
Honey	0409	49	14	0.0%	-26.9%

Source: ITC, Trade Map 2004, 2008

Yellow highlights show potential export products included in the export potential assessment at HS-6 level. All data other than those for lentils are 'mirror data' (Nepal's export data). For more detailed HS-6 Code data, see the full report.

Changes in the Nepalese goods export basket have been accompanied by a change in destination markets. Table 1.3 shows the 20 largest importing markets of Nepalese goods. Besides the dramatic rise in the importance of the Indian market for Nepalese exports, the table shows the declining (or slow growing) importance of traditional 'Northern' export markets—EU, US especially—and the growing importance of new markets, especially those of the Asian and the Middle East and Gulf regions.

Table 1.3

Nepalese Goods Exports by Destination, 2004 and 2008, in US$1,000

No.	Importing Country	2004 Goods Import from Nepal	2004 % share of total	2008 Goods Imports from Nepal	2008 % share of total	% Annual Growth 2004-08
	Total	684,209		953,637		
1	India	342,883	50.1	632,095	66.3	15.5
2	EU	128,260	18.7	127,349	13.4	-0.2
3	USA	156,140	22.8	92,302	9.7	-12.3
4	Canada	11,328	1.7	14,559	1.5	6.5
5	Turkey	4,532	0.7	14,412	1.5	33.5
6	Japan	7,570	1.1	11,229	1.2	10.4
7	Switzerland	7,768	1.1	6,767	0.7	-3.4
8	China	8,231	1.2	5,983	0.6	-7.7
9	UAE	434	0.1	5,011	0.5	84.3
10	Egypt	0	0.0	4,782	0.5	very large
11	Australia	1,706	0.2	4,204	0.4	25.3
12	Philippines	15	0.0	3,647	0.4	294.9
13	Sri Lanka	78	0.0	3,566	0.4	160.0
14	Hong Kong	1,238	0.2	3,426	0.4	29.0
15	Sudan	8	0.0	3,350	0.4	352.4
16	Singapore	2,558	0.4	3,264	0.3	6.3
17	Bhutan	0	0.0	2,975	0.3	very large
18	Malaysia	282	0.0	1,975	0.2	62.7
19	Pakistan	3,710	0.5	1,450	0.2	-20.9
20	Mexico	986	0.1	1,419	0.1	9.5

Source: ITC Trade Map

Blue: 30% or more increase; Yellow: decline

1.4 Export Expansion and 'Inclusive' Growth

An expansion of Nepal's export base offers considerable opportunities to promote 'inclusive growth'.

A simulation exercise carried out in *Nepal Trade Competitiveness Study*[2] shows that growth in manufacturing and export sectors, which account for a reasonable portion of Nepal's current export basket, can have potentially significant, positive effects on the urban poor. Perhaps even more importantly, a switch from traditional subsistence agriculture to high value tradable crops (such as spices, herbs, tea, fruits, and vegetables, as identified later in this study) could have a major impact on the poor. These crops are produced in different regions; spice such as ginger production is more evenly distributed, except in far-western areas,

[2] Ministry of Industry, Commerce and Supplies, 2004

while cardamom is mainly produced in the eastern hills; tea is also produced mainly in the eastern areas; and fruit and vegetables production is spread throughout, though it is concentrated in the rural hills and the Terai. Accordingly, growth of these crops can have varying, positive regional effects.

Remittances from export of labour export are quite inclusive and can have strong potential to reduce poverty in Nepal. The incidence of remittances from labour export services abroad is widely distributed across the geographic regions and castes of Nepal (Table 1.4). The incidence of remittances in 2003/04 is higher in rural than urban Nepal. Among rural areas, the incidence of remittances is the highest in rural west mountain/ hills, followed by rural western Terai, rural eastern Terai, and rural eastern mountain/hills. The share of households receiving remittances from abroad also has increased uniformly across the country. For example, between the mid 1990s and the mid 2000s, the rural eastern hills--the poorest region in Nepal--registered a fourfold increase in the number of households receiving money from abroad. That same proportion more than doubled in 'other urban areas' of Nepal.

Looking at the proportion of households receiving remittances by caste, Dalit (the so-called lowest castes in the Hindu caste hierarchy) have the highest probability of receiving money from outside Nepal (25 per cent), while the incidence of external remittances is much lower among Newar and Terai-hill Janjatis (indigenous peoples). At the same time, only 10 per cent of Dalit households receive remittances from Nepal. This might suggest that poor job opportunities at home prompt Dalit households to concentrate their job search efforts abroad.

Table 1.4

Percentage of Nepali Households Receiving Remittances by Regions and Castes

	Receive remittance from Nepal		Receive remittance from abroad		Receive any remittance	
	1995/96	2003/04	1995/96	2003/04	1995/96	2003/04
Regions						
Kathmandu	14.3	7.8	3.6	5.7	17.9	13.5
Other urban areas	13.1	17.1	6.0	14.3	19.2	31.3
Rural West mountain/hills	10.6	11.1	19.6	29.4	30.2	40.4
Rural Eastern mountain/hills	11.1	16.9	2.0	9.3	13.1	26.2
Rural Western Terai	12.0	12.6	10.6	19.2	22.6	31.8
Rural Eastern Terai	14.7	14.6	11.0	18.1	25.7	32.7
Caste						
Brahmin/Chhetri	13.4	15.8	11.1	19.9	24.5	35.7
Dalit	12.0	9.8	15.1	24.7	27.0	34.5
Newar	13.2	14.3	3.6	7.8	16.8	22.1
Teari-hill Janjatis	9.8	14.6	9.4	15.4	19.2	30.0
Muslim/Other minorities	13.1	12.1	11.4	18.3	24.4	30.3
Total	12.3	13.9	10.6	17.7	23.0	31.6

Source: Lokshin et al (2007)

Remittances from labour export services abroad also have contributed to a decline in poverty. It is estimated that one-third to one-half of overall reduction in headcount poverty rate between 1996 and 2004 was due to increased remittances--increases in remittances coming from outside Nepal have a much stronger impact on poverty than increases in internal remittances[3]. This is not surprising given that the contribution of consumption to GDP growth increased from 79 per cent during the 1991-95 period to 86 per cent during the 1996-2000 period and 103 per cent during the 2001-08 period. Consumption, in turn, is driven by remittances. Additional evidence from the Nepal Living Standard Survey points to the poverty reducing effect of remittances.

[3] CBS 2006

1.5 Expanding an 'Inclusive' Export Base: 19 Export Potentials

To foster the growth of an export base that can help in meeting Nepal's need for poverty reduction and inclusive growth, the challenges are fourfold:

- Diversify and expand the basket of goods and services that are exported
- Diversify and expand the number of export destinations
- Move up the value chain
- Ensure that the goods and services export sectors that are expanding have a robust, positive impact on inclusive growth

Table 1.5

Number of HS-6 Products Exported and Average Number of Markets per Exported Products. Nepal Compared to Selected Countries, 2006

Rank	Country	Number of HS-6 products exported	Average number of markets per product
1	USA	4,931	46.0
2	China	4,871	52.1
3	United Kingdom	4,819	38.5
12	Japan	4,539	22.2
19	Taipei (SARC)	4,261	20.4
24	Korea, Rep.	4,208	18.7
SAARC Countries			
11	India	4,582	25.8
60	Pakistan	2,252	8.7
65	Sri Lanka	2,037	5.1
83	Bangladesh	1,215	5.9
99	Nepal	821	2.8
176	Bhutan	104	1.1
200	Maldives	24	5.0
ASEAN Countries			
13	Singapore	4,392	16.1
25	Malaysia	4,177	12.7
27	Thailand	3,993	16.9
29	Indonesia	3,855	11.7
43	Viet Nam	3,072	8.1
59	Philippines	2,301	7.9
110	Myanmar	686	3.7
117	Cambodia	628	4.4
135	Lao PDR	359	3.0

Source: ITC, 2006 export data (direct and mirror)

Some of these challenges are well illustrated in table 1.5, showing the number of HS-6 products exported by Nepal in 2006 and the average number of importing markets for such products. With a total of 861 HS-6 products exported to an average of 2.8 markets each, Nepal compares to most other LDCs in the Asia region but falls short of more developed countries: USA (4,931 products to 46 markets on average), China PRC (4,871 products to 52 markets on average), the UK, or even India or Singapore. The need for service exports is not all that different: product diversification, market diversification, and value chain improvements.

To meet the aforementioned objective of expanding an inclusive export base, 19 goods and services sectors were identified based on an initial assessment of export performance and some extensive discussions with Nepalese business community and government officials, including those from the MoCS. The list of 19 export

potentials is shown in table 1.6. The table also lists another five sectors that emerged as possible export potentials from the field work conducted by the consultants for the various chapters of the *NTIS 2010*. The selection of the 19 export potential sectors is discussed in **Appendix 1**. Chapter 2 presents a detailed discussion of each of the 19 sectors. Together, the 19 export potential sectors cover about 30 per cent of current goods exports and the vast majority of service exports (broadly defined to include exports of labour services). In term of merchandise exports, the assessment is that many of the selected sectors represent some of the most dynamic (or potentially dynamic) goods exports over the short and medium term.

Table 1.6
19 Priority Export Potentials

No.	Agro-food
1	Cardamom
2	Ginger
3	Honey
4	Lentils
5	Tea
6	Noodles
7	Medicinal herbs/essential oils
	Craft and Industrial Goods
8	Handmade paper
9	Silver jewelry
10	Iron and steel
11	Pashmina
12	Wool products
	Services
13	Tourism
14	Labour services
15	IT and BPO services
16	Health services
17	Education
18	Engineering
19	Hydro-electricity
	Other Potential Export Sectors
20	Transit trade services
21	Sugar
22	Cement
23	Dairy products
24	Transformers

Four indexes were developed to further assess export development opportunities for each product and service and their potential positive impact on socio-economic development:

- Index 1 measures current export performance of Nepal in the given goods or services sector based on a composite indicator of 2008 export value and recent growth rate;
- Index 2 measures current demand conditions for the given goods using a composite indicator of size of importing markets, growth rates of those markets and tariff advantage/disadvantage for Nepalese exporters. For services, the index is based on more limited data measuring size and growth of world demand;
- Index 3 measures domestic supply capacity. The index represents a qualitative assessment of current and potential supply capacity based on extensive desk research and a survey of producers in the individual sectors by a team of consultants focusing on quality of products or services, productivity, cost competitiveness and efficiency of supporting sectors;

- Index 4 measures the potential socio-economic impact of the sector on Nepal. It is a composite indicator of full-time equivalent (FTE) employment, participation of women in the sector, impact on poor regions and impact on skill development.

Indexes 1, 2, and 3 are further combined into a single 'export potential index', which in turn can be looked at against the socio-economic index. A fuller discussion of the four indexes is presented also in **Appendix 1**.

The findings of this analysis are summarized in tables 1.7 and 1.8.

Table 1.7

Export Potential and Socio-Eeconomic Impact of 19 Products and Services

No.	Sector	Nepali exports, 2008 (US$ 1,000)	Index 1: Export performance	Index 2: World market conditions	Index 3: Domestic supply conditions	Overall export potential	Socio-economic impact
	Agro-food						
1	Large cardamom	21,329	high	low	high	high	medium
2	Ginger	8,130	medium	low	medium	medium	medium
3	Honey	500	low	medium	medium	medium	medium
4	Lentils	22,258	medium	high	high	high	medium
5	Tea	16,805	high	low	medium	medium	high
6	Instant noodles	10,390	high	medium	high	high	low
7	Medicinal herbs/ essentail oils	11,000	low	medium	high	medium	high
	Craft and Industrial Goods						
8	Handmade paper	4,000	low	low	high	low	high
9	Silver jewelry	9,519	low	high	medium	medium	medium
10	Iron and steel products	149,394	high	high	high	high	medium
11	Pashmina products	22,074	medium	medium	high	medium	medium
12	Wool products	16,450	medium	high	medium	medium	high
	Services						
13	Tourism	352,000	high	high	high	high	high
14	Labour services	2,448,000	high	high	medium	high	high
15	IT & BPO services	10,000	medium	medium	medium	medium	medium
16	Health services	n/a	low	medium	low	low	low
17	Education services	10,000	medium	low	low	low	low
18	Engineering services	n/a	low	medium	medium	medium	low
19	Hydro-electricity	0	low	high	medium	medium	medium

Source: Chapter 2

Table 1.8
Export Potential compared to Socio-Eeconomic Impact
19 Export Potential Goods and Services

Export Potential				
Low	Medium	High		
	Tea		High	Socio-Eeconomic Impact
Handmade paper	Wool products	Tourism		
	Medicinal herbs	Labour services		
	Ginger		Medium	
	Pashmina products	Large cardamom		
	Honey	Lentils		
	Silver jewelry	Iron and steel products		
	IT and BPO services			
	Hydro-electricity			
			Low	
Health services	Engineering services	Instant noodles		
Education services				

Source: Chapter 2

Table 1.8 suggests that, with the exception of health or education services, the 17 other sectors have either medium or high export potential or medium or high socio-economic impact or both. The fact that the health and education services rank lower in the analysis does not necessarily mean they lack potential. The four indexes tend to favour short-term rather than long-term prospects from the point of view of Nepalese exporters. Certainly, education and even more so health services are fast-growing export businesses worldwide and can have a high employment and income effect on the exporting country. So, the finding simply says that conditions do not exist as of yet in Nepal to turn those two sectors into strong export potentials in the short term.

To make sure that the potential export sectors identified are not constrained by current critical resources bottlenecks, the team working on the assessment of those export potential sectors also carried out a quick survey of water and electricity dependency of the 19 sectors. See table 1.9.

With the exception of iron and steel products and hydro-electricity, the 17 other export potentials have limited impact on those two resources, ranging from medium to mostly low. The dependency of hydro-electricity on water is not necessarily a negative development as water reservoirs can also help address irrigation needs. Clearly, lack of water is not an issue in Nepal. The issue is proper distribution for consumption and irrigation purposes.

Table 1.9

Impact of 19 Export Potentials on Water and Electricity Resources

No.	Sectors	Electricity intensity	Water intensity	Overall resource intensity
	Agro-food			
1	Large cardamom	low	medium	medium-low
2	Ginger	low	low	low
3	Honey	low	low	low
4	Lentils	medium	low	medium-low
5	Tea	low	low	low
6	Instant noodles	medium	medium	medium
7	Medicinal herbs/essential oils	low	low	low
	Craft and Industrial Goods			
8	Handmade paper	low	medium	medium-low
9	Silver jewelry	low	low	low
10	Iron and steel products	high	medium	medium-high
11	Pashmina products	medium	medium	medium
12	Wool products	medium	medium	medium
	Services			
13	Tourism	medium	medium	medium
14	Labour services	none	none	none
15	IT and BPO services	medium	low	medium-low
16	Health services	low	medium	medium-low
17	Education services	low	low	low
18	Engineering services	none	none	none
19	Hydro-electricity	low	high	medium

1.6 Attractive Markets and Market Access

The detailed analyses presented in Chapter 2 include an identification of the ten most attractive markets for the 19 export potentials. The most attractive markets for goods exports are identified on the basis of a composite index, including:

- The size of the importing market for each good or service
- The rate of import growth in individual markets
- Ad valorem tariffs imposed on Nepalese exporters in individual markets
- The tariff advantage or disadvantage between Nepalese exporters and their top five competitors in those markets.

The most attractive markets for services exports are identified on the basis of more limited data with a composite index, including (in the best case):

- The size of the importing market
- The rate of growth of the individual markets
- Some measure of market openness whenever available

The findings of this analysis for the twelve goods export potentials and four of the seven services export potentials are summarized in table 1.10 (see additional detail in **Appendix 2**). The table is in two parts. Part 1--'top 10 attractive markets by region' (top 20 for labour services)—shows the growing importance of 'new' markets, especially from the Middle East and Gulf regions as well as the South Asian and South-East and East Asian regions, in terms of agro-food potential exports (half of the most attractive markets) and service exports (three-fifths of the most attractive markets). Traditional 'northern developed markets' remain primary export destinations for many of the craft and industrial goods export potential (three-quarters of the most attractive markets). Part 2--'tariff advantage'–applies to goods export only and shows that, in the great majority (87.5 per cent) of cases, Nepalese goods exporters do not benefit from a significant tariff advantage against their direct competitors. This is so either because they are competing with exporters from other LDCs that benefit from similar tariff advantages or simply because tariffs are very low as a result of rounds of multilateral trade negotiations. This confirms that the competitive advantage of Nepalese exporters must increasingly be based on their supply capacity (costs, productivity, and quality) and their ability to meet standards and address other NTBs.

Table 1.11 identifies the top ten potentially most attractive markets for the Nepalese export potential sectors reviewed in table 1.11. More detailed data for each sector is presented in Chapter 2 under each sector profile.

Table 1.10

Geographical Distribution of Top 10 Attractive Markets and Tariff Advantage or Disadvantage in Attractive Markets for 12 Goods and 4 Service Export Potentials

	Top 10 Attractive Markets by Export Potential Goods and Services by Region							Tariff Advantage for Export Potential Goods in Top 10 Markets		
	Middle East & Gulf	SAARC	SE & E Asia	Eastern Europe and CIS	Others	Subtotal	'Northern' developed countries	No tariff advantage (<+/-5%)	Tariff advantage (>+5%)	Tariff disadvantage (<-5%)
Cardamom	4	1	1		1		3	9	1	
Ginger	1	3	2				4	8	2	
Honey	1			2			7	4	6	
Lentils	6	2					2	10		
Tea	3	1		2			4	10		
Noodles				1	1		8	8	2	
Medicinal herbs			3	1			6	10		
Essential oils		1	2		1		6	9	1	
All agro-food	**15**	**8**	**8**	**6**	**3**	**40**	**40**	**68**	**12**	**0**
Handmade paper	3	1			1		5	9	1	
Silver jewelry			1				9	10		
Iron/steel	1	1	1	1			6	9	1	
Pashmina			2				8	10		
Wool products			1				9	8	2	
All craft / industrial goods	**4**	**2**	**5**	**1**	**1**	**13**	**37**	**46**	**4**	**0**
Labour services (top 20)	3		3	2			12			
Tourism	1		1	2	1		5			
Education		2	4	2	1		1			
Engineering	4	1	1		2		2			
All services	**7**	**3**	**8**	**4**	**3**	**30**	**20**			

Source: Chapter 2

Table 1.11

10 Most Attractive Markets for 12 Goods and 4 Service Export Potentials

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Agro-food										
Cardamom	Pakistan	Saudi Arabia	UAE	UK	USA	Malaysia	Japan	South Africa	Kuwait	Oman
Ginger	India	Pakistan	Bangladesh	USA	Netherlands	UK	Malaysia	Germany	Yemen	Vietnam
Honey	UK	France	Japan	USA	Germany	Belgium	Poland	Australia	Saudi Arabia	Slovakia
Lentils	Turkey	UAE	Sri Lanka	Algeria	Iran	Egypt	Saudi Arabia	Spain	UK	Pakistan
Tea	Egypt	UAE	Russia	USA	UK	Iran	Pakistan	Germany	Kazakhstan	Australia
Instant Noodles	China	Indonesia	Japan	USA	Vietnam	South Korea	Philippines	Thailand	Russia	India
Medicinal herbs	USA	France	Germany	Vietnam	Singapore	Japan	Italy	Russia	Belgium	South Korea
Essential oils	Singapore	Switzerland	India	France	Germany	USA	UK	Japan	China	Mexico
Craft and Industrial Goods										
Handmade Paper	Denmark	Canada	Netherlands	Saudi Arabia	Nigeria	India	Quatar	Egypt	Japan	Malta
Silver Jewelry	Hong Kong	USA	Germany	UK	France	Denmark	Australia	Spain	Netherlands	Canada
Iron/steel	Germany	Belgium	Poland	India	UAE	UK	Thailand	France	Italy	Sweden
Pashmina	UK	Germany	Spain	France	Hong Kong	USA	Italy	Japan	China	Switzerland
Wool Products	Germany	France	UK	Italy	Spain	Japan	Canada	Belgium	USA	Hong Kong
Services										
Labour services (1-10)	USA	Russia	Switzerland	Saudi Arabia	Spain	Germany	Italy	Luxemburg	Netherlands	Malaysia
Labour services (11-20)	China	UK	France	Oman	Japan	Norway	Kazakhstan	Kuwait	South Korea	Belgium
Tourism	Germany	Saudi Arabia	USA	UK	France	Iran	China	Russia	Italy	Ukraine
Education	China	India	South Korea	Uzbekistan	Germany	Bolivia	Vietnam	Nepal	Lao PDR	Belarus
Engineering	UAE	China	India	Brazil	Quatar	USA	Nigeria	UK	Turkey	Saudi Arabia

Source: Chapter 2

1.7 Declining Importance of Tariff Advantages

Market access environment is a critical element in export expansion.

Nepal benefits from the unilateral GSP systems from the Quad countries.

Nepal is a party to a Preferential Trading Agreement (PTA) with India that was renewed, first, in 2002 and, most recently, in October 2009. It allows for (i) exemption of primary products from import duties and quantitative restrictions on a reciprocal basis; (ii) duty-free access for some Nepalese manufactures to India largely without quantitative restrictions, except for some sensitive items; and (iii) preferential access for Indian manufacturing exports without quantitative restrictions. The 2002 treaty introduced more stringent rules of origin, tariff rate quotas, and safeguard clauses. India also imposes countervailing duties (CVD) to make the prices of Nepalese exports more comparable to Indian counterparts.[4] Moreover, Nepal's preferential access to Indian markets has eroded due to the recent policy announcement of the latter to provide similar access for exports from all LDCs to its market. While retaining the stringent provisions of the 2002 agreement, the renewed treaty of 2009 has agreed to: (i) expand the number of trade routes from 22 to 27, (ii) grant recognition to the quality certificates issued by the competent authority of the exporting country based on the assessment of their capability, (iii) scrap duty refundable process (DFR) allowing Nepal to import Indian goods in Indian currency without paying excise duty to India.

Nepal is also a party to the South Asian Free Trade Agreement (SAFTA), whose members have committed a 10-year tariff phase-out beginning in 2006. Members reached an agreement on some outstanding issues to render SAFTA effective from January 2006, which include safeguard measures--sensitive lists (to be within 20 per cent of the total tariff lines of member countries) and rules of origin (at least 40 per cent value addition), as well as a revenue compensation mechanism for the LDC members for loss of customs duty (to be in place for four years). The SAFTA agreement does not incorporate trade in services, cross-border investment or movement of labour and no timeframe has been set for eliminating NTBs. The net benefits from regional integration under SAFTA for Nepal depends on scale economies gained from access to a larger market offsetting any trade diversion and loss of customs revenue. Given that it already has significantly higher interregional trade by virtue of ties with India, particularly important for Nepal would be whether and how the PTA with India is integrated into SAFTA. The impact on tariff free market access to Indian market as well as a reduction in NTBs would be crucial. However, as trade gains might be limited by similar production structure and factor endowment, appropriate focus would be required on improving trade facilitation (transit agreements, lowering trade-related costs through better customs procedure and harmonizing standards). The benefits of SAFTA will also depend on the effective and time-bound implementation of safeguard measures, better infrastructure and regional connectivity, and extending SAFTA to cover services.

In terms of predictability, preferential market access to India is time-bound as it depends on the validity of the trade treaties, which can be revised periodically, provided that both parties agree. In contrast, preferential market access schemes to Quad countries are not binding and differ among them with respect to product coverage and rules of origin.

Although Nepal has access to a number of preferential schemes, it has been restricted from fully utilizing the benefits due to variation in the nature of schemes. For instance, Nepalese apparels are excluded from the facility of the US preferential scheme, and some key export items to India are subject to tariff quotas. Similarly, a weak understanding of the requirements to comply with stringent rules of origin and administrative procedures by Nepalese exporters has restrained their capacity to utilize the preferences fully.

[4] India has recently imposed CVD of 4 per cent to readymade garments exports from Nepal over the maximum retail price (MRP) instead of usual invoice value of their exports. Exporters have complained about such practice because MRP, being the negotiable retail price, stands three-fold increase when CVD is imposed over it, the actual tax burden for the readymade garment exporters comes in a range of 8 to 10 per cent (www.myrepublica.com).

More importantly perhaps, the value of preferences has been reduced as the margins between the preferential tariffs and the Most Favoured Nations (MFN) tariffs, which apply to all other partners in preference giving countries, especially those countries whose exporters are most likely to compete directly with Nepalese producers, have been eroding, as suggested in table 1.10. If anything, the ongoing WTO negotiations under the Doha Development Round, popularly known as the Non-Agricultural Market Access (NAMA), and aimed at reducing tariffs on goods other than agricultural commodities will further accelerate the trend.

In sum, while preferential market access may remain important to Nepal's exporters in a few sectors, such access is shrinking and it is high time for Nepalese policymakers and exporters to recognize the rapidly decreasing value of preferences as an instrument of competitiveness, as further trade liberalization takes place, both unilaterally and multilaterally.

1.8 Recommendations

During the year 2000s, Nepal has achieved already some degree of product-mix diversification. The challenges for further expanding Nepal's export growth might be more about diversifying its exports by (i) expanding the range of markets into which existing products are sold (geographical diversification); (ii) value chain upgrading of existing products, including agricultural exports; and (iii) taking advantage of opportunities to expand exports of services, including labour services.

Where growth in demand from developed economies used to be the main driver of LDC exports during the 1990s, increasingly it is the new and dynamic markets of South and Central American, Asian, Gulf and African countries where new opportunities lay. Nepal's proximity to large and most rapidly growing economies in the world--China and India--offers opportunities for expanding Nepal's export trade. The Government needs to focus on supporting exporters' efforts to enter new destination markets for goods and services, including providing improved market intelligence to them and meeting NTBs.

The Government should undertake measures to improve accessibility of Nepalese goods export markets in the areas of NTBs. There is a need to build up domestic capacity that can help exporters meet NTBs. This may include strengthening related infrastructure and creating awareness of NTBs among exporters, including building up agriculture extension services, with a view to meeting SPS requirements.

Remittances by the Nepalese workforce employed overseas will remain an important source of income and economic growth. Considerable untapped potential remains to increase and better harness remittance through policy support. Investments in education, complemented by better vocational training, could serve to raise earnings of Nepalese migrants be inducing demand in higher skill jobs. Government support through streamlined procedures at home and active search for destinations abroad could facilitate large labour migration. While a formal memorandum of understanding has been signed with Malaysia, Hong Kong and Republic of Korea, Nepal needs to extend employment-seeking talks with other countries as well. Efforts could also be made to reduce transaction costs for migrants by more effective regulations of manpower agencies and improving access to finance from the formal financial system. The central bank should continue to work with the Nepalese private sector to further develop systems for more efficient collection and repatriation of remittances through formal channels that both reduce risks for migrants and help deepen the financial system. Mechanisms need to be devised to improve the utilization of skills acquired by returning migrants and to put a large share of the remittances to use for investment and employment creation in Nepal itself.

Nepal should also negotiate to obtain commitment on market access and national treatment in all service sectors and modes of supply interest to the country, in particular labour export services to developed and developing countries. Since the present movement of natural persons is biased against semi-skilled and unskilled work, which forms the major category of labour service export from the country, Nepal should

negotiate for the inclusion of these categories of workers in such commitments. International assistance through initiative such as AfT should be operationalized effectively to enable weaker countries like Nepal to improve supply capacity and strengthen market access to international market for its products.

More broadly, the trade negotiation (bilateral, regional, and multilateral) capacity of the Government needs to be strengthened.

Finally, Nepal should favour export development that promotes inclusive growth in terms of generating new jobs and new income to various socio-economic groups and across geographic regions.

Chapter 2
Nineteen Export Potentials: Detailed Sector Analyses

2.1 Introduction

This chapter presents detailed analyses of the 19 export potential sectors identified in Chapter 1. Each export potential is examined along the dimensions that are the basis for the four ranking indexes used in the previous chapter.

Short analyses of the five additional sectors with export potential that were identified in the course of the fieldwork are also presented at the end of the chapter.

Key findings and actions recommended for each of the 19 sectors are summarized in the SWOT (Strength, Weakness, Opportunity and Threat) analyses presented in the NTIS 2010 Action Matrix.

2.2 Nineteen Detailed Sector Analyses

1) Cardamom

Background[1]

Large cardamom (*Amomum subulatom* Roxb.) is one of the oldest spices indigenous to the eastern Himalayas. It comes under the family *Zingiberaceae* to which ginger (*Zingiber officinale* Rosc.) and small cardamom (Elettaria cardamomum Maton) also belong to. It originated in Sikkim, located between Nepal and Bhutan. Large cardamom was introduced into Ilam (Nepal) in 1865, by Nepalese labourers who went to Sikkim for seasonal work. However, commercial cultivation was started in Ilam only in 1953. The establishment of the Cardamom Development Centre (CDC) in 1975 paved the way for the development of this crop. Today, cardamom cultivation is spread over 37 districts, but more than 84 per cent of total national production comes from four districts (Taplejung, Panchthar, Ilam and Sankhuwasabha) in eastern Nepal. It is one of the major sources of cash income for the farmers there. Large cardamom is mainly grown in three countries, viz. Nepal, India, and Bhutan. Cardamom, in particular small cardamom, produced in Burma, Thailand, Vietnam, Cambodia, Laos, Indonesia, Ethiopia, Guatemala, Honduras, and South India are of different species within the same genera or of another genera. Nepal is by far the world's largest exporter of large cardamom and has also become the largest producer in recent years.

Index 1: Export Performance

Table 2.1
Export Value of Cardamom, 2005-2009 (US$1,000)

	2005	2006	2007	2008	2009
Export Value (mirror data)	10,670	1,587	7,106	21,329	n/a
Export Value (Nepalese data)	12,326	11,114	13,190	14,966	n/a

Note: Nepalese data refers to 2004/05 –2007/08.

[1] Some data and information from two previous ITC studies, the Export Potential Assessment undertaken in 2007 (ITC, 2007a) and an extensive study on the cardamom sector (ITC, 2007c).

Types of Exported Products: There are a few varieties of large cardamom cultivated in Nepal like *Ramsai, Golsai, Chibesai, Dambersai, Sawney,* and *Kantidaar*. Among these, *Ramsai, Golsai,* and *Chibesai* are widespread in cultivation and export. Most of the large cardamom is exported without undertaking value adding activities, such as grading by size, in Nepal.

Current Export Destinations: India is the major export market for Nepalese large cardamom (90 per cent of Nepal's exports). Pakistan, Singapore, and the UAE are the other main export markets for Nepal. According to information obtained from traders, Afghanistan also has been emerging as an important buyer of Nepali large cardamom over the past three years.

Potential Export Destinations: Based on Indian export statistics, the main importers of large cardamom are Pakistan, Saudi Arabia, UAE, UK, and the USA. These markets appear to have the highest potential for direct export from Nepal. Some exports to these markets are already occurring, and in addition exports to Nepal are often re-exported to these markets. (More on this below.)

Nepal's World Market Share: Nepal is the world's largest exporter of large cardamom and its exports to India alone are much higher than India's exports. Using data for 2008, Nepal's share of world exports is around 90 per cent.[2]

Trade Balance: Nepal is a net exporter of large cardamom. Very few imports are recorded.
Dynamism of Exports: It is estimated that less than 10 per cent of the total production goes for domestic consumption and the remaining 90 per cent is for export. The export trend of Nepalese large cardamom to India and overseas markets has been very encouraging. In terms of quantity it has more than doubled in the last five years (based on Nepalese data). Export values also show an upward trend, but with a significant difference between mirror data (mainly based on Indian data) and Nepalese data.

Prices can fluctuate significantly and have shown no clear trend in recent years (ITC, 2007c).

Export Prospect: Nepal's export of large cardamom is very dependent on the Siliguri market in India. Cardamom is mainly exported to that market, where traders do value adding activities like tail cutting, grading by size, cleaning, and dispatching to markets like Delhi and Mumbai. The dependency on that market could be reduced if some of these activities could be done within Nepal. Traders report that almost all the exported quantity of large cardamom from Nepal to India is re-exported to Pakistan, UAE, and other countries by Indian traders from Delhi and Mumbai, although this cannot be confirmed with trade statistics (India imports significantly more from Nepal than it exports to third countries). It is also reported that Nepali large cardamom is preferred over the Indian large cardamom in Pakistan and other markets due to its quality. Thus, there is a great potential for Nepal to increase direct exports to those markets. However, most cardamom is consumed in India, which will remain the main market in the foreseeable future, too. India has shown a declining trend in production due to diseases, which is an opportunity for Nepal to increase its production and exports (ITC, 2007c).

Index 2: World Market Conditions

Total World Export Value: The world market consists mainly of three trade flows: Nepal to India, Nepal to third countries, and India to third countries. Nepal's exports to India account for up to 90 per cent of international trade in large cardamom, depending on the data used. India's exports of large cardamom have been around US$4-6 million in recent years, significantly less than Nepal's exports to India. The Total World Export Value for 2008 is estimated to be around US$20-30 million.

[2] In 2008, India imported 10,391 MT of large cardamom from Nepal. India's exports in 2007/08 were 1,325 MT.

No distinction is made between large and small cardamom in most trade statistics, the main exception being India's statistics.[3] India produces large cardamom and imports mainly from Nepal (with little imports from Bhutan). Some of the production and imports are exported to Pakistan, Saudi Arabia, UAE, and other countries. Using world trade data would be misleading because it includes small cardamom, which is a very different product.[4]

Market Access Conditions (Tariffs and non-tarrif barriers): So far Nepal has not come across any market access problem in exporting large cardamom to overseas markets. Exporters need to submit certificates of origin and a quarantine. There is no import duty on large cardamom entering India from Nepal.

Nepal charges an export fee of 0.5 per cent at the customs. Traders complain they have to pay a kind of octroi at many places inside Nepal while transporting large cardamom from production areas to terminal markets like Birtamod and Biratnagar and while exporting to India.

Tariff barriers are generally low or nonexistent for cardamom in the USA, European Union (EU), Japan, and most of the Middle East countries. In most markets, including Pakistan, Nepal does not enjoy any preferential access compared to India, which is the only other exporter to those markets.

Major Competitors in World Market: India is both the main destination for Nepal's exports and the main competitor in the world market. Bhutan is the only other producer of large cardamom.[5] On the other hand, the small and green cardamom (*Elettaria cardamomum*), mainly exported by Guatemala, could be seen as the main competitor for Nepali large cardamom (*Amomum sublatum* Roxb) in the world market. However, it is widely believed that the two varieties cannot be considered competing products because the market segments and demand for these two types of cardamom are very different, although not mutually exclusive. World Market Prospect: The overall production of large cardamom in the three producing countries, Nepal, India, and Bhutan, has been relatively stable in recent years with additional production in Nepal replacing some of the production in India (ITC, 2007c). Demand for large cardamom is regionally limited to South Asia. Though some consumption of large cardamom occurs in the Middle East, Europe, and the USA (mainly by South Asian ethnic groups), market development activities would be required to increase awareness of this variety before any large-scale demand could occur outside South Asia. The key market for large cardamom within South Asia is Pakistan.

Index 3: Domestic Supply Conditions

Producers: A large number of farmers are involved in this sector. It is estimated that more than 25,000 farm households are involved in its production in Ilam, Panchthar, and Taplejung districts alone, and as many as 67,000 households in all Nepal. Besides, a large number of private proprietors, traders, and transporters are involved in the value chain.

Production Capacity: Large cardamom in Nepal is a high-value traditionally grown crop in more than 37 hill and mountain districts. In 2007/08, the total area under cultivation was 13,784 hectares (ha) and the production was 7,087 metric tons (MT). Production has increased in recent years and there is potential for further increase (see below).[6]

[3] India breaks down 0908.30 in several products, one of which being large cardamom. Most other countries put both small and large cardamom together.
[4] Annual world exports of all cardamom (small and large) is US$100-300 million a year. Guatemala is the main exporter, but exports small cardamom. Nepal is second, followed by India. See ITC (2007c) for an extensive discussion on the (non-) substitutability of large and small cardamom.
[5] Myanmar produces some large cardamom but does not enter the international markets to the extent of competing with Nepali large cardamom.
[6] These are official Nepalese figures. However, import data from India suggests that the production might be even higher. In 2008, India reported imports of 10,391 MT of cardamom from Nepal, significantly more than what Nepal officially produces. This could partly be explained by the fact that stocks might be carried over to the next year.

Table 2.2
Large Cardamom: Acreage, Production and Yield

Year	Area (ha)	Production (MT)	Yield (MT/ha)
2001/02	10,840	6,179	0.57
2002/03	11,095	5,880	0.53
2003/04	11,220	5,983	0.53
2004/05	11,347	6,086	0.54
2005/06	13,193	6,647	0.58
2006/07	13,237	6,792	0.51
2007/08	13,784	7,087	0.51

Source: Statistical information on Nepalese agriculture, HMG/MoAC

Quality of Product: According to traders, Nepali large cardamom is preferred over Indian large cardamom due to its quality. It could be further enhanced by undertaking value adding activities like tail cutting, grading by size, and cleaning, which at present are mostly done in the Siliguri market. Nepalese exporters in Birtamod and Dharan have started undertaking such value adding activities in the last few years.

Productivity: While the average productivity of large cardamom for Nepal is 540 kg/ha, productivity level could easily be increased to about 600 kg/ha and could go as high as 800 kg/ha through proper management, adequate shading, and manuring practices.

Availability and Quality of Labour Force: Traders think that labour productivity is very low. Experienced and skilled farm labour is available and in abundance. There is a shortage of skilled labour that could do the value adding activities. Traders have to depend on Siliguri for the supply of such labour. Lack of skills is mainly due to lack of formal training.

Labour Cost and Overall Production Cost: Labour cost is higher compared to the costs of other inputs. A small production cost advantage exists in the use of water and packaging materials.

Level of Processing Technology: Drying of large cardamom is the major activity in its production process. There are two systems of large cardamom processing in Nepal: drying in traditional *bhatti* and drying in improved *bhatti*.[7] The efficiency of the traditional drying technology is very low. Both drying systems are costly. Firewood is still used to dry large cardamom. The quality of product depends on the type of the *bhatti* technology that is used. Large cardamom dried in the improved *bhatti* is of better quality and fetches higher price as well. But less than 10 per cent of total production is dried in improved *bhatti*. Efforts are underway to introduce improved bhatti, but it is still not widely adopted. In a period of two years, 43 improved *bhatti* were installed in Ilam to dry only about 50 MT of large cardamom.

Cost and Quality of Infrastructure: According to industry sources, infrastructure costs are considered high compared to the competitors, especially fuel (firewood) and transportation.

Efficiency of Domestic Supporting Industries: The overall efficiency of supporting services is considered high. But forward or backward linkages in the supply chain are non-existent. Farmers themselves dry their large cardamom and take it to the market to sell or sell to collectors or middlemen at the farm after drying. The role of input supplier is minimized as most of the inputs used are farm-based and very few farmers use chemical

[7] The traditional bhatti has a two feet thick stone wall structure on three sides and a wide opening in the front for burning large wood logs. Fresh cardamom capsules are spread in a 10-12 inch thick bed on the mesh structure placed on the stone walls. Nearby trees are cut into logs and these wet logs are then burnt inside the bhatti structure below the cardamom bed. Thus, the cardamom bed is exposed to thick smoke generated during burning of wet wood. It takes about 30-50 hours to dry the cardamom.

fertilizer and insecticides or other such inputs. The role of transporters--porters, mule-owners and truckers--is very important as the product has to be transported from the farm to the road-head markets and then to the district-level markets like Ilam and Fikkel and further to the regional markets like Birtamod and Biratnagar, from where large cardamom is exported to India and overseas countries.

The major problem in the value chain is the non-uniform quality of dried large cardamom as it is collected from many small farmers who dry them in different conditions. Such non-uniform quality is based on the differences in size, colour, moisture content, broken grain, and non-uniformity in drying.

Domestic Demand: Large cardamom is used as a spice and in several ayurvedic preparations. It contains 2 to 3 per cent of essential oils and possesses medicinal properties. In India (very similar to Nepal), household consumption is estimated at 47 per cent of total domestic consumption. The industrial sector uses the remaining 53 per cent. The industrial uses are for blended spice (*'masala'*), tobacco mixtures, confectionery items like bread, cakes, and others.

Business Environment: Problems related to transport infrastructure, corruption, local 'informal' taxes, etc are reported by representatives of the sector, but no problems that are very specific to the cardamom sector are reported.

Government Initiatives and Donor Involvement: The GoN has recognized large cardamom as one of the high-value export crops and has taken some positive steps for its development. It has established the Cardamom Development Centre (CDC) near Fikkel in Ilam, which provides training in improved cultivation practices, supplies quality seedlings, and offers consultation services to farmers. The CDC carries out research on cultural practices, improved varieties, control and preventive measures against diseases, insects, and pests. It also transfers appropriate technologies and skills to farmers through demonstrations and training. It has undertaken experiments to use a gasified drying system, which has not been yet been extended to farmers. The District Agriculture Development Offices (DADOs) under the Department of Agriculture (DoA) provides awareness training and counseling to large cardamom farmers on improved cultivation, planning, follow-up, and monitoring of large cardamom development activities; and maintains records related to production, number of households involved, and total area under cardamom production. There are some INGO programmes (SNV, Mercy Corps, GTZ) that support farmers and traders to expand their market access and improve the drying method.

Prospect for Domestic Supply Conditions: There is potential for expanding domestic supply of large cardamom in Nepal. It is mostly cultivated under the conventional method. There has not been much improvement in the production technology. Thus, supply could be increased by changing the farm practices, especially by using better cultural practices and fertilizer application. Even improvements in harvesting/picking and drying could help increase the supply as well as the quality. Second, supply could be increased by improving the yield rate. Third, it is estimated that more than 13 per cent of the area under this crop has not reached the production stage. To that extent, annual supply increase could be expected even within the existing cropped area.

Product diversification avenues have not been sufficiently explored. Product diversification could be adopted to cater for and expand the needs of the spice industries both for domestic consumption and for export. Some other possible product diversifications are essential oils, paper like tablemats and others, and incense making. Another differential sector is 'colour extraction' from the flower of large cardamom, which is locally known as *'thunga'*. This item is usually thrown away while collecting the green capsules for processing/drying. The flower part produces a dark pink brown colour, which can be used as a dye.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: It is estimated that more than 25,000 farm households are involved in cardamom farming in Ilam, Panchthar, and Taplejung districts alone, and as many as 67,000 households in all Nepal. The sector generates employment for a minimum of 80-100 days per ha (about one million labour days in total/year). The estimated full-time employment equivalent (FTEE) is 5,500. In addition, a significant number of people find employment along the value chain, such as in transporting, cleaning, packaging, etc. With the promotion of value adding activities within the country, this sector could generate even larger employment opportunities.

Gender Impact: This sector creates average impact on women in terms of participation: both employment-creating and household decision-making. Women's involvement is equal to men in most farm activities. But their involvement in value adding activities (cleaning, grading, tail cutting) is above 50 per cent.

Contribution to Skill Development: There is little skill development in this sector. This is due to the inadequate government programmes for improvements in farm practices. Some DADOs sporadically organize study tours for farmers to cardamom research farms and farmers' fields. Some INGOs are involved in training farmers in improved farm cultural practices. Some traders and exporters are providing on-the-job training to their labour in value adding activities.

Impact on Development of Disadvantaged Regions: The impact on poor and disadvantaged groups or regions is positive. It brings drying units (improved bhatti) into rural areas, generating income and employment. It is a very high-value, low-volume cash crop that helps meet the cash requirements of poor households and also invest in farm improvements. It is estimated that, in Taplejung district, as much as 70 per cent of the cash income of a farm household comes from large cardamom alone. It provides cash income to small and excluded farmers with little and less fertile land. Large cardamom is cultivated in marginal and degraded slopes and, therefore, does not compete with other food crops for land. The production cost is small, thus, even small farmers can invest in its cultivation.

Energy and Water Constraints: This sector is a high consumer of water (free and perennial flow) and energy (firewood). Although farming of large cardamom ensures ecological stability, the firewood required for its drying generates negative impact in terms of large firewood consumption. The estimated fuel-wood required for drying 1 metric ton of large cardamom in the traditional bhatti is around 2 metric tons. This could increase deforestation in large cardamom-growing areas. Introduction of improved bhatti could help save at least 28 per cent of the required wood.

Environmental Impact: Farming of cardamom ensures ecological stability to fragile mountain slopes by requiring farmers to maintain a good forest cover (for shading) of nitrogen-fixing trees. It has been ecologically adapted to farming on sloping lands and forestry systems and the plants maintain permanent green cover on forest floor. But it is a high firewood-consuming sector.

Market Attractiveness Index

With a slightly modified methodology to distinguish between large and small cardamom (see below), Pakistan is identified as the most attractive market. Nepal already exports small amounts to that market, but most cardamom is exported to India and then possibly re-exported. Other major markets for potential direct exports are Saudi Arabia, UAE, UK, and USA. Fast-growing markets are Kuwait, USA, and UAE. No tariff preferences exist compared with exports from India to those markets.

Because HS 0908.30 covers both large and small cardamom, the methodology has been adjusted. Indian exports of large cardamom to third countries were used to identify attractive markets. India is the major exporter

of large cardamom (some of it being re-exports of Nepalese cardamom) and its export data differentiates between large and small cardamom on the tariff line level. The tariff advantage is the one compared with Indian exports (no such advantage exists in any of the major markets).

Table 2.3
Attractive Markets for Cardamom

Attractive markets for Cardamom (HS 0908.30)							
Top 10 - Weighted Market Attractiveness Index							
Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	Pakistan	809	65.9%	24.8%	5%	0%	India is the main competitor in all these markets
2	Saudi Arabia	0	11.1%	-5.6%	0%	0%	
3	UAE	0	5.2%	26.7%	0%	0%	
4	UK	0	3.5%	1.7%	0%	0%	
5	USA	0	3.2%	32.0%	0%	0%	
6	Malaysia	0	2.8%	13.6%	0%	0%	
7	Japan	0	2.5%	-17.8%	0%	0%	
8	South Africa	0	1.1%	8.8%	0%	0%	
9	Kuwait	0	1.1%	136.0%	0%	0%	
10	Oman	0	0.9%	3.8%	0%	0%	

Attractive markets for Cardamom (HS 0908.30)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	Pakistan	Kuwait	n/a	India	20,520
2	Saudi Arabia	USA	n/a	Pakistan	809
3	UAE	UAE	n/a		
4	UK	Pakistan	n/a		
5	USA	Malaysia	n/a		
6	Malaysia	South Africa	n/a		
7	Japan	Oman	n/a		
8	South Africa	UK	n/a		
9	Kuwait	Saudi Arabia	n/a		
10	Oman	Japan	n/a		

2) Ginger

Background

Ginger is Nepal's most important exported spice, besides cardamom, with exports in 2008 of US$8.2 million. Nepal is the fourth largest producer and sixth largest exporter of ginger in the world. Ginger is exported either fresh or dried; the latter is called *"sutho"*. It is one of the main sources of cash income for farmers. It is grown across the whole east-west length along the Siwalik and mid hill ranges, and in altitudes as high as 1,500m due to its climatic suitability. Climatically, ginger thrives well in warm and humid conditions during the initial stage of growth, but it needs dry atmosphere and mild temperatures in time of harvest. Frost and heavy dew are not favourable for growth. As it is being produced in the whole of the mid-hill areas, this crop is very important for the development of this region. It serves as an important counterforce to rural-urban migration by providing income and new opportunities. The intercropping of ginger with other crops, including coffee and orange, is a recent method.

Index 1: Export Performance

Export Value: All recorded exports of ginger go to India. Nepalese export data and Indian import data are relatively similar. Export volumes are approximately 30,000 to 40,000 MT/year. It is believed that there is significant informal border trade. According to estimates obtained from industry sources, around 75 per cent of the domestic production is exported, which is around three times higher than the official exports. This means that annual exports could be as high as US$25 million. However, this figure is not reliable and we will use the official numbers for the calculation of indicators.

Table 2.4

World Value of Ginger, 2005-2009 (US$1,000)

	2005	2006	2007	2008	2009
Total Export Value	3,855	6,006	9,417	8,130	n/a
Total export value (Nepalese data)	3,709	5,191	8,094	8,180	n/a
Fresh ginger (Nepalese data)	2,477	4,234	7,415	7,441	n/a
Dried ginger (Nepalese data)	1,232	957	679	739	n/a

All figures are in US$1,000. Nepalese data refers to 2004/05–2007/08.

Types of Exported Products: Ginger is exported mainly in fresh form. Two types of dried ginger (*"sutho"*) are also exported: sun-dried from Rapti zone (in the mid-western region) and fire or smoked-dried from Lumbini and Gandaki zones (western region of Nepal). Dried ginger constitutes 10-30 per cent of the total ginger export. Other exported products are ginger oil and oleoresin, but in negligible volumes.

Current Export Destinations: Almost all exports (both fresh and dried) are to India, particularly to northern Indian markets of Gorakhpur, Varanasi, Lucknow, Kanpur, Patna, Jaipur, and Delhi. Besides, according to industry sources, Nepal exports very small amounts of ginger to Pakistan and Bangladesh, but this cannot be confirmed with official trade data. It should, nevertheless, be added that much of what is exported to India (especially dried ginger) is re-exported to Pakistan.

Potential Export Destinations: The major importers of ginger are Japan, USA, EU, Pakistan, and Malaysia. India also exports large amounts to Bangladesh and Saudi Arabia. Nepal does not export direct to those markets, though some of its exports to India are probably re-exported. According to industry sources, there could be a potential for direct exports to some of those markets for dried ginger. (More on this below.)

Nepal's World Market Share: Nepal is currently the sixth largest exporter of ginger, although its share in world exports is only 2.4 per cent. This share does not account for informal border trade with India, which is believed to be significant. The world market is highly dominated by China (62 per cent).

Trade Balance: Total trade balance of ginger is consistently highly positive. Nepal imports only nominal amounts of ginger, especially from China. Such imports amounted to less than 17 per cent of its total official export in 2007/08, according to the Trade and Export Promotion Centre (TEPC) data.

Dynamism of Exports: India is a large and fairly dynamic market for Nepalese ginger. Supply of ginger from domestic sources in India, particularly Cochin and Bangalore, is penetrating into the established Nepali ginger markets of northern India. However, due to its proximity, Nepal still enjoys comparative advantages and is not losing market share because the Indian market is expanding. There are also many small markets bordering Nepal where a large quantity of Nepali ginger is exported to. Thus, within India, Nepal has access to many markets. Nepal is losing some share in southern India, but this represents less than 5 per cent of Nepal's total export to India.

The value of ginger export has been increasing over the years and has even doubled during the last 15 years. However, annual fluctuations are also very discernible during the last five years. In terms of quantity, more than 75 per cent of the total ginger produced in Nepal is exported.

Export Prospect: Export prospect seems very positive, with demand exceeding supply. Nepal is unable to supply the required demanded quantity and cater for the expected fresh ginger market expansions of India. Niche markets for Nepali dried ginger in India are also expanding.

There is a very high potential for diversifying Nepali ginger exports into processed products. Since dried ginger fetches relatively high prices in Indian markets. Traders believe that Nepal should export more dried than fresh ginger. Besides dried ginger, other potential products include ginger oil and oleoresin, ginger powder and mixed spices, ginger candy and slices, etc. In Nepal, the potential for producing ginger oil is limited, the *'nase'* variety is too fibrous and farming methods are inadequate to avoid an 'earthy aroma' in ginger oil. Production of oleoresin, on the other hand, is less sensitive to quality of inputs. Ginger oleoresin has widespread uses as a flavouring agent in foods, beverages, and medicines. Ginger oleoresin is preferred in these industries over the natural ginger due to the advantages that oleoresins hold over the spices themselves. These advantages include increased economy in use, more uniform flavour and concentration, and lack of microbial contamination.

Index 2: World Market Conditions

Table 2.5

Total World Export Value of Ginger 2005-2009 (US$1,000):

2005	2006	2007	2008	2009	2009
321,704	247,995	264,599	339,275	n/a	n/a

Source: FAO Statistics. Nepal is the fourth largest producer after India, China, and Indonesia

Market Access Conditions (Tariffs and NTBs): In terms of tariffs, Nepal enjoys a significant preference in India, which applies a 30 per cent MFN tariff on ginger imports, including imports from China. Pakistan applies a 15 per cent tariff, with a 9 per cent reduced rate for Nepal as a SAFTA member. There is, however, no significant tariff advantage for Nepal compared to China, the main competitor, in any of the other major importing markets.[8]

Nepal enjoys free access to India's markets but faces various non-tariff measures. A range of different fees are levied on Nepali ginger. The total cost of these amounts to NRs 170/MT, approximately 1 per cent of the cost of ginger exported to Gorakhpur in India. Nepalese exporters can only sell their produce to licensed Indian traders. This limits Nepalese exporters in their choice of traders, as many Indian traders do not have PAN (traders' registration under the Indian Act). India also applies SPS measures. While authorities in Nepal require consignments of ginger to be issued a phytosanitary certificate, all ginger entering India from Nepal have to undergo a further pesticide residue test at border crossings. The samples are not tested at border crossings, but are sent to specific locations, often in each state capital that has been allotted by the Indian government. It takes about three days for the result to return, during which time the truck has to wait at the Indian custom point. Also, Nepalese trucks are not permitted to enter India, which means that the consignment has to be re-loaded onto Indian trucks at customs crossings. All these obstacles add costs to the

[8] The USA applies a very low MFN tariff for ground ginger (around 0.5 per cent), and a zero rate for others. Japan grants duty-free access to both China and Nepal. The EU and Malaysia apply a zero MFN rate.

exporters. Nepal permits all Indian trucks to travel anywhere into Nepal's territory for 72 hours for a nominal fee; Nepali traders are demanding reciprocity from India. At the same time, in the absence of institutional arrangements for money transfer, almost all export transactions take place in cash. This creates an extra risk for traders According to traders, these non-tariff barriers (NTBs) are less prevalent at the moment (late 2009), with prices being rather high and exports moving smoothly. However, once prices are low again, the use of NTBs might increase again.

Major Competitors in the World Market: China dominates the world market, with a share of world exports of 62 per cent in 2008. It is followed by Thailand (8 per cent), Nigeria (3 per cent), India (3 per cent), and Nepal (2.4 per cent). Nepal has around a 50 per cent share in the Indian market, with China and Nigeria being the main competitors (besides competition from domestic production).

World Market Prospect: The world market for ginger has been highly dynamic over the last eight years. World exports almost tripled in value terms and almost doubled in volume terms between 2001 and 2008. One of the largest and fastest growing import markets is India. The major challenge for Nepal is to increase its direct exports to third countries and to add more value to the produced ginger, or produce a level of quality that would be suitable for major import markets such as Japan.

Index 3: Domestic Supply Conditions

Producers: Most small holder farms in Nepal are involved in ginger production, but often only for household consumption. It is grown in all districts of Nepal (except in the high hill districts), but Salyan, Palpa, Tanahu, Syangja, Kaski, Nawalparasi, Bhojpur, and Ilam are the major ginger producing districts that are relatively easily accessible by road transport. Dried ginger is produced only in the western region of the country.

A large number of private traders, assemblers, middlemen, wholesalers–are involved in the business. Most of the exporters are also wholesalers. There are a few cooperatives at farm level that are also undertaking domestic marketing. Those cooperatives are still not involved in export business. Practically, all farmers and processors along the supply hain are small family businesses.

Production Capacity: Both area and production of ginger have increased significantly over the recent years, with a small increase in yield. The total acreage of land under ginger cultivation has more than doubled during the last decade: 14,000 ha in 2007/08, up from 5,300 ha in 1994/95. Still more acreage can be brought under ginger cultivation.

Table 2.6
Ginger: Acreage, Production, and Yield

Year	Area (ha)	Prod. (MT)	Yield MT/ha
2000/01	8,956	84,366	9.42
2001/02	9,189	87,909	9.57
2002/03	11,480	140,056	12.20
2003/04	11,830	150,593	12.73
2004/05	11,930	152,704	12.80
2005/06	12,994	154,197	11.87
2006/07	13,170	160,576	12.19
2007/08	14,007	161,171	11.51

Quality of Product: The quality of exported ginger is considered average, but the exporters see good prospects. Nepal is producing two varieties of ginger: *"nase"* rhizome containing more fibres and *"Bose"* rhizome, which is fibreless or with negligible fibrer. From the fresh consumption market perspective, the quality of Nepali ginger is considered lower than those of Cochin and Bangalore in India, Jamaica and elite varieties of other countries because of Nepal's high fibre content and dirty look. The *Nase* variety is preferred by the spice industry for making ginger powder, preparing mixed spices and for medicinal purposes. The Nase variety has an established market. Therefore, there is good potential in improving the product mix for fresh consumption (*bose*) and industrial use (*nase*) as most of the produce at present is of *Nase* variety.

Productivity: Productivity of Nepali ginger is comparable with India, but lower than other international competitors. More importantly, there is a large variance in the yield in different districts, ranging from about 20 MT/ha in Tanahu (which is comparable to other countries) to less than 10 MT/ha in Nawalparasi district (ITC 2007a).

Availability and Quality of Labour Force: Industry sources report a lack of skills due to a lack of formal training. However, the farm labour and the labour involved at different levels of the value chain have gained long experience in their professions. Labour productivity is assessed 'above average'.

Labour Cost and Overall Production Cost: There is no indication that Nepal has a significant advantage or disadvantage in production costs compared to India.

Level of Processing Technology: The technology used in this sector is minimal. The drying technology that is used has shown little improvement in recent years. Very little processing is done.

Cost and Quality of Infrastructure: Ginger being a bulk item, the weak road infrastructure is a factor affecting the sector.

Efficiency of Domestic Supporting Industries: Supply of farm inputs and transportation services are well organized.

Domestic Demand: Demand for ginger--fresh or dried--from domestic industries is low because the product diversification has not been successful. Production of ginger oil and oleoresin is still at an experimental level. Production of other products like candy, spices, ayurvedic medicines and other ready-to-eat food prepared from ginger is very small.

Business Environment: Industry sources were mainly referring to general problems in the business environment, such as insufficient administrative and judicial services, corruption, crime, and complex border procedures.

Government Initiatives and Donor Involvement: There is no specific strategy or policy for the sector. However, production expansion and export promotion activities are implemented under the general development programmes of the government by agencies such as the TEPC, Agribusiness Promotion and Marketing Development Directorate (APMDD), National Agriculture Research Council (NARC), National Agriculture Development and Research Fund (NADRF), the DADOs, Plant Quarantine Directorate, Department of Food Technology and Quality Control, National Spice Development Programme, and the Ginger Research Programme.

Prospect for Domestic Supply Conditions: Stakeholders of the value chain claim that total production could be easily doubled within two crop cycles with market assurance to the farmers under the prevailing production technology. Total production could be further increased by changing the crop variety (like the *Kapurkot Aduwa 1* variety, which was released by the Government Ginger Research Farm and by using more of the fibreless variety of seed) and improving farm practices to improve the yield rate.

Table 2.7

Attractive Markets for Ginger

Attractive markets for Ginger (HS 0910.10)							
Top 10 - Weighted Market Attractiveness Index							
Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	India	8,123	4.1%	27.4%	0%	30%	China, Nigeria, Ethiopia
2	Pakistan	0	7.8%	14.4%	9%	5%	China, Thailand, Myanmar
3	Bangladesh	0	3.9%	42.9%	9%	0%	China, Indonesia, India
4	USA	0	11.4%	5.3%	0%	0%	China, Thailand, Brazil
5	Netherlands	0	5.1%	5.3%	0%	0%	China, Thailand, Brazil
6	UK	0	5.5%	4.8%	0%	0%	China, India, Netherlands
7	Malaysia	0	4.1%	10.5%	0%	0%	China, Indonesia, Thailand
8	Germany	0	3.5%	15.0%	0%	0%	China, Thailand, Netherlands
9	Yemen	0	1.0%	65.2%	5%	0%	China, Ethiopia, India
10	Viet Nam	0	0.9%	175.4%	20%	-5%	China, Nigeria, India

Attractive markets for Ginger (HS 0910.10)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	Japan	Viet Nam	India	India	8,123
2	USA	Yemen	Russia	Belgium	7
3	Pakistan	Bangladesh	Japan		
4	UK	India	Belarus		
5	Netherlands	Germany	Kazakhstan		
6	Malaysia	Pakistan	Switzerland		
7	India	Malaysia	USA		
8	Bangladesh	USA	New Zealand		
9	Germany	Netherlands			
10	Saudi Arabia	Russia			

3) Honey

Background[9]

The honey sector has attracted considerable attention from government agencies and the donor community in recent years. Beekeeping and honey production (*A. dorsata*) is a long-established practice in Nepal. Traditionally, bees are generally kept in log hives and wall hives and are found in different parts of the country. Honey can be and is produced all over Nepal. Its abundant forest flora, diversified horticultural and crop producing farming system, geo-climatic conditions and biodiversity are very conducive for good quality specialty honey production. Nepal enjoys the occurrence of five popular species of honeybee: *A. cerana, A. dorsata, A. laboriosa* and *A. florea,* which are are indigenous to Nepal, and *A. mellifera,* which is an exotic species. These species are highly concentrated in the Terai and Inner Terai areas. *A. cerana* and *A. mellifera* are two handy hive bees that are kept in hives. The other three are wild nesting in the open. However, commercial production of honey by raising *A. mellifera* and *A. cerana* has only been of recent origin. Honey production

[9] Some data and information from ITC (2007a).

Nepal's World Market Share: Nepal's annual production of honey constitutes less than 0.05 per cent of world production, and the share in world exports is negligible.

Trade Balance: Nepal imports small amounts of honey for domestic consumption from India and, according to industry sources, also from the USA, China, and Saudi Arabia, but these imports remain very small. Only India's trade data shows exports to Nepal (around US$70,000 per year).

Dynamism of Exports: The destinations for Nepal's honey export to overseas markets are erratic: some destinations drop and new destinations are recorded every year. Even Nepal's diverse portfolio of destination countries has dwindled. Nepalese honey has been banned from entering the EU countries (and also Norway) due to the non-submission of national residue plans. India, on the other hand, has been a steady market.

Export Prospect: Nepal faces export restrictions in a number of markets. The government has responded by prescribing mandatory standards for honey production. However, Nepalese standards for honey do not meet international standards, including a number of Codex parameters such as electrical conductivity, Diastase unit (*Schade Scale*), Invertsae (*Siegenthaler unit*) and Proline. This makes it difficult for Nepal to overcome export market restrictions. In addition, without a significant increase in production, honey exports will remain small in absolute terms. Even if all of Nepal's current honey production were exported, exports would still be small (< US$2 million at current wholesale prices).

Index 2: World Market Conditions

Table 2.9

Total World Export Value of Honey 2005-2009 (US$1,000)

2005	2006	2007	2008	2009	2009
752,599	818,485	918,015	1,226,758	n/a	n/a

Source: TradeMap (import data).

Market Access Conditions (Tariffs and NTBs): Nepal would enjoy a significant tariff advantage for its honey exports compared to some of the main competitors (in particular China and Argentina) in both EU and Japan. Japan applies a 30 per cent MFN tariff and 25.5 per cent to China, while Nepal would enjoy duty-free access. The EU's MFN tariff is 17.3 per cent, which also applies to most non-EU suppliers, and Nepal has duty-free access. The USA has a low tariff and imports mainly from Canada. Anti-dumping duties apply against exporters from some countries, including China and Argentina. But such preferences are not a sufficient condition for any exports and the main challenge for Nepal will remain to be able to export commercial quantities needed in these markets and to overcome the SPS barriers. Nepal has already suffered from the SPS measures in the form of Pesticide Residue Content in its export to Norway. Nepal, to be eligible to export honey to any EU member country, will have to be listed in the EU as authorized country for import, under EU Directives 92/118/EEC of 17 December 1992. For that purpose, it has to submit national residue plans, guaranteeing the monitoring of the groups of residues and substances identified by the EU. However, it has not yet submitted its national residue plans, and, therefore, is banned from exporting honey to the EU member countries. A similar situation applies to export to Korea.

Access to Nepal is free and only subject to small nominal fees and a large share of the trade probably occurs informally anyway.

Major Competitors in World Market: Since Nepal's honey has free access to the Indian market and as trading takes place in an informal manner, mainly through bordering Indian cities and towns, traditionally Nepal's main competition comes from the domestic supply of honey in India. Honey is now imported from countries

like China and Australia, which are becoming a serious threat to export of Nepali honey to India. This is particularly the case as the production technology and packaging of honey in these countries are superior.

China is by far the largest honey producing nation in the world, followed by the USA, Argentina, Turkey, and Mexico. Other notable producers are Brazil, Canada, Australia, France, Spain, and Hungary.

World Market Prospect: Though there has been an upward trend in world imports of honey, there is an increased competition from China, which is now even entering the Indian market. Preferential tariffs, which Nepal is currently not using, will partially erode in the future.

Index 3: Domestic Supply Conditions

Producers: Honey is produced by a large number of beekeepers/farmers scattered all over Nepal. Marketing functions of the processors-wholesalers-exporters are integrated into a family business, most of them located in Kathmandu valley. Few traders are involved in export. The domestic market can be characterized as a 'buyers' market' with little bargaining power with the producers. In response, the beekeepers/producers in major producing districts are organizing themselves in association or cooperatives for marketing their honey.

Production Capacity: Nepal produced about 1,000 MT of honey in the year 2007/08. The total production has been increasing over the last years. The major honey producing districts of Nepal are Chitwan, Nawalparasi, Rupandehi, Kapilbastu, Dang, Sarlahi, Sunsari, Mahotari, Makwanpur, Banke, Bardia, and Kanchanpur. Similarly, the prominent areas for *A. laboriosa* or *Bhir Mauri* production are Ghachowk, Ghandruk, and Landruk of Kaski district, Lumle of Sunsari district, and Sumsher *Bhir* of Lamjung district. There are more than 150 bhirs in Ghachowk area alone.

Table 2.10
Honey Production in Nepal

Year	Distribution of Bee Hives (No.)	Production (MT)	Yield Kg./Hive
2001/02	126,884	529	4.17
2002./03	127,501	530	4.16
2003/04	130,000	577	4.44
2004/05	130,000	600	4.62
2005/06	NA	650	NA
2006/07	NA	650	NA
2007/08	NA	1,000	NA

Quality of Product: Nepalese honey has a unique flavour and is produced all over Nepal. It is estimated that almost 60 per cent of the total honey produced comes from *A. mellifera,* 38 per cent from *A. dorsata* and only 2 per cent from *A. cerana*. Different tests undertaken in Nepal and Denmark have confirmed that, except for Hydroxy Methyl Furfural (HMF) content, which has been found to be slightly on the higher side, all other parameters of Nepalese honey are within the acceptable level of quality/standard. The high content of HMF, however, is due to overheating and long storing duration.

Productivity: The average annual productivity of *A. cerana* and *A. melifera* is estimated to be about 8-20 kg. and 40-60 kg. per hive respectively. The productivity of *A.melifera* seems to be on the lower side as compared with the productivity of major honey-producing countries.

Availability and Quality of Labour Force: Labour is abundantly available. Many farmers have been trained in beekeeping and processing of honey by government and donor projects.

Labour Cost and Overall Production Cost: Transporting honey from the farm to the processing unit or wholesaler is the major marketing cost for each item, constituting as much as 50 per cent of the total marketing cost. The high transport cost is related to the small size of consignments. According to GTZ (2008), overall production costs of honey are high compared to China and India.

Level of Processing Technology: Processing technology used in the country is still rather primitive, but changes are taking place. There is almost no processing of honey in the *A. cerana* belt. Honey is squeezed out of the cut comb by pressing and then strained with a cloth. In the *A. mellifera* belt, the beekeepers use honey extractors and honey straining devices. In Chitwan, Nepal Beekeepers' Association (NBA) has installed a medium-sized honey processing plant. In Kathmandu, Gandaki Bee Concern has imported a honey processing plant of European standard. Other smaller enterprises have also developed simple processing units and treating smaller lots to meet their sales.

Cost and Quality of Infrastructure: Though some infrastructures like roads and electricity are developed in the beekeeping areas, they are not adequate. The sector is hindered by insufficient road infrastructures in the interior hill areas to transfer beehives for 'grazing' to the hill forest. This has limited exporters' capability to export even if honey remains a viable product. Additionally, quality monitoring, checking, and controlling of honey production and export by the government authority is lacking in Nepal.

Efficiency of Domestic Supporting Industries: Upstream enterprises supplying inputs like beehives are scattered and large in number and small in size, particularly the localized beehive manufacturer or suppliers. Their efficiency is high, but improvements in beehives are needed. The main downstream industry buying honey as input is the manufacturers of Ayurvedic medicines. There is one large buyer, viz. Dabur Nepal, while other traditional buyers are very small and scattered in urban centres throughout Nepal.

Domestic Demand: The major use of honey in Nepal is its consumption as a food item. It is used in traditional ways in medicine as well as for religious purposes. It makes an important ingredient and an additive in Ayurvedic and Homeopathic medicines and treatments. The total annual demand for honey in the domestic market is estimated to be above 300 MT, and is increasing over the years.

Government Initiatives and Donor Involvement: As more and more farmers are attracted towards beekeeping and its development, a number of organizations in both private and public sectors, including NGOs and INGOs, are involved in providing training as well as extension services. The major organizations are: Beekeeping Development Section, Godavari (Under MoAC/DoA), DADOs, Nepal Agricultural Research Council (NARC), District Forest Offices, MEDEP (UNDP/HMG, Nepal), Winrock International, AEC/FNCCI, GTZ, ICIMOD, Api-Net, Nepal, Nepal Beekeepers' Associations/Cooperatives, Local NGOs, SNV, CARE/Nepal, SCF/US. Besides, organizations like DANIDA, Heifer International, CECI, and JICA are also supporting beekeeping programmes by organizing different activities. Most of these organizations provide hives with colony and equipment at subsidized rate and provide training to farmers. The government's role in the sector has been in the form of subsidizing hives and tools, developing a national standard and coordinating donor activities. The government has been providing a 25 per cent cost subsidy on beehives and 50 per cent on other tools, equipment and services. The Agriculture Perspective Plan adopted by the government has given high priority to honey as a high value crop to be promoted in Nepal. However, donors admit that honey production costs are high and volumes currently too low to compete successfully in the world market (GTZ 2008). Donor-funded programmes are currently not targeted at directly promoting exports, but mainly in helping small farmers to produce and sell for the local market, which seems to make sense, given the probably high costs to establish or revive exports to third countries and the small value of overall production.

Prospect for Domestic Supply Conditions: The Federation of Nepal Beekeepers Association estimates the potential production of 20,000 MT of honey per year, and a study by GTZ estimates the potential at 10,000 MT, but we are not able to verify whether these numbers make sense from a commercial point of view.

The opportunities for product diversification are at two fronts. First, to produce specialty forage-based honey and ensure its quality for export into special markets like Japan. Second, opportunity lies in producing organic and pesticide-free honey. Some traders claim their honey as organic and pesticide-free because it is collected from forest and by default it is organic.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: According to previous estimates, more than 53,000 farmers are involved in honey production. The commercial production from *A. mellifera* is estimated to be coming from about 130,000 hives distributed by the government and various development programmes. A previous FTEE by ITC (2007a) of 13,000 was calculated by using an estimate of the required labour days for the production of 600 MT. It appears high, given that the annual value-added is less than US$2 million. A current production of 1,000 MT should require around 50,000 hives, and the required labour for one hive based on available US or UK data is only 5-30 hours, which suggests that FTEE in Nepal is well below 13.000. One would have to add people working along the value chain. We use 2,000 for the calculation of our indictors in the absence of better estimates. But it should be noted that for almost all farmers honey is not a full-time occupation, so the number of farmers involved in production is much higher.

Gender Impact: Employment creation for women is very small due to the hazardous nature of production processing. Women are also not much involved in honey processing.

Contribution to Skill Development: A number of training has been implemented by government and bee-keeping, honey processing and hive-making projects, which have generated required skilled and technical manpower. However, skilled labour and improved tools are insufficient for processing of honey.

Impact on Development of Disadvantaged Regions: Most of the beekeeping farmers are small farmers whose farm economics is constrained by land resources and they can get some cash income from honey production. As it is being produced in the whole of the Terai and hill areas, honey is very important for the development of this region. Also, beekeeping complements the production of other crops, especially those which are not of self-pollinating type.

Energy and Water Constraints: The sector is not energy- or water-intensive. Some energy is used in processing, but most of the honey extractors are still hand-operated.

Environmental Impact: The greatest environmental impact of beekeeping is its contribution towards pollinating. It has been reported that beekeeping helps increase the yield of all agricultural crops like mustard rapeseed, orange, etc. No negative environmental impact has been reported by beekeeping, except for the small impact due to the expanding use of wood in manufacturing beehives (very low quality timber used).

Market Attractiveness Index

Several EU markets, the USA, and Japan are the most attractive markets. Nepal enjoys significant tariff preferences in these markets.[12] However, honey is subject to stringent sanitary standards. Currently, honey is exported only to India, with official trade figures being negligible.[13]

[12] The table shows different tariff advantages across EU markets because the tariff advantage is calculated by comparing the rate applicable to Nepal with the rate of the main competitors in the individual market. If France, for example, imports honey mainly from Spain (duty-free), then the tariff advantage is lower than in a market such as the UK, where honey is mainly imported from countries subject to higher MFN rates.

[13] Estimates were used for exports, see above. The table shows official import data from India.

Table 2.11

Attractive Markets for Honey

Attractive markets for Honey (HS 0409.00)							
Top 10 - Weighted Market Attractiveness Index							
Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	UK	0	8.6%	11.7%	0%	11%	New Zealand, Argentina, Germany
2	France	0	7.7%	15.4%	0%	5%	Spain, Hungary, Argentina
3	Japan	0	6.9%	7.1%	9%	26%	China, Argentina, Canada
4	USA	0	18.9%	11.8%	0%	1%	Canada, Viet Nam, Brazil
5	Germany	0	20.1%	2.3%	0%	14%	Argentina, Mexico, Uruguay
6	Belgium	0	3.5%	19.1%	0%	14%	China, Germany, Mexico
7	Poland	0	1.2%	32.3%	0%	10%	China, Ukraine, Czech Republic
8	Australia	0	1.5%	26.8%	0%	0%	New Zealand, Canada, Argentina
9	Saudi Arabia	0	2.6%	13.1%	5%	-1%	Mexico, Yemen, Germany
10	Slovakia	0	0.8%	65.1%	0%	2%	Hungary, Czech Republic, Ukraine

Attractive markets for Honey (HS 0409.00)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	Germany	Poland	Norway	India	14
2	USA	Australia	India		
3	UK	Slovakia	Japan		
4	France	Belgium	Bulgaria		
5	Japan	France	Belgium		
6	Italy	Saudi Arabia	Germany		
7	Belgium	USA	UK		
8	Saudi Arabia	UK	Poland		
9	Switzerland	Turkey	Czech Republic		
10	Netherlands	Japan	Switzerland		

4) Lentils

Background

Lentil is a legume crop. It plays a very important role in improving soil fertility and for the sustainability of the farming system. The cropping pattern is either 'relayed' into paddy or 'follow' paddy harvest. The majority of farmers grow lentil for consumption while in the Terai region it is mainly grown for the domestic market and for export. Nepal's exportable lentil production is concentrated in 10 districts of Terai, where approximately 80 per cent of the total national production is harvested annually. There are about 670,000 farms in these ten districts. Average yield in this region is higher than the national average and India's yield rate. But the small producers with low input cropping patterns provide the bulk of supply, and commercial farm production is only a marginal source of lentil supply. Lentil is considered a traditional crop of secondary importance, and less attention is paid by the farmers to improve cultural operations and consequently little priority has been given to research, extension, policy, and infrastructure development. Lentils represent 60 per cent of the national pulses production and 90 per cent of pulses exports. The national production of lentils has been in the range of 140,000 to 160,000 MT per year since 2000. It was 161,147 MT in the year 2007/08. Approximately 15 per cent of it (at 70 per cent milling recovery rate) is exported.

Lentils are subject to occasional export bans. The GoN banned the export of lentils for more than six months in 2009.

Index 1: Export Performance

Table 2.12
Export Value of Lentils, 2004-2008 (US$1,000)

Direct data (Nepal)	2003/04	2004/05	2005/06	2006/07	2007/08
Exports overseas	13,975	8,628	21,010	6,222	17,946
Exports to India	8,909	10,263	9,895	4,204	4,312
Total exports*	**22,884**	**18,891**	**30,905**	**10,426**	**22,258**
Mirror data	2004	2005	2006	2007	2008
Exports overseas	0	0	0	0	22,509
Exports to India	7,829	8,144	5,225	2,267	5,156
Total exports	**7,829**	**8,144**	**5,225**	**2,267**	**27,665**

* Exchange rates used: 1US$ = NRs 65 until 2005/06, then 1US$ = NRs 73.

Nepalese export data differs substantially from foreign (mirror) data. Unlike for other products, Nepalese data was used to calculate indicators as the mirror data appears to be less reliable in this case. In particular, the imports reported from Turkey might not be accurate. The fact that domestic production was relatively stable since 2003/04 is also a good indicator that exports may have been rather stable as well, but even Nepalese data shows substantial fluctuations. Policy interventions, such as export bans, could also have a significant effect on the accuracy of trade data because they give an additional incentive to use informal channels.

Types of Exported Products: Whole and split pink lentil (mostly) in 50 kg jute bags with lining. Seed coat (*chuni bhusi*) are exported to India as animal feed.

Current Export Destinations: Nepal is currently exporting lentils to only a few countries. India remains the major destination, but Bangladesh and Sri Lanka have come up as other export market offering much potential. The USA, UAE, and Singapore are other export destinations. Turkey has appeared as a major importer in 2008, according to import data from Turkey. However, this could not be confirmed by Nepalese sources.

Potential Export Destinations: An empirical review and analysis of non-traditional potential markets indicates that a number of Middle East countries (Iraq, Saudi Arabia, Kuwait, and Qatar) could potentially be interested in importing Nepal's lentil. Turkey also seems to be an attractive market.

Nepal's World Market Share: Nepal is recognized as a significant player in the world's lentil market. Over the past two decades, it has ranked as number eight both as a producer and as an exporter of lentil. Nepalese lentils are said to be preferred in India. In comparison with Indian lentils, they are smaller in size but considered tastier. In 2008, Nepal's world market share was 2.2 per cent and it was the sixth largest exporter.
Trade Balance: Nepal also imports lentils from India. Such imports are volatile and have been between US$100,000 and US$10 million in recent years. According to Nepalese data, exports and imports with India are very similar, but if trade with third countries is included, Nepal is a net exporter.

Dynamism of Exports: Nepal's lentil export performance is somewhat irregular and suffers instability. Exports are fluctuating significantly from one year to the next in both volume and value. Yearly variations of 40 per cent or 50 per cent decrease or increase are common, and export revenues can double or triple suddenly, or vice versa. However, domestic production has been relatively stable in recent years.[15]

Export Prospect: Export prospect is very positive. Exports will remain volatile due to harvest fluctuations. A major threat is the government policy on exports and the occasional export bans. These could have a long-term effect on investment in the sector and other measures should be considered to reduce the impact of price surges on the poor, without jeopardizing export opportunities.

Index 2: World Market Conditions

Table 2.13

Total World Export Value of Lentils, 2005-2009 (US$1,000)

2005	2006	2007	2008	2009	2009
611,810	653,940	897,361	1,255,867	n/a	n/a

World imports have doubled over recent years, mainly due to a significant increase in imports from Turkey, Sri Lanka, and the UAE.

Market Access Conditions (Tariffs and NTBs): There is free access to the Indian market. The exporters or the Indian importers have to submit a certificate of origin and a phytosanitary certificate, which could be arranged at nominal cost. But both Nepalese and Indian governments can restrict the export or import unilaterally, depending on the domestic general food situation and lentil scarcity or abundance situations. Duties are 0-5 per cent in most of the potential markets, with main exceptions being Turkey (19.4 per cent) and Syria (50 per cent).

Major Competitors in World Market: India is both an important export destination and a competitor for Nepal. Canada and Turkey are other main competitors.

World Market Prospect: World imports and prices have grown significantly in recent years, but are very volatile as they depend on harvests in some of the key producing markets such as India and Australia.

Index 3: Domestic Supply Conditions

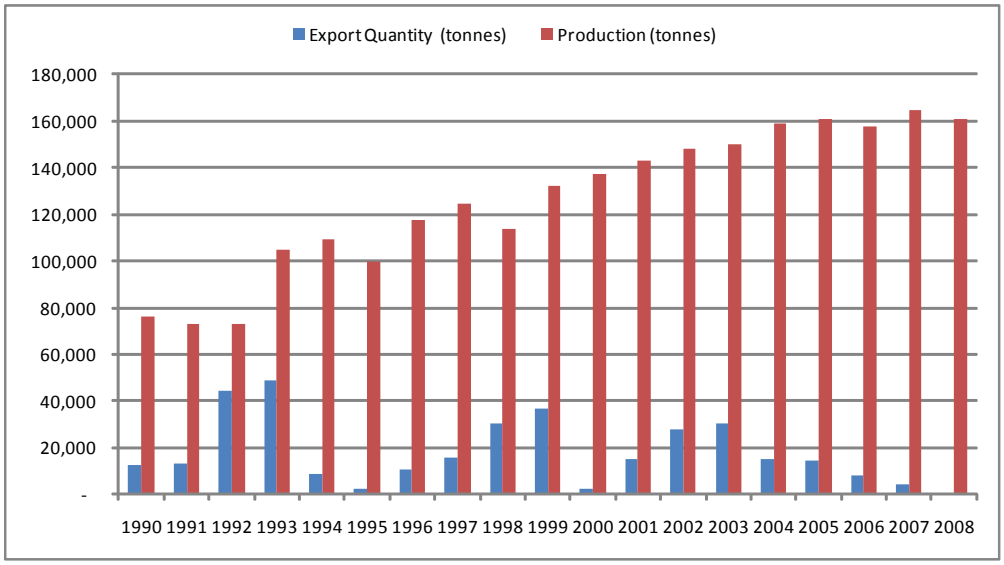
Producers: More than 670,000 farm families are involved in lentil production in 10 districts of central and western regions alone, supplying more than 80 per cent of the total national production. Thus, small producers with low input cropping patterns provide the bulk of the supply. Commercial farm production plays a marginal role.

There are a large number of small *'dal'* (pulses) mills scattered all over the country. They do custom milling as well as processing and sell lentils in the domestic market. The major exporters are 15 lentil processing mills. All of them are sizeable companies (each with 2-4 MT/hour processing capacity), and generally have multiple economic activities besides lentil milling and export.

[15] Annual production was between 148,000 and 166,000 MT between 2001 and 2008. Yield and harvested area have remained stable as well. Source: Statistical information on Agriculture, GoN, MoAC.

Production Capacity: National production of lentil has been in the range of 140,000 to 165,000 MT per year since 2000. It was 161,141 MT from 189,498 ha of cultivated area in 2007/08. Thus, production has been relatively stable. Large increases to the current level occurred during the 1990s.

Figure 2.1 Production and Official Exports of Lentils 1990-2008



Source: FAOSTAT. The export data that is shown here does not seem to reflect actual flows. Export data for 2008 is not available.

Quality of Product: The product quality is considered high with high future prospect. The grain size of the Nepali lentil is small, but it has a reputation of being 'small, very pinky, and tastier' lentil in international market. Nepal Bureau of Standards and Metrology has fixed the standard of split lentil.

Productivity: Average national yields are close to 0.9 MT/ha, which is above India's yields, but 20 per cent to 30 per cent inferior to other major lentil exporting countries such as Syria, Canada, and Turkey. Disease and pests are the major causes of reduction in yield and sometimes cause complete crop failure.

Availability and Quality of Labour Force: Low to average labour availability at both farm and processing level. Labour productivity is also low. Skilled labour is mostly and easily procured from bordering Indian towns by millers.

Labour Cost and Overall Production Costs: Labour cost is relatively high compared to other production costs. A small production cost advantage compared to other suppliers in the use of water, packaging, and equipment. Overall production cost is expected to remain high in the future.

Level of Processing Technology: The millers/exporters are using modern technology available in India and China. The technology is comparable to the ones used by their foreign competitors.

Cost and Quality of Infrastructure: The costs of electricity and transportation are high. Other infrastructural costs are comparable to the competitors. The condition of roads is bad and is deteriorating. Electricity supply is unreliable and mills have to install their own generators.

Efficiency of Domestic Supporting Industries: Efficiency of supporting industries is average to high. The mills can procure raw materials from concentrated lentil production areas but at comparatively high costs due to weak infrastructure. Other supporting industries are negligible.

Domestic Demand: Very small demand from domestic industries. There are a few ready-to-eat-food and snacks industries, but their requirements are negligible. A very large and expanding domestic market for lentils itself is resulting from occasional export bans. The domestic retail prices of lentils have sharply increased in recent years, from 38.3 NRs/kg in 1998/99 to 64.4 NRs/kg in 2007/08.[16]

Business Environment: The overall business environment is considered as average. But the administrative and judicial services are considered weak to very weak due to a high level of corruption, increasing business insecurity and crimes in the country, and high informal costs, especially for import/export procedures. The overall macro-economic environment is also considered bad, but there are no legal restrictions for investors, a good capital market and a lenient tax system are in place. The port facilities in Kolkata for exporting lentil are considered bad.

Lentil is a food item and thus it carries the risk of being a restricted item for export, depending upon the food situation in the country. Accordingly, export was banned for more than six months during 2009. The GoN restricted the export of lentil on the ground that its supply in the domestic market had decreased and the price had increased, thus, adversely affecting the general food situation in the country.

Government Initiatives and Donor Involvement: There is no specific strategy or policy for the sector. However, production expansion and export promotion activities are implemented under the general development programmes of the government. Some such government agencies/programmes are: the Trade and Export Promotion Centre (TEPC), Agribusiness Promotion and Marketing Development Directorate (APMDD), National Agriculture Research Council (NARC), National Agriculture Development and Research Fund (NADRF), District Agriculture Development Offices (DADO), Plant Quarantine Directorate, Department of Food Technology and Quality Control (DFTQC), National Bureau for Standards and Metrology and Crop Diversification Project with Asian Development Bank (ADB) loan.

Prospect for Domestic Supply Conditions: Continuation of production increases can be expected in the future due to increasing domestic demand and price and export demand, government's efforts to extend area and increase yield (from 0.72 MT to 0.90 MT per ha), and farmers' willingness to cultivate this crop. Also, the adoption of improved varieties of seed could help expand the production and enhance the quality of exported lentils.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: The number of people currently employed and future employment prospects in this sector are very high. There are about 600,000 to 700,000 farms in the Terai involved in lentil production and employing in average about 70 labour days per ha cultivated. This is approximately equivalent to 30,200 full-time jobs in lentil farming alone. Even more labour days are involved in the total value chain, which is characterized by the presence of a very large number of traders and middlemen to assemble the scattered production and transferring it through different marketing channels to the mill and for export. Similarly, approximately 50,000 truckloads--truckers and labour--are employed to transfer raw materials from the farm to the mill to the export points.

With a rough estimate of 15 per cent of production being exported, the FTEE for exports is estimated at 4,500.

[16] Source: Agricultural Marketing Information Bulletin 2008.

Gender Impact: This sector creates an average impact on women, in terms of both employment creation and work stress. Their involvement is mainly concentrated on less hazardous activities in the value chain,i.e. harvesting and cleaning of lentils in the mill.

Contribution to Skill Development: Government's efforts to improve the lentil farming system using appropriate inputs are contributing towards farmers' skill development. Similarly, the mills are providing training to their workers.

Impact on Development of Disadvantaged Regions: The impact on the disadvantaged groups of this sector is reported to be very high. Most of the farm workers and manual workers in the marketing channel and transportation are supplied by disadvantaged groups. Some of the 15 large mills are located in rural areas, creating employment opportunities for the poor and disadvantaged people. Lentil production also helps farmers to supplement their low protein diets and earn extra income by selling their surplus.

Energy and Water Constraints: This sector is energy–intensive, using electricity in processing and petroleum in the transportation of raw materials and final products. But the utilization of water is very low; the crop is mostly rain-fed and very little water is used in its processing.

Environmental Impact: Lentil is a leguminous crop which is characterized by 'nitrogen fixing' elements enriching the soil. Thus, it is considered very environment-friendly. The processing does not emit significant pollution.

Market Attractiveness Index

Unlike most other agricultural products, Nepalese lentils are already exported to a variety of markets, with Turkey being the major destination, followed by India. Turkey is the world's major importer of lentils, with very high growth rates in recent years, but applies a high tariff of 19.4 per cent. Other attractive markets are the UAE, Sri Lanka, and Algeria. Tariff advantages play no role in these '"attractive markets'. Apart from relatively small markets, India is the only market where Nepal has a significant tariff advantage (MFN 10 per cent, Nepal 0 per cent).

Table 2.14
Attractive Markets for Lentils

Attractive markets for Lentils (HS 0713.40)

Top 10 - Weighted Market Attractiveness Index

Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	Turkey	8,963	19.4%	213.1%	19%	0%	Canada, Iraq, Australia
2	UAE	3790	6.5%	101.5%	5%	0%	Canada, Australia, Turkey
3	Sri Lanka	3192	8.6%	40.7%	11%	0%	Australia, Canada, Turkey
4	Algeria	0	4.1%	38.1%	5%	0%	Canada, China, USA
5	Iran	0	2.9%	?	5%	0%	UAE, Canada, Turkey
6	Egypt	2597	5.2%	11.6%	0%	0%	Canada, Syria, Australia
7	Saudi Arabia	0	2.4%	49.6%	5%	0%	Canada, USA, Turkey
8	Spain	0	3.8%	26.6%	0%	0%	USA, Canada, Portugal
9	UK	1337	2.9%	34.0%	0%	0%	Canada, Turkey, Australia
10	Pakistan	0	2.7%	31.9%	0%	0%	Canada, USA, Ethiopia

Attractive markets for Lentils (HS 0713.40)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	Turkey	Turkey	Norway	Turkey	8,963
2	Sri Lanka	UAE	Russia	India	5,156
3	UAE	Iran	India	UAE	3,790
4	Egypt	Saudi Arabia	Kyrgyzstan	Sri Lanka	3,192
5	Algeria	Sri Lanka	Belarus	Egypt	2,597
6	Spain	Morocco	Kazakhstan	UK	1,337
7	Iran	Algeria	Japan	USA	523
8	UK	Kuwait	Switzerland	Canada	395
9	Colombia	Syria	Tajikistan	Australia	389
10	Pakistan	UK	USA	Singapore	336

5) Tea

Background

Tea cultivation in Nepal began in 1863 and the first factory was built in Ilam in 1878. Nepal Tea Development Corporation (NTDC) was established by the government in 1966. It was not until 1982 that its significance as an export earner was identified by the government with the designation of eastern districts (Jhapa, Ilam, Panchthar, Terhathum, and Dhankuta) a 'Tea Zone'. From then onwards, the government has been assisting tea growers and processors for its development. The industry began to be more organized and recognized as a potentially significant sector with the government promulgating Nepal Tea and Coffee Development Board Act in 1993 and setting up the Tea and Coffee Development Board. A National Tea Policy was introduced in 2000 to support the growth of the sector. The government adopted a privatization policy so that the private sector would become the engine of growth for the industry, envisaging that tea would be one of the major crops for poverty reduction in the rural and hill areas and become a significant export earner. Due to the varied weather conditions and soil composition, tea is grown in two areas, under significantly different agro-climatic regions, in the Terai and the hills. In the hills, orthodox/green (leaf) tea is produced for export while in the Terai region the CTC tea is produced, mostly used for domestic consumption with some exported to India.

Tea production and exports increased very significantly over the last decade (2.2) and, today, tea is one of the largest agricultural exports of Nepal. Around two-thirds of the production is exported, mainly to India.

Index 1: Export Performance

Table 2.15

Export Value of Tea, 2004-2008 (US$1,000)*

Mirror data	2004	2005	2006	2007	2008
Exports to India	3,679	5,891	5,103	12,739	16,158
Exports overseas	1,217	1,550	2,279	1,087	635
Total exports	**4,896**	**7,441**	**7,382**	**13,826**	**16,805**

* Limited data from Nepal is available. Export values to overseas countries are similar, but export data to India seems unreliable.

Export Prospect: According to industry sources, the prospect of further increases in both exports and production is widely seen as very positive. Export prospect is basically in line with production prospect as most of the production is exported.

Index 2: World Market Conditions

Table 2.16
Total World Export Value of Tea, 2004-2008 (US$1,000)

2005	2006	2007	2008	2009	2009
3,335,023	3,616,503	3,889,756	4,248,759	5,408,830	n/a

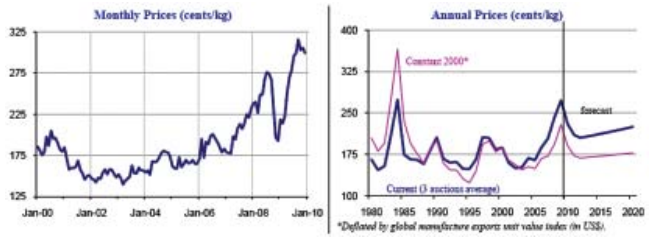
World tea exports have grown annually by 12 per cent in recent years, with a slight nominal upward trend in average unit values.

Market Access Conditions (Tariffs and NTBs): Overall, Nepal has favourable market access to most markets but few tariff advantages, with the main exception being the Indian market. India applies a 100 per cent MFN tariff on tea. Many major importers have zero MFN rates for tea,[18] so there is no advantage for Nepal. This includes major importers such as EU, USA, Oman, and UAE. Russia applies a 20 per cent tariff and grants duty-free access to Nepal, and similarly does Japan. These could, therefore, be interesting markets for direct exports. Pakistan, one of the largest importers in the world, grants a 10,000 MT duty-free quota for SAPTA LDCs (of which only Nepal and Bangladesh export tea).

Major Competitors in World Market: Sri Lanka and Kenya are the main competitors in Nepal's current or potential export destinations, followed by China and India. Pakistan, for example, imports 63 per cent of its tea from Kenya alone.

World Market Prospect: Overall, world market prospect is positive. World market prices for tea are volatile, but have shown an upward trend in recent years, except for a temporary but significant fall during the global economic crisis in 2008/09. By the end of 2009 prices have reached their highest level since the mid 1980s. The World Bank forecasts a positive trend in prices in the long-term, partly due to increasing demand from India.

Figure 2.3 Tea Prices on World Markets



Source: World Bank, Global Economic Prospects 2009 (Commodity markets briefs)

[18] Tariffs refer to black tea only.

Index 3: Domestic Supply Conditions

Producers: There are reportedly a total of 12,200 smallholder plots,[19] 31 cooperative societies, 134 medium-sized gardens (57 are CTC tea estates), and 38 large plantations. There are 40 tea processing units of different sizes. There are 28 units having both tea estates and processing units and about 20 tea packers, exporters, and importers in the country.

Production Capacity: The sector is concentrated in five districts in eastern Nepal. The last decade or so has seen a tremendous growth in the Nepalese tea industry with the plantation area expanding from 3,502 ha in 1996/97 to 16,594 ha in 2007/08. This increase in plantation area has been matched by an increase in the output of tea: 2,900 MT in 1996/97 to 16,100 MT in 2007/08. Of this, 85 per cent was CTC and 15 per cent was orthodox type. Production is concentrated in a number of fragmented areas such as private gardens, small farmers' plantations, and factories. Consequently, marketing efforts are also disjointed. For instance, Nepal's tea factories are supplied by over 12,200 producer farmers.

Table 2.17
Acreage and Production of Tea

Year	Area (ha)	Production (Million kg).	Yield (kg./ha)
2003/04	15,012	1.17	776
2004/05	15,900	1.26	793
2005/06	16,012	1.37	855
2006/07	16,420	1.52	924
2007/08	16,594	1.61	972

Quality of Product: All the stakeholders of tea value chain reported that quality of Nepal tea was high and expected it to improve further in future, but pesticide residues has been a problem in recent years.
Productivity: In 2007/08, the overall average yield of CTC tea plantations was 972 kg/ha, while it was only 274 kg/ha for orthodox type. The productivity per unit of land area is steadily increasing over the years. The orthodox tea yield in Nepal is about 25 per cent less than India and 30 per cent less than Sri Lanka. In the case of CTC the yield is less than that of Kenya.

Availability and Quality of Labour Force: There is scarcity of skilled personnel and expertise in the tea sector, partly due to a lack of formal training institutions.

Labour Cost and Overall Production Cost: Production costs--leaf production and processing--on the average are comparable to the competitors. Labour costs were reported to be around US$1.50-2 for tea pluckers in 2007, but depend on the amount plucked (ITC, 2007d). However, these costs apparently have since risen and industry sources complained about, in their view, excessive wage demands from unions and have therefore rated overall labour costs as 'high'.

Level of Processing Technology: The technologies used in tea production and processing are of average standard. The past efforts of all stakeholders have helped increase the production of green leaf of small farmers, cooperatives, and tea estates. But the processing capacity has not developed to cope with the increased production of green leaf.

[19] NTCDB indicates a total of 7,791 smallholder farmers. However, data collected from associations/chambers/and INGO/NGO's suggests that a total of 12,200 smallholder farmers are active.

Cost and Quality of Infrastructure: High costs of electricity and fuel are major problems, as are the transportation facilities used for carrying tea leaf from farm to processing unit are bad, which are negatively affecting the quality of product.

Efficiency of Domestic Supporting Industries: All required inputs are easily and abundantly available. Many people are even complaining of indiscriminate and overuse of inputs. The production of tea leaf far exceeds the processing capacity of the existing factories, and farmers are selling their leaf to Indian factories across the border.

Domestic Demand: No industrial uses of tea were reported. However, there are a number of tea blenders who are diversifying their activities, resulting in a very high demand for processed tea.

Business Environment: The overall business environment is considered as average. But export is made costly due to lack of certification and test reports on the products from accredited laboratories or authorities. One issue that has been raised in the past about the Nepalese sector is the lack of an auction system for tea, which would allow international buyers to source tea direct from one source. Tea from different small-scale producers could be graded, increasing the transparency for buyers who prefer to source from one place only rather than from a variety of small-scale producers.

Government Initiatives and Donor Involvement: There are several government-backed authorities, private associations, and international donors assisting the tea sector. The government grants a number of incentives and assistance to the tea industry like exemption of land ceiling; exemption of 75 per cent of land registration fee and land revenue; leasing of public land for up to 50 years for tea cultivation; priority lending; low interest rates for land consolidation; free technical service to small and cooperative tea farming; capital grants for irrigation; establishment of research and training centres in collaboration with the private sector; incentives to ancillary industries, and some export promotion activity support.

HIMCOOP has been formed to provide a one-stop agency for tea sales. It is funded by SNV and its marketing strategy has been structured with the assistance of GTZ and WINROCK International. Efforts are made to brand Nepalese tea in the international market as 'Quality from the Himalayas'. HOTPA is also implementing, in cooperation with several donor agencies, a code that will bring the sector up to international standards. This includes the introduction of environmentally friendly and socially accountable practices.

Prospect for Domestic Supply Conditions: Tea cultivation has been extended to different districts from Jhapa in the Terai to Ilam, Panchthar, Dhankuta, Terhathum, Sankhuwasabha, Bhojpur, Dolakha, Ramechhap, Solukhumbu, Sindhupalchowk, Nuwakot, and Kaski in western Nepal. Production has increased very fast and more promising as most plantations are still young and yet to start yielding harvest, which suggests that production is set to increase even further. There is a large potential to expand the cultivated area, but additional processing facilities will be required to help increase Nepal's tea export. Organic certification and high quality teas are the further differentiating factors.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: The job creation impact of this sector is very high compared to other sectors. This sector seems to be a strong engine for farmers' income generation and poverty reduction as orthodox tea gives higher returns compared to other crops. This sector is also likely to have a high impact on total employment compared to other sectors, especially female employment, as estimates suggest that it already accounts for around 100,000 people (ITC, 2007a).

The FTEE is high for this sector. Over 30,000 people are directly involved in the industry, with a large percentage being rural women.

Gender Impact: Women constitute a large percentage of total labour involved in this sector, although this is mainly in low-skill work, such as leaf picking. Their overall share is estimated at 60 per cent (Thapa, 2005).

Contribution to Skill Development: Most of the workers are trained and/or have gained experience in Indian tea estates. The establishment of a tea technical school in Nepal is still under consideration.

Impact on Development of Disadvantaged Regions

Stakeholders agree that tea production has a positive effect on disadvantaged regions.

Energy and Water Constraints: Energy and water uses are average. Tea bushes do not require high irrigation, and the seasonal monsoon rains provide the required amounts sufficient for the season unless in very adverse periods.

Environmental Impact: The land use is better for tea as the undulating terrain and barren areas can be used due to the hardy and deep roots of the bushes, able to bind the soil and stop erosion. However, indiscriminate and high use of pesticides and insecticides and incorrect application cycles, mainly in the orthodox tea areas, where the insect and pest presence is very high due to the dampness in the atmosphere, have caused the final product to contain more than the maximum level of residues permitted.

Market Attractiveness Index

Almost all of Nepal's tea is exported to India. Attractive markets for direct export appear to be Egypt, UAE, Russia, USA, and UK. These markets are relatively large and fast-growing. No significant tariff advantages exist in major markets other than India, but Pakistan is granting a duty-free quota of 10,000 MT/year to SAPTA LDCs.

Table 2.18

Attractive Markets for Tea

Attractive markets for Tea (HS 0902.40)

Top 10 - Weighted Market Attractiveness Index

Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	Egypt	0	7.3%	200.3%	2%	-2%	Kenya, India, Indonesia
2	UAE	0	7.0%	24.7%	0%	0%	Sri Lanka, India, Kenya
3	Russia	0	11.7%	19.9%	0%	0%	Sri Lanka, India, Kenya
4	USA	11	6.2%	11.2%	0%	0%	Argentina, Germany, China
5	UK	0	11.8%	5.4%	0%	0%	Kenya, India, Tanzania
6	Iran	0	6.3%	20.9%	30%	0%	Sri Lanka, India, Kenya
7	Pakistan	31	8.4%	3.5%	10%	0%	Kenya, India, Bangladesh
8	Germany	239	4.0%	8.5%	0%	0%	India, Sri Lanka, Indonesia
9	Kazakhstan	0	2.8%	19.1%	0%	0%	Kenya, India, Sri Lanka
10	Australia	0	1.3%	33.8%	0%	0%	India, Indonesia, Sri Lanka

Attractive markets for Tea (HS 0902.40)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	UK	Egypt	India	India	15,116
2	Russia	Australia	Kyrgyzstan	Germany	239
3	Pakistan	UAE	Japan	France	59
4	Egypt	Iran	Tajikistan	Pakistan	31
5	UAE	Russia		Japan	27
6	Iran	Kazakhstan		Austria	17
7	USA	USA		Canada	13
8	Japan	Germany		USA	11
9	Germany	Saudi Arabia		Poland	10
10	Kazakhstan	UK		Denmark	6

6) Instant Noodles

Background

Invented in Japan in the late 1950s, production of instant noodles in Nepal began in the early 1980s. Gandaki Noodles started with the now famous 'Rara' brand. This came at a time when there was a growing demand for instant noodles, which were imported mainly from Thailand. Several other companies followed over the years. At present, there are more than 14 noodles factories scattered all over Nepal, with an installed annual production capacity of more than 48,890 MT. The sector is driven by large companies with well-established brands (e.g. Chaudhary with 'Wai Wai' and Khetan with 'Mayos'). Today, the estimated value of production is US$28 million, with exports above US$10 million. The internal market is tight and competition is intense. After the Nepal-India treaty of 1996, Nepal-made instant noodles have found a ready market in India (and also Bhutan), where Nepalese brands are now well-established.

Nepal is the 17th largest consumer of instant noodles in the world.

Index 1: Export Performance

Table 2.19

Export Value of Instant Noodles, 2004-2008 (US$1,000)

Direct data (Nepal)	2004/05	2005/06	2006/07	2007/08	2008/09[20]
Exports overseas	1,196	1,574	1,783	4,171	1,927
Exports to India	5,682	6,380	3,252	7,300	9,516
Total exports	**6,878**	**7,954**	**5,035**	**11,471**	**11,443**
Mirror data	2004	2005	2006	2007	2008
Exports overseas	19	999	274	423	1,240
Exports to India	2,434	3,410	881	2,699	9,150
Total exports	**2,453**	**4,409**	**1,155**	**3,122**	**10,390**

[20] US$=NRs65 till 2005/06, then on US$=NRs 73.

As with most products, there is a significant difference between Nepalese data and mirror data, except for the most recent period. However, what is clear is that 80-90 per cent of exports go to India alone. Mirror data was used for the calculation of indicators.

Types of Exported Products: Brown and white noodles, with a large number of brands in each category. Brown type of noodles comes in three different ways: straight out of pack, cooked, or as a soup. In terms of HS codes, most exported pasta products are 1902.19 ('uncooked pasta, not stuffed or otherwise prepared, nes', with some exports of 1902.11 ('uncooked pasta, not stuffed or otherwise prepared, containing eggs').

Current Export Destinations: According to Nepalese data, in 2008/09, exports to India constituted 83 per cent, China (including Hong Kong) 14 per cent, and Bhutan 2 per cent. Very small amounts were exported to Malaysia, Kuwait, UAE, EU, and Australia. Mirror data shows 88 per cent exports to India and 7 per cent exports to Qatar.

Potential Export Destinations: The largest markets for instant noodles in terms of consumption are China, Indonesia, Japan, USA, Vietnam, Korea, Philippines, Thailand, Russia, and India. India and some countries in the Middle East have very large growth in consumption.

Nepal's World Market Share: Given the diversity of products grouped together under the applicable tariff code, no exact calculation of the size of the world market or Nepal's share in it is possible. However, Nepal has almost a 100 per cent share of the Indian import market.[21]

Trade Balance: Nepal imports noodles from a number of countries like Italy, Turkey, and India, but the import value has been below US$0.5 million in recent years and some imports, such as those from Italy, are different types of pasta. Wheat flour, the major input for noodle factories, is mostly supplied by domestic wheat flour factories. But some wheat flour is imported from India due to price differences and quality considerations.
Dynamism of Exports: Exports have increased substantially over recent years, both according to Nepalese and Indian data, and also by both value and volume. According to interviewed companies, many new production units are coming up with new brands of noodles for export markets.

Index 2: World Market Conditions

Instant noodles do not have a specific tariff code in most countries. They would usually fall under the HS heading, 1902.11/19 (uncooked pasta), which also includes completely different types of noodles. That means the world trade indicators are not meaningful for the instant noodles sector. In the absence of trade data on instant noodles, estimates for consumption provided by the World Instant Noodles Association (WINA) are shown. There is no comparable data on values, but with a rough assumption of a typical cost of US$10 cts. per pack, the world instant noodles production would be worth more than US$9 billion.

Table 2.20
Total World Consumption of Instant Noodles, 2004-2008
(in million packs)

2004	2005	2006	2007	2008
79,980	86,000	92,080	98,420	93,600

Source: http://instantnoodles.org/noodles/expanding-market.html

[21] The actual share for the main exported product (1902.19) is 80-90 per cent, but most of the remainder comes from Italy, for which one can assume that it is not a directly competing type of pasta.

Market Access Conditions: Nepal has free access to the Indian market and is benefitting from a high MFN tariff of 30 per cent. Other markets for which there might be a potential for future exports apply the following MFN rates and preferences for Nepal:

Table 2.21:
Nepal's Preferential Tariffs for Instant Noodles

Importer	MFN tariff	Preferential rate applicable to Nepal
Pakistan	20%	12%
Bangladesh	25%	no preference
Bhutan	30%	28.5%
China	15%	no preference
Japan	20-30%	Free
Korea	8%	no preference
EU	27-35%	Free
USA	0-6%	Free
Qatar and UAE	5%	no preference
Russia	15%	no preference

This shows that Nepal still faces considerable tariff barriers in many of the regional markets (Pakistan, Bangladesh, Bhutan), which probably have a much higher export potential than distant markets. See also below the Market Attractiveness Index (MAI) section for further details on tariffs in the world's largest markets for instant noodles.

Major Competitors in World Market: Though there is no detailed data on world trade flows, Thailand appears to be by far the largest exporter of instant noodles. Other countries with even higher exports (Italy, Turkey) export other types of pasta products. India is not a large exporter (US$2-3 million/year), but Indian producers are the main competitors in the Indian market. India imports very little from other countries.

World Market Prospects and Export Prospect: World consumption has been growing by 4 per cent per year since 2004, with the highest growth rate being estimated for India with 38 per cent. Consumption in Gulf countries, to which Nepal also exports, has grown annually by 8 per cent. Industry sources in Nepal also claim that Bangladesh, Bhutan, and Pakistan have very good prospect for further export growth.

Index 3: Domestic Supply Conditions

Producers: There are at least 14 noodles factories of different sizes in the country, but only three of them export. A few were established under technical collaboration with foreign companies like the Singapore-based Cinnovation Group or the Thai President Foods. One of the companies has an estimated turnover of US$10 million/year. One has established its own two manufacturing units in India with an investment of US$7 million and a combined total production capacity of 20,000 MT/year. They all are private companies.

Production Capacity: It is estimated that the size of the instant noodles sector is around US$28 million/year. According to Nepal Rastra Bank (NRB) statistics, the production of the industry was 25,747 MT in the year 2004/05, which is estimated to have been increasing at the rate of 15-20 per cent per year.

Quality of Product: The products fulfill stringent hygienic standards. All have acquired the applicable Nepalese standards and most of the units are ISO 9001:2000 certified.

Productivity: The companies have installed modern technology with high productivity. But infrastructural constraints like power cuts, labour strikes, and short supply of water are constraining productivity.

Availability and Quality of Labour Force: According to interviewed companies, there are no significant problems related to the availability of workers or labour productivity. Experienced foreign investors are providing technical know-how to some units. Most companies are equipped with a market research team backed by managerial efficiency to promote their products in the market.

Labour Cost and Overall Production Cost: There is some labour cost advantage compared to other suppliers.

Level of Processing Technology: All units are using modern technology and some of them are using state-of-the-art Japanese machinery with very high efficiency. Moreover, some companies are employing one of the most cutting edge production technologies in Nepal.

Cost and Quality of Infrastructure: Infrastructure is ranked low by interviewed companies, whereas costs are on average side compared to the competitors.

Efficiency of Domestic Supporting Industries: A large number of domestic industries are supplying raw materials, in particular wheat flour. Nepal is a wheat surplus country. There are more than 15 big wheat flour mills, producing around 130,000 MT of wheat flour per year. These mills also supply wheat flour to noodles factories. Also, one of the noodles companies has its own wheat flour mill. But some wheat flour is imported from India due to price and quality differences. Imports from India are duty-free and easy as well, but sometimes India restricts the export of wheat flour. The noodles factories then have to import the wheat flour from other countries, which is more difficult and costly. The industry depends on imports of some raw materials like chemicals, seasoning, palm oil, and preservatives. Overall, the present level of efficiency of domestic support industries is high and the prospect is also high.

Business Environment: The overall business environment of this sector is considered good to very good. Industry sources did not state particular problems with the macro-economic environment, administrative services, judicial services or the tax system.

Government Initiatives and Donor Involvement: The government does not have any specific strategy or policy for the sector, except during the bilateral trade talks and agreements where this product is included as a major export item. No donor agencies have been involved in the sector. It is entirely driven by the private sector.

Prospect for Domestic Supply Conditions: There is good prospect for increasing the production. Industry watchers say that the noodles industry has been growing at a steady rate of 15 to 20 per cent in recent years. Besides, the industry was running at less than 60 per cent production capacity during 2004/05, which is expected to increase over the years. Now the noodles market has become so sophisticated that manufacturers are bringing in new products targeting special segments of the market like noodles solely targeting school kids.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: Total FTEE for the year 2006/07 is estimated at 4,800 workers.[22]

[22] Source: Industrial Statistics 2006/07.

Gender Impact: The respondents stated that the industry provides high opportunities for women employment. The share of women in visited companies is well above 50 per cent, but mostly for low-skill jobs, such as packing. However, official employment data for 2006/07 indicates that only 25 per cent of the total workers employed were women.

Impact on Development of Disadvantaged Regions: There is no particular impact on disadvantaged regions, except for possible backward linkages to the wheat sector.

Energy and Water Constraints: The energy intensity of this sector is considered average. The production requires electricity and water, and industry sources stated that the supply of both is often problematic. All the factories have their own sources of back-up supplies of water and electricity, which increases their production costs.

Environmental Impact: There are no particular negative environmental effects of this sector.

Market Attractiveness Index

Instant noodles mainly fall under HS 1902.19, 'Uncooked pasta, not stuffed or otherwise prepared'. A lot of other pasta products fall under this category, such as 'ravioli' or other products which are entirely different from the type of instant noodles that are popular in most parts of Asia. Therefore, trade data could not be used to identify promising markets. The table shows the 10 largest markets in terms of consumption and consumption growth (for which data is available), together with tariff data. Out of the 10 largest markets, Nepal currently exports only to India. It can be assumed that instant noodles are mainly produced locally in these markets. Nepal would also face very high tariff barriers in many of them.

Table 2.22
Attractive Markets for Instant Noodles

Attractive markets for Instant noodles (HS 1902.11/19)

Top 10 - Market Attractiveness Index by market size

Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage
1	China, Hong Kong	-	48.3%	3.7%	15%	0%
2	Indonesia	-	14.6%	3.3%	5%	0%
3	Japan	-	5.4%	-2.0%	20-30%	20-30%
4	USA	-	4.6%	3.3%	0-6%	0-6%
5	Vietnam	-	4.2%	12.1%	50%	0%
6	Republic of Korea	-	3.6%	-2.2%	8%	0%
7	Philippines	-	2.7%	0.0%	15%	0%
8	Thailand	-	2.3%	5.1%	30%	0%
9	Russia	-	2.1%	7.1%	15%	0%
10	India	9,150	1.7%	38.0%	30%	30%

Attractive markets for Instant noodles (HS 1902.11/19)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	China (incl. HK)	India	India	India	9,150
2	Indonesia	Myanmar	Japan	Qatar	145
3	Japan	Nigeria	Norway	Belgium	15
4	USA	Costa Rica	Australia	UK	13
5	Vietnam	Vietnam	Switzerland	Canada	9
6	Korea (South)	Cambodia	USA		
7	Philippines	Malaysia	New Zealand		
8	Thailand	GCC*	Canada		
9	Russia	Nepal	Portugal		
10	India	Russia	Italy		

Source: MacMap and WINA. World market share is measured by consumption per country. Exports are in US$ 1,000. GCC (Gulf Cooperation Council) countries

7) Medicinal Herbs and Essential Oils

Background

The Himalayan medicinal and aromatic plants (MAP) have directly contributed to the livelihoods of people in Nepal's mountainous areas for many centuries. Nepal's biodiversity exists due to its climatic conditions, and many isolated topographical locations hosts around 7,000 species of plants.[23] About 1,800 species are currently in use for production of Ayurvedic, Unani, and Siddha medicines[24] and also for essential oils, cosmetics, aromatic foods, and perfumes. A recent report counted 701 species of medicinal plants in Nepal.[25,26] At present, the processing of MAP is limited to distilling of essential oils. The major part of collected plants is exported to India in raw form. A smaller part is processed into essential oils or used in the manufacturing of traditional Ayurvedic medicines. Essential oils are exported to overseas markets and then used in the manufacturing of cosmetics, perfumes, and pharmaceuticals. Local production of such items for export is very limited.

The sector has the potential to contribute more to poverty alleviation as it provides employment in remote areas where the harvest takes place. There is a surging global market and growing consumers' preferences for natural food and natural health care and herbal products.

Index 1: Export Performance

Table 2.23
Export Value of Medicinal Herbs and Essential Oils, 2005-2009 (US$1,000)

	2005	2006	2007	2008	2009
Medicinal herbs (1211.90)*	2,143*	1,314*	1,802*	2,991*	n/a
Essential oils (3301)	379	491	586	963	n/a
*Note: *Export values above are based on official import statistics from third countries.*					

[23] Department of Plant Resources, MFSO/GoN, Flowering Plants of Nepal (Phanerogams), 2001.
[24] Baral, S.R. and Khurmi P.P., A Compendium of Medicinal Plants of Nepal, 2006.
[25] Department of Plant Resources, MFSC/GoN, Bulletin No 28, Medicinal Plants of Nepal (Revised) 2007.
[26] K.P. Acharya, R.P. Chaudhary and O.R. Vetaas [not consistent with name style in fn 24], 'Medicinal Plants of Nepal: Distribution pattern along an elevation gradient' (…), Banko Janakari, A Journal of Forestry Information for Nepal Department of Forestry Research and Survey, Vol 19, No 1, May 2009.

Information from industry sources and data provided by the TEPC suggest that exports of medicinal herbs, which go mainly to India, could be as high as US$10 million per year. Adding an estimated export value of US$1 million for exports of essential oils, this study uses **US$11 million** for the calculation of indicators for the sector. A separate estimate cited in ITC (2007a) suggests that overall exports of non-timber forest products (NTFP), of which herbs are a substantial part in Nepal, could be as high as US$35 million.

Types of Exported Products: Medicinal plants are exported in raw form. A smaller part of the harvest is processed into essential oils.

Current Export Destinations (share of exports): Essential oils are mainly exported to the EU (71 per cent), India (11 per cent), and USA (10 per cent). Medicinal herbs are mainly exported to India, with significant informal exports. The only other major destination is Hong Kong (63 per cent of official exports).

Potential Export Destinations: Large and dynamic importers for essential oils are, for example, Singapore, Switzerland, and India and for medicinal herbs the USA, EU, and Vietnam. However, such analysis based on trade flows should be interpreted carefully because such products are very heterogeneous.

Nepal's World Market Share: Nepal's share in the world market is around 0.1 per cent and 0.2 per cent in the market for medicinal herbs.

Trade Balance: Nepal's imports of medicinal herbs and essential oils are around US$1 million per year. However, these are not necessarily competing products due to the heterogeneity of the sector.

Dynamism of Exports: Exports are highly dynamic. Annual growth of exports since 2004 has been 20 per cent.[27]

Export Prospect: According to industry sources, the main barrier to additional export of essential oils is a lack of supplies, whereas there is sufficient demand from international buyers for such products.

Index 2: World Market Conditions

Table 2.24
Total World Export Value Medicinal Herbs and Essential Oils, 2005-09 (US$1,000)

	2005	2006	2007	2008	2009
Medicinal herbs (1211.90)*	1,075,041	1,144,928	1,418,939	1,552,489	n/a
Essential oils (3301)	1,249,545	1,349,055	1,651,439	2,013,500	n/a

Market Access Conditions (Tariffs and NTBs): Tariffs are relatively low for such products in major markets. However, numerous other barriers exist, such as the SPS measures. Requirements are stricter for final products (such as cosmetic products, perfumes, pharmaceuticals) than for the raw materials which Nepal currently exports; so, adding further value to raw materials could be challenging in terms of fulfilling standards in destination markets. Industry sources suggest that there have not been significant problems in fulfilling exports requirements, with one exception being difficulties in obtaining 'organic product' certification.

Major Competitors in World Market: Indonesia, China, and France are the major exporters of essential oils.

World Market Prospect: The world market for both medicinal herbs and essential oils is growing fast, with annual growth rates of 13-18 per cent (2004-08) for major products. Generally, prospect in the world markets for such natural products is considered to be very positive.[28]

[27] TradeMap, using mirror data. [28] See for example ITC (2007a).

Index 3: Domestic Supply Conditions

Producers: Out of about 300 firms, only 28 are directly involved in processing, while the others focus on trading alone. Nepal Herbs and Herbal Products Association (NEHHPA) has 33 members and *Jadi Buti*, the Herbs Entrepreneurs Association of Nepal (JABAN) has 225 members (of which only three are involved in essential oil processing).

Production Capacity: Estimates based on collection permits issued in 58 districts (out of the 75 districts in Nepal) by the Department of Forestry indicate that annually about 50,000 MT of MAPs could be harvested.[29] Out of this, currently only 20-30 per cent are being collected, processed, and traded. In 2007/08, a total of Rs 29 million was recorded as royalties from collection of 3,381 MT.[30] Attaria and Tanakpur in the Far-Western Region (30 per cent), Nepalgunj in the Mid-Western Region (50 per cent), Butwal in the Western Region (4 per cent), Trishuli and Kathmandu in the Central Region (9 per cent), and Basantpur in the Eastern Region (7 per cent) are the collection and marketing centres for herbs in Nepal.[31] There has been a drastic reduction in herbs collection as against an annual average of 8,400 MT for the previous five years (2002/03 to 2006/07).[32] However, the situation is improving with exports of 5,540 MT of 40 species of crude herbs valued at Rs 400 million. Data from Nepalgunj customs in 2008/09[33] indicates that the total export of the country could have surged to about 10,000 MT. Informal and unrecorded exports to India from porous borders are also high. A list of the 52 most important commercially available herbs is presented in Table 2.27.

Quality of Product: More than 95 per cent of commercialized herbs are wild, organic, and natural. In general, herbs collectors are using traditional knowledge for pre- and post-harvesting operations and processing. There is scope for reducing wastage and improving quality through proper training and information management system. The Department of Plant Resources (DPR) has also started developing quality standards for medicinal herbs.[34] The DPR also provides services for testing and certifying the quality and composition of essential oils.

Productivity: There is a lack of scientific knowledge and consciousness on the conservation, propagation, and cultivation of herbs.

Availability and Quality of Labour Force: It is estimated that as many as 300,000 families are engaged in medicinal herbs collection in 58 districts[35]. It is also estimated that another 100,000 families can easily join the herbs collection jobs when opportunities arise. However, these workers need training.

Labour Cost and Overall Production Cost: Most of the collection takes place in remote mountain areas that have labour cost advantages as compared to other suppliers in India and Bhutan.

Level of Processing Technology: Crude herbs are being processed through rudimentary techniques. Essential oils are produced basically through a distillation process. There is a need to introduce more modern processing systems. Critical pressure through carbon dioxide and fractional distillation are the most modern technologies that could be introduced for oil extraction.

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[29] Pradip Maharjan, Herbs Production and Processing Co.Ltd. (HPPCL), Community Based Natural Resources Management, MAP in Nepal, Proceeding of Nepal-Japan Joint Symposium 2000.
[30] Department of Forestry, MFSC, *Hamro Ban*, 2064/65 (2007/08).
[31] Figures in parentheses represent the share of the region in total national collection.
[32] Dharmatma Lal Shrivastava, "Resources of Nepalese Medicinal and Aromatic Plants: Status and Development", Department of Plant Resources, Plant Resources, A Scientific Publication, Bull Dept Pl. Res. No. 31, p. 127, 2009.
[33] Herbs Entrepreneurs Association of Nepal (JABAN), Nepalgunj.
[34] Dharmatma Lal Shrivastava, Bull Dept Pl. Res. No. 31, p. 130, 2009. So far four standards have been developed for *Asparagus recimosus, Swertia Chirayita, Tinospora sinensis* and *Verginia ciliate*.
[35] Figure estimated by JABAN, Nepalgunj. Out of 52 districts 30 main districts are: Sankhuwasabha, Panchathar, Terahthum, Solukhumbu, Okhaldhunga, Bhojpur, Taplejung, Dolakha, Sindhupalchowk, Nuwakot, Dhading, Gorkha, Lamjung, Kaski, Manang, Mustang, Myagdi, Dolpa, Bajhang, Bajura, Rukum, Humla, Jumla, Rolpa, Kalikot, Darchula, Baitadi, Jajarkot, Dailekh, and Aachham.

Cost and Quality of Infrastructure: High costs of electricity. But the costs of other infrastructures are considered reasonable.

Efficiency of Domestic Supporting Industries: All materials are supplied by domestic collectors, middlemen, and traders. Their efficiency and improvement in quality of raw herbs depend on the prices and training.

Domestic Demand: Demand for more than 20 herbs being used for essential oils is increasing and out of these 11 herbs are being cultivated[36] under contract farming systems and through community forest users groups (CFUGs).

Business Environment: There are no legal restrictions for investors, such as for repatriating profits and capital. However, high informal costs affect the industry.

Government Initiatives and Donor Involvement: Expansion of the Community Forestry Programme and MAPs Development Programmes under the Master Plan for the Forestry Sector (MPFS) 1989, Forest Act 1993 and Plant Protection Act 1972 has complemented commercial prospect. Herbs and NTFP Development Policy 2004 is not being effectively implemented in absence of clear targets, strategic programmes, adequate regulatory frameworks, and institutional mechanisms. The Herbs and NTFP Coordination Committee has not been very effective in the commercialization of herbs. The Department of Forestry, Department of Forestry Research and Survey, and the DPR are taking lead roles in policy formulation, research and development, conservation and farming for the promotion of sustainable management and use of plant resources. Thirty plants have been identified for priority research and sustainable farming in Nepal. The DPR also has two laboratories for natural products, herbarium and plants, eleven botanical gardens[37], and seven district offices. International and bilateral donor agencies involved in the herbs and aromatic plants sector include ICIMOD, RECAST, GTZ, SNV Nepal, WWF-KCAP, ANSAB, and IEDI.[38]

Prospect for Domestic Supply Conditions: Only 20-30 per cent of the naturally available stocks of identified herbs are collected, processed and traded. There are medium and long-run prospect for further utilization of existing species and identification of new species that are in demand. More than 90 per cent of the collected crude herbs are exported to India without processing and some of the restricted species are smuggled. Further investments in technology, training in product development, production and marketing are needed to achieve diversification and growth.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: It is estimated that the sector gives FTEE to about 10,000 people in Nepal.[39] This includes 8,000 persons in collection, 1,000 in intermediary trading, and 1,000 in processing and trading houses (NHHPA).

Gender Impact: Mostly women are engaged in the collection, cleaning, and grading of herbs. It is estimated that more than 50 per cent of workers are female.

Contribution to Skill Development: Traditional skill is passing through the younger generations, but further training is needed for waste minimization, improvements in the value chain and natural resources conservation.

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[36] MAP being cultivated include *Asparagus recimosus, Chammomile, Citronella, French Basil, Holy Basil, Lemongrass, Mentha arvensis, Palmarosa, Swertia Chirayita, Withania somanifera* and *Xanthozylem armatum (Timur).*

[37] There are 11 government botanical gardens, including the National Botanical Garden of Godavari, with more than 357 ha of land for the collection and conservation of herbal and other plants in Nepal.

[38] Yubaraj Pokhrel and Govinda Ghimire, Seabukthorn, "Prakriti", Nepal Herbs and Herbal Products Association, Quarterly, Year 3, No2, p. 29, Magh 2063.

[39] Calculation of full employment is based on the earning of US$1,000 per full-employed person, who approximately earns Rs.200 per day.

Impact on Development of Disadvantaged Regions: Further development and commercialization of wild as well as cultivated herbs in Nepal has a direct and positive economic impact on the livelihoods of people in the Mid-Western and Far-Western Regions of Nepal. At present, two regions together contribute to more than 85 per cent of the total collection of herbs in Nepal.

Energy and Water Constraints: Collection of wild herbs or cultivation of other herbs does not require intensive irrigation systems. Energy consumption is minimal, except for the production of essential oils.

Environmental Impact: In case of wild herbs, environmental impact is minimal, except the possible harm to endangered species. Cultivated herbs contribute positively to the environment.

Market Attractiveness Index

The MAI is calculated separately for two products: medicinal herbs (1211.90) and essential oils (3301.29, the main types of essential oils which Nepal exports). Herbs are exported mainly to Hong Kong and India, but the results suggest that the USA and several European countries could be attractive markets for future exports of herbs as well as essential oils. Both products are, however, very heterogeneous (Table 2.27), so the MAI can only give some first guidance. Whether the types of herbs which Nepal produces are actually the ones demanded in some of these potential export markets cannot be seen from the available data.

Table 2.25

Attractive Markets for Medicinal Herbs

Attractive markets for medicinal herbs (HS 1211.90)							
Top 10 - Weighted Market Attractiveness Index							
Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	USA	13	14.4%	15.1%	0%	1%	India, China, Mexico
2	France	0	5.2%	14.7%	0%	0%	Morocco, China, Italy
3	Germany	22	9.3%	10.5%	0%	0%	Poland, Chile, Egypt
4	Viet Nam	0	3.7%	27.8%	5%	0%	China, India, Hong Kong SARC
5	Singapore	1	4.0%	20.0%	0%	0%	Indonesia, China, Hong Kong S.
6	Japan	0	7.2%	8.2%	0%	0%	China, Thailand, India
7	Italy	0	3.7%	13.1%	0%	1%	USA, France, Germany
8	Russia	0	1.8%	41.5%	0%	3%	Germany, Egypt, Nigeria
9	Belgium	0	2.8%	15.6%	0%	1%	Israel, France, Morocco
10	Korea (South)	0	3.2%	14.6%	8%	0%	China, USA, Hong Kong SARC

Attractive markets for medicinal herbs (HS 1211.90)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	USA	Russia	India	Hong Kong (S.)	1,875
2	Germany	Viet Nam	Russia	India	1,025
3	Japan	Singapore	Kazakhstan	Germany	22
4	France	USA	Belarus	China	22
5	Singapore	France	Belgium	USA	13
6	Viet Nam	Korea (South)	USA	Pakistan	11
7	Italy	Italy	Italy	Czech Republic	9
8	Hong Kong (SARC)	Belgium	UK	UAE	5
9	Korea (South)	Germany	Sweden	Australia	4
10	Canada	Switzerland	Czech Republic	Switzerland	3

Table 2.26

Attractive Markets for Essential Oils

Attractive markets for essential oils (HS 3301.29 - Essential oils, nes)							
Top 10 - Weighted Market Attractiveness Index							
Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	Singapore	0	4.8%	27.9%	0%	0%	Indonesia, China, France
2	Switzerland	2	9.1%	25.0%	0%	0%	France, Indonesia, Germany
3	India	94	2.8%	36.6%	0%	18%	Indonesia, China, Singapore
4	France	125	15.9%	18.4%	0%	0%	Indonesia, Switzerland, China
5	Germany	193	8.6%	18.0%	0%	0%	France, Indonesia, China
6	USA	85	18.6%	15.6%	0%	1%	France, Indonesia, China
7	UK	74	7.6%	14.6%	0%	1%	France, USA, South Africa
8	Japan	2	4.0%	13.2%	0%	1%	France, UK, India
9	China	0	2.8%	39.7%	19%	-2%	USA, Myanmar, France
10	Mexico	0	3.0%	22.6%	6%	-2%	Indonesia, Switzerland, China

Attractive markets for essential oils (HS 3301.29 - Essential oils, nes)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	USA	China	India	Belgium	214
2	France	India	Russia	Germany	193
3	Switzerland	Singapore	Korea (South)	France	125
4	Germany	Switzerland	Kazakhstan	India	94
5	UK	Mexico	Belarus	USA	85
6	Singapore	France	Japan	UK	74
7	Japan	Germany	Latvia	Australia	44
8	Mexico	USA	Portugal	Taiwan (China)	12
9	China	UK	UK	Canada	11
10	India	Japan	Czech Republic	Sweden	6

Table 2.27

List of Commercially Available Medicinal and Aromatic Plants (MAPs) and Essential Oils in Nepal[40]

#	Botanical Name[41]	Species	Nepali / English Names	Annual Collection in MT[42]	Collection in 2007/08 Qty. in MT[43]	Remarks (Ref Foot notes)
1	*Abies Spectabilis D.Don Mirb.*	*Pinaceae*	Himalyan Silver fir, *Talispatra, Gobresalla*	10-20		EOA EPAP
2	*Acacia Concinna and Catechu Wild*	*Leguminosae*	*Khyar*, Catechu	200		
3	*Aconitum heterophyllum Wall.*	*Ranunculaceae*	*Atibikh*, Atis root	2-5	4.8	GPFR
4	*Aconitum spicatum (Bruhl Stapf)*	*Ranunculaceae*	*Bikha*	5 – 20	19.3	GPFR
5	*Acorus calamus linn*	*Acoraceae*	*Bojho*, The Sweet Flag	20	16.0	EOA, GPFR
6	*Adhatoda vasica Nees. Justicia Adhatoda*	*Acanthaceae*	*Ashuro*		0.5	

[40] Interviews with officials of the Ministry of Forestry and Soil Conservation and De¬partment of Plant Resources, Nepal.
[41] Department of Plant Resources, Medicinal Plants of Nepal 2007
[42] Dharmatma Lal Shrivastava, Bull Dept Pl. Res. No. 31, p. 129, 2009 and Consultant's estimations.
[43] Ministry of Forestry and Soil Conservation, Hamro Ban, 2064/65.

#	Botanical Name[41]	Species	Nepali / English Names	Annual Collection in MT[42]	Collection in 2007/08 Qty. in MT[43]	Remarks (Ref Foot notes)
7	*Aegle marmelos (Linn)*	*Correa*	*Bel*	400	4.2	
8	*Artemisia Vulgaris L.Spp.*	*Compositae*	*Titepati/* Mugwort		7.7	EOA
9	*Asparagus racimosus wild.*	*Liliaceae*	*Satawari /Kurilo* wild asparagus	25-35	25.2	BC, GPFR
10	*Azadirachta Indica A. Juss.*	*Meliaceae*	*Neem,* Indian Lilac			GPFR
11	*Berberis aristata DC*	*Berberidaceae*	*Chutro*		15.5	
12	*Bergania ciliata Haw. Sternb.*	*Saxifragaceae*	*Pakhan Ved,* Rock foil	300-400	338.7	GPFR
13	*Cinnamomum glaucescens (Nees) Hand. Mazz.*	*Menispermaceae*	*Gurjo* /Tinospora		3.9	EOA, GPFR
14	*Cinnamomum glaucescens (Nees) Hand.-Mazz*	*Lauraceae*	*Sugandha Kokila,* Nepali Sassafras	15-20	12.4	EOA, GPFR, EPAP
15	*Cinnamomum Tamala Nees & Eberm.*	*Lauraceae*	*Tejpat, Cinnamom* leaves and barks	100-500	434.6	EOA, GPFR
16	*Cordyceps/ Ophiocordyceps sinensis (Berk) Sacc.*	*Clavicipitaceae*	*Jiban buti, Yarsagumba,* Chinese Caterpillar Fungus		1.1	GPFR
17	*Cymbopogon flexuosus Steud*	*Graminae*	Lemongrass			BC, EOA
18	*Cymbopogon martini var. motia*	*Graminae*	Palmarosa/ gingergrass			BC, EOA
19	*Cymbopogon winterianus Jowitt*	*Graminae*	Citronella			BC, EOA
20	*Dactylorhiza hatagirea (D.Don), Soo*	*Orchidaceae.*	*Panchaunle,* Salep			BCE, GPFR
21	*Dioscorea deltoidea Wall.*	*Dioscoreaceae*	*Vyakur,* Deltoid Yam			GPFR
22	*Eucalyptus camaldulensis/ citriodora*	*Myrtaceae*	Lemon-scented eucalyptus			BC,EOA
23	*Gaultheria fragrantissima Wall*	*Ericaceae*	*Machhino, Dhasingre,* Fragrant Wintergreen	15-20	17.3	EOA, GPFR
24	*Hippophae salicifolia D.Don and Hippophae tibetana schlecht*	*Elaegnaceae*	*Dalechuk, Taru, Tarbu, Amchi /* Seabuckthorn			
25	*Juniperus Communis L. / Recurva/J. Communis*	*Cupressaceae*	*Dhupi/* Juniper berry	30 – 50	25.9	EOA
26	*Lycopodium clavatum Linn*	*Lacopodiaceae*	*Nagbeli*		1.3	EPAP
27	*Matricaria chamomilla L. or Chamamilla Ricutita Rauschert.*	*Asterceae*	*Tareful,* Chamomile			BC, EOA
28	*Mentha arvensis L.*	*Labiateae*	Japanese mint			BC, EOA
29	*Morchella esculenta, conica Pers.*	*Morchellaceae, Pezizaceae*	*Gucthichyau /* Himalayan Morel Mushroom		1.5	GPFR
30	*Nardostachys grandiflora DC Jatamansi*	*Valerianaceae*	*Jatamasi /Balachad/ Bhulte /* Spikenard	500- 1000	109.8	EOA, EPAP, GPFR
31	*Neopicrorhiz/Picrorhiza scrophulariifolia Pennell, Hong*	*Scrophulariaceae*	*Kutaki ,* Picrorniza	20 – 50	49.1	EPN, GPFR
32	*Ocimum basilicum*	*Labiateae*	*Babari,* French basil			BC, EOA, GPFR
33	*Paris polyphylla Sm.*	*Liliaceae*	*Satuwa*		2.1	
34	*Parmelia nepalensis Tal*	*Parmeliaceae*	*Jhyau, Budhani,* Linchen spp	200-300	184.7	BCE, GPFR
35	*Phyllanthus emblica Linn.*	*Euphorbiaceae*	*Amala,* Emblica offcinalis Myrobolon	200-300	149.0	GPFR
36	*Piper longum Linn*	*Piperaceae*	*Pipala,* Long pepper		0.05	GPFR

#	Botanical Name[41]	Species	Nepali / English Names	Annual Collection in MT[42]	Collection in 2007/08 Qty. in MT[43]	Remarks (Ref Foot notes)
37	*Podophyllum hexandrum Royle*	*Berberidaceae*	*Laghupatra, May Apple*		1.17	GPFR
38	*Rauwolfia Serpentina (L) Benth ex Kurz*	*Apocynaceae*	*Sarpagandha, Chandmaruwa*			EOA, EPAP
39	*Rheum australe D.Don*	*Poylgonaceae*	*Padamchal, Himalayan Rhubarb*	100	25.1	GPFR
40	*Rhododendron Anthopogon D. Don , (Rhododendron Lepidotum)*	*Ericaceae*	*Sunpati / Dwarf Rhododendron, (Bhali sunpati)*	30	9.5	EOA
41	*Rubia cordifolia Linn/Manjith Roxb.ex Fleming*	*Rubiaceae*	*Majitho / Indian Madder*	50-100	64.0	GPFR
42	*Sapindus Mukorossi Gaertn.*	*Spindaceae*	*Riththa, Soapnut*	1000	703.4	GPFR
43	*Swerita Chirayita (Roxb.ex.Fleming) Karsten*	*Gentianaceae*	*Chirayito / Chireta*	300-500	72.2	BC,GPFR
44	*Tagetes glandulifera Schrank minuta L.*	*Compositae*	*Jangali Sayapatri, Tagetes*	10-20	9.5	BC, EOA,GPFR
45	*Taxus baccata Linn. And Taxus Wallichiana Zucc.*	*Taxaceae*	*Louthsalla/Himalayan Yew*	350	1.1	EPAP, GPFR, EOA
46	*Terminallia bellirica Gaertner Roxburg.*	*Combretaceae*	*Barro, Belleric Myrobolon*	200	1.5	
47	*Terminallia chebula Ritzius.*	*Combretaceae*	Harrro Chebulic Myrobolon	100		
48	*Tinospora sinensis (Labour.) Merr*	*Menispermaceae*	Gujro / Tinospora, Cordifolia			GPFR
49	*Trichosanthes Palmata Roxb Spp.*	*Cucurbitaceae*	Indrayani, Indreni		0.35	BC, GPFR
50	*Valeriana Jatamansi Jones*	*Valrianaceae*	*Sugandhawal, Samayo Indian valerian*	200	36.4	EOA GPFR EPAP
51	*Zanthoxylum armatum DC Nepalense*	*Rutaceae*	*Timmur / zanthosylum, Nepali piper,*	300-500	373.3	BC, EOA,GPFR
52	*Zingiber Officinale, Rosc,*	*Jingiberaceae*	Sutho, Ginger (Fresh and Dried)	150,000		BC,EOA

Note: BC = Being Cultivated, GPFR= Government has Prioritized for Farming and Research, EOA = Essential Oils Available. EPAP = Export Permitted after Processing (Export permit is needed for raw Kutki), BCE = Banned for Collection and Export (Juglans regia Linn, walnut is also BCE)

Source: Field Work

8) Handmade Paper and Paper Products

Background

Nepali handmade paper is a unique product made from the inner barks of *Daphne Papysacea Wall* and *Daphne Bholua Buch (Thymelaeaceae sp.)* called *'Lokta'* and also from a mixture of *'Lokta'* and Argeli plant's fibres.[44] The traditional Tibetan paper-making technique was transferred and developed in Baglung district and other parts of Nepal in the 7th century.[45,46] The paper is strong and durable and has an inherent natural resistance to worms and insects. The raw paper is produced in more than 22 districts.[47] The production of finished paper products is done in Kathmandu valley and Janakpur. Such products include greeting cards, shopping bags, packing boxes, stationery sets, diaries and notebooks, folders, photo albums, wrapping papers, photo frames, curtains, wallpapers, table and ceiling lamps, wall paintings, etc. HANDPASS, the Handmade Paper Association, estimates that around 55,000 families earn a livelihood with *Lokta* collection and the production of handmade paper and its products.[48] However, this work is usually on a part-time basis. The FTEE is estimated to be around 8,000 workers.

With estimated annual exports of around US$4 million, handmade paper is a niche product. It certainly has a positive socioeconomic impact, but its overall economic importance is relatively small.

Index 1: Export Performance

Table 2.28
Export Value of Handmade Paper, 2005-2009 (US$1,000)

2005	2006	2007	2008	2009
n/a	n/a	n/a	4,000 (estimate)	n/a

There is no reliable data on export of finished *Lokta* paper products because there is no distinction between the products made of normal paper and those made of *Lokta* in trade statistics of importing countries. Estimates of the total export value of finished *Lokta* products vary. HANDPASS, the handmade paper association, estimates that annual exports are worth US$4 million.[49] In the absence of reliable estimates over several years, exports of HS Code 4802.10, which accounts only for raw *Lokta* paper ('Paper, handmade, uncoated, in rolls or sheets'), is used for the calculation of export growth rates. These exports have been slowly declining from US$734,000 in 2005 to US$531,000 in 2008.

Types of Exported Products: Both handmade paper and finished products made of handmade paper are exported (such as notebooks, lampshades, etc).

[44] These plants grow well at elevations ranging from 1,500 to 3,000 m, Department of Plant Resources, "Medicinal Plants of Nepal", Bulletin No 28, 2007, p. 46 and 239.
[45] Bibendra Prasad Singh, Nepali Paper Industry, Lokta: An Introduction, SMARIKA, HANDPASS, 2062, p. 1.
[46] Jesper Tier, An Introduction to Handmade Paper in Nepal, Ancient Paper of Nepal, Nepal Handmade Paper Association, SMARIKA, 2062, p. 5.
[47] These 22 districts are: Aachham, Baglung, Bajura, Bajhang, Bhojpur, Dailekh, Dolakha, Gorkha, Ilam, Jajarkot, Myagdi, Okhaldhunga, Panchathar, Parbat, Ramechhap, Rolpa, Rukum, Sankhuwasabha, Sindhupalchowk, Solukhumbu, Taplejung, and Terahthum.
[48] Nepal Handmade Paper Association, *Loktapatra,* Vol 3, Issue 1, January 2009.
[49] This is roughly in line with an estimate by Bhishma P. Subedi et al (Handmade Paper Value-Chain in Nepal, 2006). They estimate that total value-added of the industry is around US$6 million, not all of which goes into export.

Current Export Destinations: Export destinations (with share of exports in 2008) for handmade paper are the USA (32 per cent), France (26 per cent), Japan (8 per cent), Sweden (6 per cent), and Germany (6 per cent). There is no detailed data for handmade paper products, but available information suggests that the export patterns for such products are similar, i.e. exports go mainly to the USA, EU, and Japan.

Potential Export Destinations: Attractive markets are Denmark, Canada, Netherlands, Saudi Arabia, and Nigeria. These countries are major importers of handmade paper and have shown high growth rates in recent years.

Nepal's World Market Share: Nepal's share in world exports of handmade paper (4802.10) is 0.4 per cent. Its share in finished handmade paper products is unknown.

Trade Balance: There are no imports of *Lokta* into Nepal.

Dynamism of Exports: Exports of handmade paper have declined slightly between 2005 and 2008.

Export Prospect: According to a study undertaken by GTZ[50], there is a 'huge potential' for additional exports in the EU market if *Lokta* products could be sold through mainstream channels. Right now such products are mainly sold through specialty shops (such as fair trade shops), and it would require increased marketing efforts to enter such markets.

Index 2: World Market Conditions

Table 2.29
Total World Export Value of Handmade Paper, 2005-09 (US$1,000)

2005	2006	2007	2008	2009
64,887	126,441	102,127	139,653	n/a

Note: Export values refer to exports of 4802.10 only.

Market Access Conditions (Tariffs and NTBs): Tariffs are generally low or zero in major markets for handmade paper. However, Nepal has no tariff advantage in most markets (except India) and even faces slightly higher tariffs than competitors in some markets (eg Japan). No NTBs were mentioned by interviewed companies.

Major Competitors in World Market: The major exporters of handmade paper are India (21 per cent), the USA (17 per cent), UK (11 per cent), Egypt (8 per cent), and France (8 per cent). However, trade statistics are not detailed enough to fully capture the market of *Lokta* products. A similar product is produced in Thailand (*'Saa'*).

World Market Prospect: Being a niche product, there is little reliable information on world market prospect for *Lokta* products. To become a significant source of export revenue, *Lokta* products would certainly have to enter the mainstream markets outside of alternative or fair-trade shops. World import of handmade paper (4802.10) has grown at 4 per cent in recent years, with total import of US$167 million in 2008.

[50] GTZ (2007). Handmade Paper in Nepal.

Index 3: Domestic Supply Conditions

Producers: Out of about 300 registered cottage and small-scale paper and paper product industries, 259 are in operation.[51,52] There are 40 manufacturers of finished paper products and more than 300 firms involved in exporting paper or finished paper products. Many paper-making units are run by rural local entrepreneurs and more recently by CFUGs and farmers' cooperatives.

Production Capacity: About 2.9 million ha of suitable lands are available for *Lokta* plantation in 55 districts.[53] Currently, production of handmade paper is located in 22 districts and the production volume is estimated at 15,000t.[54]

Quality of Product: The fibre from the high altitude plant makes the Nepali *Lokta* paper very sturdy and unique--different from those produced in China, India, Philippines, and Thailand. The production process is not mechanized, and each paper sheet is dried naturally in the sun and wind.

Productivity: The productivity can be further increased to reduce the *Lokta* requirement for production of handmade paper, e.g. through the introduction of new tools, such as improved boilers and modern water pipe systems. Such an improved system could result in an estimated reduction of the *Lokta* requirements by around 30 per cent.

Availability and Quality of Labour Force: Papermaking is not a highly skilled job. Semi-skilled workers are available and paper products workers are trained on-the-job. There seems to be no problem attracting new workers to the industry.

Labour Cost and Overall Production Cost: Because of rural locations, labour costs in paper making are lower than labour costs for the making of finished paper products. Semi-skilled workers required for finished paper products are trained by entrepreneurs. According to GTZ (2007), production costs in Nepal are lower than for a comparable product in Thailand.

Level of Processing Technology: Traditional technology is a unique selling point. Some improvements in production process are required to reduce wastage. Quality and design also need to be improved.

Cost and Quality of Infrastructure: Papermaking is highly water–intensive, but the cost of water in rural production centres is very low. Locally available fuel (firewood and bio-mass) is used in boiling *Lokta* and the cost is low.

Efficiency of Domestic Supporting Industries: Papermaking units receive *Lokta* from local farmers or CFUGs during the season. Paper product producers have found their paper suppliers efficient in terms of delivery in required specifications and quantity.

Domestic Demand: About 90 per cent of the paper output of the country is used by paper product manufacturers for further value addition and export thereafter. Current domestic demand for paper products is likely to increase because the GoN has recently decided to use Nepali paper for citizenship certificates.

Business Environment: According to entrepreneurs, the quality of infrastructure and credit facilities is quite acceptable.

Government Initiatives and Donor Involvement: The Department of Cottage and Small Industries has extended technical and training support to papermaking enterprises in the past. The sector also receives

[51] TEPC, Trade News Service, Year 3, No 7, 2065, p. 5.
[52] Nima Sherpa, Acting President of HANDPASS.
[53] Bibendra Prasad Singh, Nepali Paper Industry, Lokta: An Introduction, SMARIKA, HANDPASS, 2062, p. 2.
[54] TEPC, Trade News Service, Year 3, No 7, 2065, p. 5.

significant attention from donors. An EU project, Enhancement of Sustainable Production of *Lokta* Handmade Paper in Nepal, with GTZ and HANDPASS as cooperating partners, is operational since early 2009.[55] Project activities include (a) training for *Lokta* collectors, CFUGs, and SMEs in product development, quality, design, input utilization, waste reduction, etc; (b) TA for tissue cultured *Lokta* plantation, wastewater management, and quality improvement; and (c) market promotion strategies and programme support. Expected project outcomes are an increase of export to EU markets and strengthening of HANDPASS.

Prospect for Domestic Supply Conditions: With suitable forest land available, it is estimated that annual paper production can reach up to 110,000 MT, compared to a current production of 15,000 MT.[56] Prospect for additional supply and positive socio-economic impact on rural population is high if project activities similar to EU support are extended to other districts with added TA and other programme components. HANDPASS has registered 'Nepalokta' as a trademark (a property of HANDPASS) in European countries, in cooperation with GTZ/PSP–RUFIN.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: It is estimated that handmade paper and paper products give FTEE to about 8,000 people in Nepal.[57] Out of these, around 6,000 are working in *Lokta* collection and processing, around 1,000 in the production of handmade paper, and another 1,000 in paper products manufacturing. The potential for future job creation is high in view of the recent initiatives towards *Lokta* farm development.

Gender Impact: Women, either as workers or as entrepreneurs, play important roles in different activities, including collection, cleaning, and grading of *Lokta*, finished paper product-making, and exporting. It is estimated that women provide more than 50 per cent of employment in the industry.

Contribution to Skill Development: Traditional skills are passed on by adults to the younger generations, but further training and improvement in tools and operational system are required for waste reduction, quality improvement, and product diversification.

Impact on Development of Disadvantaged Regions: The paper is produced in 22 districts, many of which are located in disadvantaged/poor parts of Nepal. Further development and utilization of *Lokta* plantation are possible in forests of about 30 disadvantaged remote districts. Such districts are, for example Salyan, Pyuthan, Lamjung, Kaski, Myagdi, Dolpa, Humla, Jumla, Kalikot, and Surkhet.

Energy and Water Constraints: Paper-making process is highly water- and fuel-intensive. However, paper production centres do not report any energy and water constraints.

Environmental Impact: *Lokta* collectors and farmers are partly trained and are aware of the environmental impact of unscientific harvesting of *Lokta* plants. All stakeholders are aware of the possible environmental impact of *Lokta* plant utilization. Pollution through wastewater is not considered to be severe due to very little use of chemicals. Some entrepreneurs have installed wastewater treatment facilities. The CFUGs have managed to reduce the adverse environmental effects in some areas through reforestation and the use of alternative fuel instead of firewood.

[55] GTZ and HANDPASS were already supporting the sector in 2006-08 through a range of activities, see GTZ (2007).
[56] Bibendra Prasad Singh, p. 2.
[57] Calculation of full employment is based on the earning of US$1,000 per full-employed person, who approximately earns Rs.200 per day. Another study estimates that employment (not full-time equivalent) is 28,000 (Bhishma P. Subedi et al (2006). *Handmade Paper Value-Chain in Nepal).*

Market Attractiveness Index

Handmade paper (4802.10) is the only product for which trade data allows us to distinguish between handmade paper and normal paper, though there surely exists a wide variety even within handmade paper. For other products such as envelopes, no such distinction is possible and we are not able to directly identify attractive markets. Therefore, it is difficult to identify attractive markets solely based on trade data. That said, the most attractive markets for handmade paper are Denmark, Canada, Netherlands, Saudi Arabia, and Nigeria. Tariff advantages compared to main competitors exist only in India.

Table 2.30

Attractive Markets for Handmade Paper

Attractive markets for Handmade paper (HS 4802.10)							
Top 10 - Weighted Market Attractiveness Index							
Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	Denmark	26	6.9%	151.3%	0%	0%	Germany, India, Sweden
2	Canada	17	5.1%	59.9%	0%	0%	USA, China, Japan
3	Netherlands	9	6.5%	19.7%	0%	0%	Belgium, Germany, France
4	Saudi Arabia	0	3.8%	136.8%	5%	-5%	Egypt, Qatar, China
5	Nigeria	0	5.4%	17.9%	5%	0%	India, Singapore, Taiwan (China)
6	India	12	2.0%	45.9%	0%	10%	Indonesia, Sweden, Netherlands
7	Qatar	0	1.8%	?	5%	-1%	Indonesia, UAE, China
8	Egypt	0	2.3%	100.7%	10%	0%	India, Russia, USA
9	Japan	44	10.7%	1.9%	3%	-3%	China, Taiwan (China), Thailand
10	Malta	0	1.0%	153.8%	0%	0%	UK, Italy, Tunisia

Attractive markets for Handmade paper (HS 4802.10)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	France	Denmark	India	USA	181
2	Japan	Qatar		France	143
3	Denmark	Saudi Arabia		Japan	44
4	Netherlands	Egypt		Sweden	35
5	Nigeria	Canada		Germany	32
6	Canada	India		Denmark	26
7	Saudi Arabia	Malta		Canada	17
8	UAE	Netherlands		Austria	13
9	USA	Sri Lanka		India	12
10	Belgium	Indonesia		Switzerland	12

9) Silver Jewelry

Background

Nepali silver jewelry is completely handmade using traditional processes. Unique pieces of artistic work and design are based on cultural, ethnic, and religious motifs. Since ancient times, Nepalese craftsmen of the Shakya and Sunar families have produced pieces of gold and silver jewelry in different parts of the country. Commercial production and trading activities are mainly located in Kathmandu valley in the districts of Lalitpur, Bhaktapur, and Kavre and in Janakpur. Export of silver jewelry has remained quite stable for the past three years (2006/07 to 2008/09) with an average annual export value of US$5 million.[58] Import figures from destination countries suggest that exports are even higher (US$9.5 million in 2008). Industry sources put the figure even higher, at around US$15 million.

Index 1: Export Performance

Table 2.31

Export Value of Silver Jewelry, 2005-2009 (US$1,000)

2005	2006	2007	2008	2009
8,312	8,588	9,774	9,519	n/a

Source: TradeMap (mirror data).

Notes: Products covered are 7113.11/19 and 7117.19/90. Most exports are silver jewelry (7113.11). Above figures were used for the calculation of indicators.

Types of Exported Products: Several types of silver jewelry having unique and often religious or ethnic designs are exported.

Current Export Destinations: Official exports mainly go to the USA, Canada, and several EU markets. There are practically no official import of silver jewelry registered by India, but it can be assumed that export to India exist and is done informally.

Potential Export Destinations: According to producers and traders, potential for future export is seen in Korea (South), China, Russia, and South Africa. Hong Kong, USA, and several EU markets have been identified as attractive markets by ITC's calculations (see below).

Nepal's World Market Share: Nepal's world market share is around 0.2 per cent.

Trade Balance: Very little import of jewelry is recorded. However, according to industry sources, import of raw materials, in particular silver, accounts for roughly 50 per cent of the export value. Nepal imported silver worth US$10.3 million in 2008, some of which will have been used in the jewelry industry.

Dynamism of Exports: Export has been fairly stable in recent years.

Export Prospect: Prospect for future export is generally seen as very good. The recent political instability and conflicts between employers and workers have left the sector largely unaffected. Also, production costs are competitive and workers are readily available.

[58] Trade and Export Promotion Centre, Nepal Foreign Trade Statistics, 2009 (provisional).

Index 2: World Market Conditions

Table 2.32
Total World Export Value of Silver Jewelry, 2005-09 (US$1,000)

2005	2006	2007	2008	2009
2,805,000	3,309,000	3,941,000	4,367,000	n/a

Note: Data shown here are only for silver jewelry (7113.11).

Price fluctuations may mostly reflect changes in the price of silver and do, therefore, not necessarily show a trend for the market for production steps undertaken in Nepal.

Market Access Conditions (Tariffs and NTBs): Most major markets grant duty-free access to Nepalese silver jewelry. Tariff rates (for Nepal/MFN) for silver jewelry (7113.11) in some markets are: EU (free/2.5 per cent), US (free/5-13.5 per cent), Japan (free/6.2 per cent), Canada (free/5-8.5 per cent), and India (free/10 per cent). No specific NTBs have been reported by the interviewed companies, expect for the possible ban on silver containing cadmium, which is expected to be introduced by the EU and which would require testing and certifying institutions.

Major Competitors in World Market: The largest exporters are Thailand, Hong Kong, EU, China, and the USA.

World Market Prospect: The market for silver jewelry products is growing relatively fast. World exports have grown by 14 per cent per annum between 2004 and 2008 by value (partly reflecting higher prices for silver), and by 9 per cent by volume.

Index 3: Domestic Supply Conditions

Producers: According to the Federation of Handicrafts Association of Nepal, 527 firms and companies were directly involved in jewelry production and export in 2007/08[59]. All of these companies are owned by private entrepreneurs and operate as small scale/cottage producers. Firms normally outsource jewelry production to individual craftsmen in different villages who have in-house workshops.

Production Capacity: At present annual production of silver jewelry is 15 to 20 MT.[60] On average each craftsman annually produces 5 kg of silver jewelry.[61] It is estimated that there are 6,700 craftsmen (FTEE) involved in production of silver jewelry and the annual production capacity is estimated at 50 MT.[62] Raw materials, in particular silver, have to be imported. It is estimated that the value added in Nepal is around 40-50 per cent of the export value.

Quality of Product: Nepal is known for the high artistic quality of its jewelry. Recently, an issue of adulteration of silver with cadmium was raised and exporters have become cautious on possible adverse impact on future exports.

Productivity: Jewelry is fully handmade. Productivity and quality can be improved if production were further mechanized.

[59] Federation of Handicrafts Association of Nepal, Handicraft Trade Directory 2007/08, p. 280.
[60] An estimate given by one of the leading exporters of jewelry to EU markets, Mr. Swoyambhu Ratna Tuladhar, Managing Director, Yak and Yeti Enterprises Pvt Ltd., Kathmandu, Nepal. In 2008, the average world market price for 1 MT of silver was around US$ 0.5 million.
[61] An estimate given by one of the leading exporters of jewelry to Japan, Mr. Suman Ratna Dhakhwa, Proprietor, Valhalla Enterprises, Lalitpur, Nepal
[62] Nepal Gold and Silver Entrepreneurs Association and other industry sources.

Availability and Quality of Labour Force: About 50,000 gold and silver craftsmen are available in the country and 40 per cent of them are in and around Kathmandu valley.[63] There is no labour shortage and the industry is unlikely to face problems in attracting new workers.

Labour Cost and Overall Production Cost: Recently labour cost has increased by about 20 per cent due to overall inflationary pressure, but is cheaper than in competing countries, such as India and Thailand. Monthly salaries for skilled workers are around US$100 in Nepal. Raw materials are available without any restriction on foreign exchange payment on import.

Level of Processing Technology: Traditional technology is a unique selling point. The processes include cutting, molding or casting, embossing, buffing, policing, and studding of gemstones, as required. Entrepreneurs have felt an urgency to introduce modern machinery, equipment and tools[64] to reduce wastage and enhance product quality and quantity.

Cost and Quality of Infrastructure: Being a low bulky handmade item, jewelry does not attract many infrastructural facilities.

Efficiency of Domestic Supporting Industries: Almost all silver and 95 per cent of gemstones and semiprecious stones[65] required for jewelry are imported from India, Brazil, Thailand, Pakistan, and Sri Lanka, and distributed by local importers.

Domestic Demand: Output is supplied to domestic (50 per cent) as well as foreign (50 per cent) markets. However, products sold in domestic markets are usually exported later, either through resale to tourists or through informal exports.[66]

Business Environment: The poor business environment has encouraged informal trade in substantial quantity, which is also related to evasion of taxes, including income tax.

Government Initiatives and Donor Involvement: The Commercial Policy 2009 stresses (a) a separate strategy for gems and semi-precious stones for the promotion of jewelry, (b) mining of gemstones and gems processing through trade-friendly regulations, (c) duty-free import of equipment and tools, (d) provision of training, and (e) marketing promotion activities. There is no separate association for silver jewelry development and promotion.

Prospect for Domestic Supply Conditions: In the short-term, export of jewelry can be encouraged by extending support to introduce modern equipment and tools. In the long run, jewelry production for export can be outsourced from the districts outside Kathmandu valley to more remote areas provided special action programmes are implemented. Some of such measures are training of craftsmen in modern equipment and tools, establishment of linkages between rural craftsmen and exporters in Kathmandu and strengthening of exporters' marketing capabilities.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: It is estimated that currently 10,000 craftspersons are available to work for silver jewelry production, with an FTEE of around 6,700. In addition, it is estimated that

[63] Nepal Gold and Silver Entrepreneurs Association, See also International Trade Centre, UNCTAD/WTO, Export Potential Assessment in Nepal, 2007.

[64] Such tools and equipment are for casting, soldering, cutting, drilling, policing, vibrating, calibrating, etc.

[65] According to the Department of Mines and Geology, 200 varieties of gems are available in Nepal. The most popular ones are Aquamarine, Beryl, Kyanite, Quarts, Ruby and Sapphire, Tourmaline, and Garnets. See also International Trade Centre, UNCTAD/WTO, Export Potential Assessment in Nepal, 2007.

[66] Jewelry exporters have reduced operating costs by engaging in informal exports that help to reduce procedural costs. Official trade figures are therefore expected to be underestimated.

another 1,300 people are employed in the industry, putting the total number at 8,000. There is prospect of increasing the production by 50 per cent. Increased market demand can be met either by attracting gold craftsmen to silver work or by giving on-the-job training to incumbents in various districts outside Kathmandu valley.

Gender Impact: Buffing, polishing and finishing activities are mostly done by women. Although male workers dominate the industry, about 15-20 per cent of the total craftsmen are estimated to be women.

Contribution to Skill Development: Traditional skills are passed on by adults to the younger generations. Skills are developed from on-the-job training to apprentices. Formal training with improved tools and operational systems are required for waste reduction, quality improvement, and product diversification.

Impact on Development of Disadvantaged Regions: Some of the exporters can immediately outsource exportable silver jewelry from many other districts[67] outside Kathmandu valley. However, a number of issues have to be addressed and constraints have to be cleared out. Initially, it is necessary to provide training under the collaborative efforts of government, non-governmental institutions and export enterprises, establish good linkages between exporters and craftsmen, etc.

Energy and Water Constraints: Jewelry does not rely heavily on water and electricity.

Environmental Impact: Adverse environmental impact is minimal.

Market Attractiveness Index

Silver jewelry is a very heterogeneous product, so whether Nepal can supply certain markets also depends on whether the types of jewelry produced in Nepal match with the trends in the export markets. Some of the current export markets also rank high in the overall MAI (eg USA, France). Hong Kong appears to be a very attractive market, but with no import from Nepal recorded in 2008. Tariff advantages play only a minor role in the most attractive markets, with one exception being the USA. Silver jewelry is the main Nepalese product that is exported under preferential rates (rather than MFN rates) to the US market.

Table 2.33

Attractive Markets for Silver Jewelry

Attractive Markets for Silver Jewelry (HS 7113.11)

Top 10 - Weighted Market Attractiveness Index

Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	Hong Kong (SARC)	0	9.3%	20.7%	0%	0%	China, USA, Italy
2	USA	2708	31.7%	11.8%	0%	4%	China, Thailand, India
3	Germany	246	8.1%	12.8%	0%	2%	Thailand, China, Denmark
4	UK	57	6.0%	11.2%	0%	2%	Thailand, Italy, China
5	France	855	4.2%	17.5%	0%	1%	Italy, Thailand, Germany
6	Denmark	8	2.6%	47.2%	0%	2%	Thailand, Germany, Italy
7	Australia	42	2.8%	30.2%	0%	1%	Thailand, USA, Italy
8	Spain	0	3.0%	22.5%	0%	1%	Italy, Denmark, Hong Kong SARC
9	Netherlands	298	2.2%	39.5%	0%	2%	Thailand, Denmark, Hong Kong S.
10	Canada	857	2.2%	19.7%	0%	2%	Thailand, USA, China

[67] Some potential districts are Tansen, Dang, Banke, Rupandehi, Sunsari, Dhankuta, and Chainpur.

Attractive Markets for Silver Jewelry (HS 7113.11)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	USA	Denmark	Tajikistan	USA	2,708
2	Hong Kong (SARC)	Netherlands	India	Canada	857
3	Germany	Australia	Kyrgyzstan	France	855
4	UK	Spain	USA	Italy	491
5	Japan	Hong Kong (SARC)	Japan	Japan	368
6	France	France	Iceland	Netherlands	298
7	Spain	Germany	Denmark	Switzerland	257
8	Australia	USA	Germany	Germany	246
9	Denmark	UK	Canada	Ukraine	61
10	Canada	Thailand	Italy	UK	57

10) Iron and Steel Products

Background

Modern steel products manufacturing plants based on imported raw materials began to be set up in Nepal since the early 1980s. There are currently around 50 plants in operation with a total capacity of 2 million tons and with an estimated total investment of more than US$100 million. Most of the plants serve domestic market requirements. Around ten of the largest plants also sell their products to India and Bhutan.

There is no manufacturing of steel in Nepal. The production is based on imported steel coils, steel sheets, wires, etc. Thus, the added value of the industry is rather low in relative terms, but very high in absolute terms compared to most other sectors covered in this study. Gross export of steel products in 2008 was around US$150 million. Practically, all trade, both imports of raw materials and exports, is with India, but some export also goes to Bhutan.

Index 1: Export Performance

Table 2.34
Export Value of Iron and Steel Products, 2004-2008 (US$1,000)

Mirror data	2004	2005	2006	2007	2008
Exports overseas	251	273	343	831	1,447
Exports to India	54,910	48,694	36,110	80,507	147,983
Total exports	55,161	48,967	36,453	81,338	149,430
Source: TradeMap (mirror data).					

Types of Exported Products: The main items of export include (a) cold rolled steel sheets; (b) galvanized colour-coated steel sheets; (c) black galvanized steel pipes; (d) black galvanized wires; (e) steel structures: pre-engineered buildings, transmission and telecom towers, steel bridges, etc.; (f) telescopic and tubular poles for power and telecom sectors; and (g) bicycle rims.

Current Export Destinations: According to official trade data from importing countries, practically all export goes to India, with negligible export to Bhutan, Egypt, and Japan. According to information directly obtained from exporters, Bhutan is an important market for Nepalese steel products and some export has also been made to other countries, e.g. Tanzania.

On average 10 per cent of the total production of higher value added products like GI and pre-coated sheets are being regularly exported and mainly to neighbouring markets in India and Bhutan. One of the surveyed companies exports almost 75 per cent of the total sheet production to Indian and Bhutanese markets and other companies export similar shares of their wire production. Recently, Bhutan Power Corporation has given an order for electrical poles to the tune of 15,000 MT.

Potential Export Destinations: Respondents see some potential in African markets.

Dynamism of Exports: Exports have grown fast in recent years and have almost tripled since 2004. However, one reason for that is certainly the increasing cost of raw materials.

Index 2: World Market Conditions

Table 2.35
Total World Export Value of Iron and Steel Products
(HS chapters 72+73)

2004	2005	2006	2007	2008
393,527,488	456,050,992	539,355,488	682,594,896	826,689,312

Source: TradeMap.

World Market Prospect: The world market for iron and steel products has been very dynamic, but this also reflects the increased prices in raw materials. Average unit values for export of iron ore have quadrupled between 2003 and 2008 and have increased further since. Additional increases can be expected from the upcoming change of the contract system that was announced in March 2010. But these developments do not directly affect the Nepalese steel industry because Nepal is not 'selling' steel but only processing steel. What is more relevant for Nepal is the demand for steel products from its potential export markets, in particular India. India's demand for steel products has been very dynamic in recent years and, with a forecasted annual growth of construction in the next few years, this will certainly remain so.

Market access conditions: Nepal would enjoy no preferential access in almost all markets when compared to the tariffs faced by major competitors. The only exception is India. India applies a 5-10 per cent duty on imports of iron and steel products, but provides free access to Nepal.

Index 3: Domestic Supply Conditions

Producers: There are around 50 plants in operation and around ten of them are currently exporting. Most of the production is, however, for the domestic market. Some of the firms operate under joint venture with Indian companies.

Production Capacity: Nepal's current annual production capacity is as follows:

- Cold rolled galvanized sheets (340,000 MT)
- Black galvanized steel pipes (220,000 MT)
- Structures, poles, towers, bridges, etc (240,000 MT)
- Mild-low carbon-coated and high tensile galvanized wires (84,000 MT)
- Brash sheets (copper 64 per cent and zinc 36 per cent) (4,000 MT)
- Bicycle rims (1,000 MT)

The capacity utilization of export-oriented companies in each product line currently varies from 50-100 per cent. Recently, capacity utilization has been restricted by adverse external factors like general strikes, power outages, low labour productivity, etc.

Competitiveness of the Steel Sector: According to information obtained from Nepalese producers, Nepal's steel industry is based on certain advantages over competitors in India:

- High flexibility in terms of quantity and delivery time and customization of products to suit customer requirements.
- Facilities to import against payments in US dollar allows Nepalese producers to source raw materials at a slightly cheaper price (2-5 per cent) because receiving US dollar payments make Indian exporters eligible for duty-free imports under the Indian Duty Exemption Passbook (DEPB) scheme.
- Due to the volume, the companies have been able to negotiate good commercial terms with vendors like Hindustan Zinc of India for supply of zinc and steel majors like Posco, Nippon steel, and Tata steel.
- The product quality is well recognized as some of the companies are registered with Nepal Standard (NS) and ISI for making standard quality products. For example, while most of the reputed Indian companies use 120 grams zinc in galvanizing, Nepalese companies offer 145 grams of zinc-coated sheets to meet international standards.
- Domestic supplies in India and Bhutan have not adequately met the growing demand for development projects.
- The Government of India and Power Grid Corporation of India (PGCI) have approved NS. Product designs and technical standards meet the Indian requirements.
- Trade and diplomatic relations between Nepal and India have improved.
- Another reason for investment in Nepal had been the labour cost advantage compared to India. If the industrial labour pool is trained systematically, productivity could also be increased further in Nepal. However, increased conflicts with workers, political interference, and labour laws, seen as discriminatory by employers, have reversed this potential advantage.

The following impediments to expanding the export market prevent the company from initiating any major thrust for export:

- Aggressive marketing in Indian market has been counterproductive in earlier instances, as it has invited punitive and NTBs from Indian authorities through additional duties, imposition of discriminatory NTBs like mandatory registration with the Bureau of Indian Standards, a quota system in case of vanaspati ghee, etc.
- Volatility in international steel markets does not reflect correctly or promptly in neighbouring Indian market as the Indian government has significant control and influence over the steel sector. This leads to increased risk for long-term contracting for exports to India as well as preventing the companies from formulating a long-term strategy for entering the export market.
- Lack of reliable electricity supply is a major constraint. The operation of machines through diesel generators is possible, but it entails heavy investment and high operating cost (Rs20 instead of Rs6-7 per kWh).

Quality of Products and Processing Technology: Nepalese steel products are considered to have high quality and meet international standards. Several factories have undertaken various measures, including ISO 9001 certification and training of workers. Such measures have resulted in an increase in productivity in recent years.

Many companies have invested in the latest technology in most of the product lines on a regular basis to keep abreast of international development and have been able to keep its operating costs parameters comparable at regional and global level. The upcoming major investment in capacity is for new colour coating lines to manufacture pre-coated sheets, which simultaneously address the future EU environmental regulations as well as ensuring long-term competitiveness of the product line.

The most important raw material inputs are hot-rolled coil, sheets, steel wires, MS billets, sponge iron, and zinc. The major sources of import are international steel companies such as Posco (South Korea), Nippon Steel (Japan), and TATA Steel and Hindustan Zinc Ltd (India). According to information obtained from exporters, these inputs constitute 75 to 83 per cent of the total cost. Another major input is electricity (from grid or self-generated). Therefore, the value added of the industry is roughly around 20 per cent of the total cost.

Import tariffs of the GoN on major raw materials are 5 per cent on CIF value, which, at least in principle, would be refunded if used for exports.

Labour Cost and Overall Production Cost: According to industry sources, overall production costs are comparable or even lower than in India. Labour costs are also competitive, but training of workers has to be improved to increase productivity.

Cost and Quality of Infrastructure: Manufacturing of steel products is highly power-intensive and, therefore, particularly affected by unreliable electricity supply. Most of the factories have installed self-generation facilities. Almost all have diesel generators and some have also introduced biomass power by installing gasification plant, and this is replacing the use of about 2,500 l of diesel fuel per day. Self-generation capacities currently enable operation of most processes, but are adding significantly to production costs.

Costs of supportive or logistic industries like transportation were also considered very high by the respondents from the industry.

Business Environment: Producers interviewed point to the overly complicated duty drawback system as well as frequent conflicts with employees and political unrests as constraints.

Duty drawback procedures: The existing processes for addressing the issue of providing duty free inputs for all exports have to be revisited in consultation with all stakeholders in order to streamline the facility. At present, there is a requirement of minimum value addition of 20 per cent on imported input values to entitle duty drawback in Nepal. This mandated requirement has no logic when Nepal-India Trade Treaty does not make any such NTBs and it has given open duty-free access to output based on inputs originated in either of two countries. Therefore, the provision of mandatory value addition for duty drawback should be removed. The range of domestic value addition varies across products and industries by a wide range from as low as 5 per cent to possibly more than 60 per cent.

Industry respondents argued that the drawback process should be strengthened, which could include, for example, a single-window system for the exporter at point of customs and the option for exporters for duty-free import of inputs prior to export or post-export of goods. Deposit of duties, even if refunded later, requires working capital. Therefore, respondents argued that all raw materials imported for exportable output should be permitted against a bank guarantee. In case where duty is already paid, a 'Duty-free Replenishment Certificate' should be introduced, as in India.

India has three types of duty refund schemes for different purposes and different types of industries as follows:

i. Duty Exemption Entitlement Certificate (DEEC): When finished products containing foreign inputs are exported, the DEEC is issued to the exporter to the extent of the amount of duty component involved in the raw materials of exported products. This certificate is restricted to duty-free import of inputs

required for the particular exporter industry.

ii. Duty Exemption Passbook Scheme (DEPB): This is similar to the process in Nepal, but there is no value addition requirement. When the exporter exports finished products, the input import entitlements are credited in the passbook and to the extent of entitlement, the exporter can import such inputs free of duty.

iii. Duty Free Replenishment Certificate (DFRC): It is value-based (value cap-based). There is no passbook. This certificate is transferable and can be sold like a bond for duty-free imports of varieties of inputs by any industry.

Customs procedures: Respondents from the industry considered customs procedures as very cumbersome for their sector. Clearance procedures of imported cargoes are normally delayed by one day. If an enterprise deposits duty today customs official clear the cargo the next day. This has implications when the exchange rate fluctuates. Therefore, the clearing and valuation process should be simplified and discretionary powers with officials restricted. The rule of applicable exchange rate for valuation of import cargo is not fixed. It varies according to interpretation and discretion of customs officials from time to time. Prudent commercial practice demands that the exchange rate prevailing at the time of payment of import duties be applied for valuation of cargo, whereas often the rate applied is changed during physical crossing of cargo or at the time the final lot of the import cargo is crossed from the customs point. This ambiguity in application of rate for valuation leaves many doors open for manipulation and legitimate businesses are invariably adversely affected.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: Ten factories engaged in exporting give full employment to an estimated 5,000 workers. It is estimated that the total steel subsector gives employment to more than 15,000 people in Nepal.

Gender Impact: Most employees in the industry are men and there is no particular positive impact on gender equality. The share of women in the industry is estimated to be less than 5 per cent.

Impact on Development of Disadvantaged Regions: The industry is mainly located in urban areas within the Terai and has no particular impact on poor areas or disadvantaged regions.

Energy and Water Constraints: The industry is highly electricity-intensive. Water is necessary for cooling in some production steps, but water supply is not considered a problem.

Environmental Impact: Overall, the environmental impact can be considered low. There is no steel production, which could cause a lot of emissions.

Market Attractiveness Index

European markets and the UAE rank very high in the MAI index , mainly because these markets are very large and have been very dynamic in recent years. There are a few countries where Nepal would enjoy any tariff advantage over competitors, the main exception being India. However, two caveats of the index have to be mentioned: First of all, many markets appear very dynamic, but this is very much related to the increase in the world market prices for steel in recent years and not necessarily in a similarly large increase in demand for steel processing. Second, transport costs have to be taken into consideration. The Indian market will likely remain the main export destination in the near future because of location, the close link that has already been established, and the very dynamic demand in India, in particular through the booming construction industry. Annual construction growth rates for India are forecasted to be around 10 per cent in the next few years, but only 1-2 per cent for European markets.[68]

[68] See factsheet for engineering services.

Table 2.36

Attractive Markets for Iron and Steel Products

Attractive markets for Iron and Steel products (HS 72+73)							
Top 10 - Weighted Market Attractiveness Index							
Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	Germany	0	7.2%	19.4%	0%	0%	EU, China
2	Belgium	0	3.8%	27.0%	0%	0%	EU, China
3	Poland	0	2.4%	34.1%	0%	0%	EU, China
4	India	147,983	1.5%	50.4%	0%	5 -10%	China, Korea, Japan, EU
5	UAE	0	4.2%	47.9%	5%	0%	India, China, Korea
6	UK	0	2.9%	10.3%	0%	0%	EU, China
7	Thailand	0	2.3%	31.8%	9%	0%	Japan, Korea, China
8	France	0	4.6%	8.9%	0%	0%	EU, China
9	Italy	0	2.7%	8.0%	0%	0%	EU, China
10	Sweden	0	2.8%	24.3%	0%	0%	EU, China

Attractive markets for Iron and Steel products (HS 72+73)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	USA	Denmark	India	India	147,983
2	Germany	Qatar	Australia	Egypt	461
3	France	Saudi Arabia	Tajikistan	Bhutan	285
4	Belgium	Egypt	New Zealand	Bosnia	159
5	UK	Canada		Japan	150
6	Sweden	India		Netherlands	90
7	Italy	Malta		Sudan	80
8	Poland	Netherlands		Chinese Taipei	33
9	Spain	Indonesia		USA	22
10	UAE	Ukraine		Finland	21

Table 2.37

Profile of Major Steel and Metal Plants Engaged in Exports

#	Name of Steel Plant	Date Established	Exportable Items	Production Capacity	Capacity Utilization	Exports in 2009	Current Employment
1	Hulas Wire Industries Ltd, Biratnagar	1983	(a) Black galvanized wires (b) Brass sheets **TOTAL**	36,000 MT 3,600 MT 39,000 MT	53 per cent 10 per cent 58 per cent	14,000 MT	450
2	Premier Wires Pvt Ltd, Biratnagar	1997	(a) Black galvanized wires (b)Electric galvanized wires (c) Electric and telephone cables **TOTAL**	24,000 MT	63 per cent	7,500 MT	300
3	Aarti Strips (P) Ltd, Biratnagar	2001	Galvanized colour-coated steel sheets **TOTAL**	100,000 MT **100,000 MT**	100 per cent 100 per cent	75,000 MT 75,000 MT	300
4	Hulas Steel Industries Ltd, Simra, Bara	1981	(a) Cold rolled steel sheets (b)Galvanized colour-coated steel sheets (c) Black galvanized steel pipes/tubes (d) Steel structures (f) Telescopic and tubular poles **TOTAL**	80,000 MT* 36,000 MT 36,000 MT 9,000 MT **81,000 MT**	90 per cent 95 per cent 80 per cent 70 per cent 70 per cent 85 per cent	3,600 MT	850
5	Jagdamba Steels Pvt Ltd. Jagdamba Wires Pvt Ltd, Birgunj	1994	(a) Black galvanized steel pipes/tubes (b) Steel structures (c) Others **TOTAL**	40,000 MT 3,000 MT 157,000 MT **200,000 MT**	100 per cent 100 per cent 50 per cent 60 per cent	18,000 MT 1,000 MT	1500
6	Bhagawati Steel Ind. Pvt Ltd, Birgunj	1991	(a) Black galvanized steel pipes/tubes (b) Bicycle rims (c) Electrical extension poles **TOTAL**	45,000 MT 360 MT 30,000 MT **75,360 MT**	80 per cent 28 per cent 25 per cent 58 per cent	4,500 MT 100 MT 7,500 MT	205
7	Rajesh Metal Crafts Ltd, Birgunj	1992	(a) Cold rolled galvanized steel sheets (b) Black galvanized steel pipes/tubes **TOTAL**	80,000 MT 50,000 MT **130,000MT**	50 per cent 50 per cent 50 per cent	NA	300
8	Pioneer Wires Pvt Ltd, Biratnagar***	1997	(a) Black galvanized wires (b)Electric galvanized wires (c) Electric and telephone cables **TOTAL**	**24,000 MT**	50 per cent	NA	300
9	Mainabati Steel Pvt Ltd, Biratnagar***	NA	(a) Black galvanized steel pipes/tubes (b) Bicycle rims (c) Others **TOTAL**	50,000 MT 360 MT 25,000 MT **75,360 MT**	80 per cent	NA	250
10	Lumbini Cable Pvt Ltd, Butwal, Rupendehi District	NA	Copper-wire production and export to India	NA	NA	NA	NA

Notes: Production capacity of Hulas Steel Industries Ltd to increase by 80,000 MT in July 2010. (*) Figures estimated from secondary source.
Source: Field Work

11) Chyangra Pashmina Products

Background

Pashmina, now commonly known in Nepal as *Chyangra Pashmina,* is a fine hair fibre from the inner down coat of *Capra Hircus,* a mountain goat called *'Chyangra'* in Nepal, which inhabits the Himalayas in areas above 2,300 m.[69] The fibre is well known for its uniform quality and fineness. It is soft, warm, and very light. It is sometimes called 'Diamond Fibre' or 'Soft Gold of High Asia'. *Pashmina* products, such as shawls, are usually produced using a blend of *Pashmina* and the cheaper silk yarn. Exports of *Pashmina* products like shawls, stoles, blankets, sweaters, and other accessories boomed in the late 1990s to record high level of US$80 million in 2000/01, but then declined again to around US$22 million in 2008. A major reason for the decline is seen in increased competition from other countries, which often use cheaper imitation materials. ITC published an extensive study on the sector in 2007.[70]

Index 1: Export Performance

Table 2.38
Export Value of Pashmina Products, 2005-2009 (US$1,000)

2005	2006	2007	2008	2009
19,091	15,530	15,790	22,074	n/a

Source: TradeMap (mirror data). Data covers products 6214.10/20/90 and 6301.20.

Types of Exported Products: The main products are *Pashmina* shawls, but also other items such as blankets.

Current Export Destinations (share of exports): The main markets for *Pashmina* shawls are the EU (61 per cent), USA (12 per cent), India (9 per cent), and Japan (7 per cent), which together account for 90 per cent of exports.

Potential Export Destinations: Fast-growing markets are China and UAE. According to industry sources, other promising new markets are Russia and South Africa.

Nepal's World Market Share: Nepal's share for the major product (6214.20, shawls of fine animal hair), is around 3 per cent. However, the world market share is difficult to assess using trade data because the relevant product codes cover not only *Pashmina* products but also other products . China, Mongolia, India, and Pakistan are also large producers of cashmere, which is similar to *Chyangra* wool.

Trade Balance: There are negligible recorded imports of such products. Raw materials have to be imported, such as silk and dyeing materials. Annual imports of silk and silk products, at least some of which will be used in *Pashmina* production, are around US$4-5 million.

Dynamism of Exports: Exports have been relatively stable over the last four years (see data above). However, they are lower today than in the late 1990s, when they were reported to be about US$80 million per year.

[69] "Chyangra Pashmina" is similar to other fine animal hairs like "Cashmere", "Merino", "Alpaca", and "Mohair". During the early 2000's, the word "Pashmina" was often misrepresented in the western markets by a low-value shawl woven out of cheap materials like acrylic or viscose yarns.

[70] ITC (2007b). Chyangra Cashmere and Silk Products – Export Performance and Potential. ITC, Geneva.

Export Prospect: According to industry sources, prospect is very good for new designs and niche products such as blankets.

Index 2: World Market Conditions

Table 2.39
Total World Export Value of Pashmina Products, 2005-09 (US$1,000)

2005	2006	2007	2008	2009
1,138,040	1,059,315	1,222,434	1,701,445	n/a

Note: Data covers products 6214.10/20/90 and 6301.20

Market Access Conditions (Tariffs and NTBs): Tariffs are low in most markets. The EU[71] and Japan apply zero tariffs to Nepal. No preferential access is granted in the US market, which applies a 6.7 per cent tariff. Firms interviewed did not report difficulties with other trade barriers.

Major Competitors in World Market: The main competitors are China and India.

World Market Prospect: There has recently been a strong upward trend in world markets for such products. However, as *Pashmina* products are 'fashion products', demand is very volatile and difficult to forecast.

Index 3: Domestic Supply Conditions

Producers: About 86 cottage and small industries, including 25 knitting units, are actively operating[72] and currently 327 entrepreneurs are involved in the export of *Pashmina* products.[73]

Production Capacity: At present, almost all raw materials, including *Pashmina* and silk yarns and dyeing materials, are imported. The total capacity of the 86 industries is 2 million pieces of shawls and other items per year. According to producers, this capacity could easily be increased by 100 per cent within the next five years. The factories in the organized sector have 2,000 looms and employ 5,000 weavers in Kathmandu, Lalitpur, Bhaktapur, Kavre, Makwanpur, and Chitwan districts. In addition, 20,000 households in and around Kathmandu valley have one loom in each house and family members are capable of weaving shawls.[74]

Quality of Service: Entrepreneurs have gradually become more quality conscious and are interested in modernizing weaving and in introducing new knitting technologies. Normally, 70 per cent of pure *Pashmina* yarn and 30 per cent silk yarn are used in shawl production.

Availability and Quality of Labour Force: Semi-skilled workers are readily available. Workers are trained on-the-job. Labour supply is not a serious problem should the production be expanded.

Labour Cost and Overall Production Cost: Labour cost has increased slightly due to the recent inflationary pressure in the country. According to industry sources, the production cost is high compared to China and India.

[71] MFN tariffs in the EU are 8-12 per cent for the relevant products. Data from Eurostat shows that 90-95 per cent of Nepalese exports enter the EU market duty-free under the GSP.
[72] Nepal Pashmina Industries Association (NPIA). There are 160 members with NPIA that include industries, knitters as well as exporters.
[73] Federation of Handicraft Association of Nepal, Handicraft Trade Directory, 2007-08.
[74] International Trade Centre, Chyangra Cashmere and Silk Products from Nepal: Export Performance and Potential, 2007, p. 23.

Level of Processing Technology: Shawls are woven on handlooms or power looms using a blend of silk and Pashmina yarns. Looms range from very small hand-held frames to large free-standing handlooms or power looms.

Cost and Quality of Infrastructure: The overall cost of infrastructure is low. However, high costs of electricity and transport are reported to be a particular burden for producers.

Efficiency of Domestic Supporting Industries: About 400 MT of Pashmina and 200 MT of silk yarn are required annually and imported from China and Mongolia. However, there are only two modern yarn dyeing plants. Further dyeing facilities would be needed by small weavers and knitters who do not have their own dyeing facilities. Many small operators are selling grey *Pashmina* shawls to exporters for further dyeing, processing, and finishing depending on the buyers' specific requirements.

Domestic Demand: The domestic market for Pashmina shawls is about 10-20 per cent of the total production.

Business Environment: The quality of communication and air freight services are considered to be very good.

Government Initiatives and Donor Involvement: *Pashmina* is one of the priority export products identified in the Government's recent Commercial Policy 2009. The Government has already supported Nepal Pashmina Industries Association to arrange registration of 'Chyangra Pashmina' with a graphic trademark in major markets.[75] Other government policy initiatives include *Pashmina* goat farm development in potential districts to establish a long-term source of raw materials, setting up of *Pashmina* yarn and product testing laboratory facilities, human resource development for production and marketing activities and design development. In the past, Asia Invest supported NPIA in organizing buyer-seller meetings, training and strengthening of the organizational capacity.

Prospect for Domestic Supply Conditions: *Chyangra* can survive at altitudes above 2,500 m. More than 35 per cent of the country's total land surface is mountainous and about 50 per cent of this surface is covered by snow. This condition offers unique prospect for developing and commercializing *Chyangra* products in Nepal. About 12 per cent of land surface of the country is already covered by grass suitable for pasture. Moreover, further pastureland development in mountain areas is possible.[76] The main districts where *Chyangra* goats are being raised are Mustang, Manang, Humla, Jumla, Mugu, and Dolpa. There is long-run prospect for developing *Pashmina* as well as silk production within the country to assure a permanent source of quality raw materials for export growth.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: It is estimated that currently 5,000 people are getting full employment from the *Pashmina* business in Nepal. According to producers, if a favourable business environment prevails, *Chyangra* farming is started and external market demand is revived, the present production can easily be doubled without much investment and efforts and, thereby, additional employment can be created for up to 5,000 people.

[75] According to Nepal Pashmina Industries Association (NPIA), as of October 2009, applications for registration of collective trademark "Chyangra Pashmina" has been already approved by the USA, Japan, Australia, and Norway. Applications submitted to Canada, Brazil, Mexico, EU, Switzerland, Russian Federation, and New Zealand are under serious consideration. Among the Asian countries applications are submitted to Thailand, China (including Hong Kong and Taiwan), Israel, Singapore, Japan, UAE, and Pakistan.

[76] Ministry of Agriculture and Cooperatives, Statistical Information on Nepalese Agriculture 2004/05, Dec. 2005.

Gender Impact: Female workers and entrepreneurs have taken important roles in weaving, knitting, finishing, and packing activities. It is estimated that more than 75 per cent of the FTEE in the industry is occupied by women.

Contribution to Skill Development: Traditional skills are passing through the younger generations, but further training is required for quality improvement and product diversification.

Impact on Development of Disadvantaged Regions: At present, export earnings are already trickling down to many families in the four to five districts in and around Kathmandu valley. However, development of *Pashmina* farming and sericulture will have better impact on the development of remote regions of Karnali, Mahakali, Gandaki, Bagmati, Sagarmatha, and Kosi zones.

Energy and Water Constraints: *Pashmina* washing and dyeing processes are highly water- and fuel-intensive. Most of the producers are located in areas having good access to water and fuel.

Environmental Impact: Except for the possible chemical dyeing use, the *Pashmina* industry is considered environmentally friendly. Some of the Pashmina factories have modern treatment systems to contain pollution within the dyeing process.

Market Attractiveness Index

EU markets are the most attractive markets for *Pashmina* products and also currently the main export destinations. Growth rates have been high in these markets, and there is a significant tariff advantage which is even higher than it appears in the table. Compared to non-EU competitors such as China and India, Nepal has an 8 per cent tariff advantage for this product.

Table 2.40

Attractive Markets for Pashmina Products

Attractive markets for Pashmina products (HS 6214.20)

Top 10 - Weighted Market Attractiveness Index

Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	UK	2,338	6.2%	17.8%	0%	4%	Italy, China, India
2	Germany	2213	6.3%	15.5%	0%	3%	Italy, China, India
3	Spain	0	4.8%	16.4%	0%	3%	India, Italy, UK
4	France	3523	7.4%	8.3%	0%	2%	Italy, UK, India
5	Hong Kong (SARC)	19	4.2%	13.8%	0%	0%	UK, France, Italy
6	USA	1983	16.5%	8.4%	7%	0%	China, Italy, UK
7	Italy	1597	5.3%	6.9%	0%	3%	UK, China, India
8	Japan	1109	21.0%	1.6%	0%	2%	China, Italy, UK
9	China	51	2.0%	51.3%	14%	0%	UK, Italy, France
10	Switzerland	404	3.1%	14.7%	0%	0%	Italy, Germany, France

Note: HS 6214.20 (shawls of wool or fine animal hair), the major export item used as a proxy for all Pashmina products.

Attractive markets for Pashmina products (HS 6214.20)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	Japan	China	India	France	3,523
2	USA	UAE	New Zealand	UK	2,338
3	France	UK	Kyrgyzstan	Germany	2,213
4	Germany	Spain	Canada	USA	1,983
5	UK	Germany	Netherlands	Italy	1,597
6	Italy	Hong Kong (SARC)	Turkey	India	1,554
7	Spain	Tanzania	Denmark	Japan	1109
8	Hong Kong (S.)	Russia	Poland	Canada	510
9	Switzerland	USA	UK	Switzerland	404
10	Korea (South)	France	Romania	Norway	231

12) Wool Products

Background

Exports of woolen knitted and felt products from Nepal grew at an annual average rate of 14 per cent during five years (2004/05–2008/09).[77] Wool products contributed 25 per cent in the total export of handmade products of Nepal and the export value has reached US$11.7 million in 2008/09, based on Nepalese data.[78] Woolen knitted products are being exported since the 1960s. Since the mid-1990s, traditionally used felt techniques to produce floor coverings *(Radi)* and blankets *(Pakhi)* were transferred to the production and export of fashion wear and accessories.[79] Annually, Nepal imports about 4,000 MT of wool valued at about US$11 million from New Zealand, China, and Australia.[80] About 1,200 to 1,500 MT of wool is used in the production of knitted and felt products and the remainder for carpet weaving. Paradoxically, locally produced sheep wool of 500 to 600 MT[81] is not being utilized in such products due to lack of quality wool and appropriate wool processing technology.

Index 1: Export Performance

Table 2.41
Export Value of Wool Products, 2005-2009 (US$1,000)

	2005	2006	2007	2008	2009
Exports	12,292	12,915	13,656	16,491	n/a
Net exports	9,219	9,686	10,242	12,368	n/a

[77] Knitted products include sweaters, pullover, cardigans, mufflers, caps, gloves, mittens, socks, and bags and felt products are shoes, bags, caps, hats, scarves, wrist warmers, and other accessories.
[78] Trade and Export Promotion Centre, Nepal Foreign Trade Data - 2008/09.
[79] Felt making out of Yak wool originated in the hilly and Himalayan regions of Nepal. Felt products like floor coverings, Bakkhu and blankets are suitable to protect from the cold climate in the mountains. Source: Catalogue of Association for Craft Producers, 2008.
[80] Source: TradeMap.
[81] Ministry of Agriculture and Cooperatives, Agri-business Promotion and Statistics Division, *Statistical Information on Nepalese Agriculture, 2004/05.*

The value added of those exports is approximately 75 per cent of the total exports, assuming the value of raw material imports is around 25 per cent of the export value (see below).

Types of Exported Products: The main types of exported wool products are pullovers, hats, gloves, and shawls.

Current Export Destinations: The main destination (with share of exports) is the EU market in in 2008 (47 per cent), followed by the US (18 per cent), Canada (14 per cent), and Japan (10 per cent).

Potential Export Destinations: The most attractive markets appear to be the EU markets and Japan. Those markets have grown fast in recent years and offer preferential market access.

Nepal's World Market Share: Nepal's share in world exports is very low (0.1 per cent).

Trade Balance: There is little import of such products, but it is estimated that yearly import of wool for the production of these products is around US$4 million, around 25 per cent of the export value.

Dynamism of Exports: Export has grown significantly since 2004 when they were only US$9.4 million.

Index 2: World Market Conditions

Table 2.42
Total World Export Value of Wool Products, 2005-2009 (US$1,000)

2005	2006	2007	2008	2009
12,768,113	13,448,478	14,673,757	15,920,594	n/a

Market Access Conditions (Tariffs and NTBs): There are high tariff barriers for these products, but Nepal enjoys preferential access in the EU, Canada, and Japan, although not in the USA. MFN tariffs in major markets are: EU (9-12 per cent), Canada (16-18 per cent), and Japan (6-17 per cent), which means that Nepal has a substantial advantage if rules of origin requirements can be fulfilled.[82] No such preferential access is granted by the USA (MFN 2-16 per cent).

Major Competitors in World Market: By far the largest exporters of such products are China, Hong Kong, and the EU, but traded products are very heterogeneous. For example, unit values for US import of the main woolen products that Nepal exports vary by factor 10, with Nepal being at the lower end of that range.

Index 3: Domestic Supply Conditions

Producers: There are 25 organized knitting units[83], and more than 258 entrepreneurs are involved in the production and export of woolen products.[84]

Production Capacity: The total annual capacity of organized industries and household units is 4 to 5 million pieces of different types of woolen products.[85] The present capacity can be increased by 50 per cent within

[82] Data from Eurostat shows that 90-95 per cent of Nepalese exports enter under preferential rates.
[83] Nepal Pashmina Industries Association (NPIA).
[84] Federation of Handicraft Association of Nepal, *Handicraft Trade Directory, 2007-08.*
[85] Calculation based on the actual exports of 3.7 million pieces to countries other than India and domestic sales to tourists. Data source for exports to countries other than India: Trade and Export Promotion Centre, *Nepal Overseas Trade Statistics, 2007/08.*

five years. The firms in the organized sector have more than 2,000 knitting machines and 3,000 knitters and felt product-makers in Kathmandu and the districts of Lalitpur, Bhaktapur, Kavre, Makwanpur, and Chitwan. In addition, 15,000 to 20,000 women in these districts are skilled and capable of producing hand-knitted woolen products as required by the foreign markets.

Quality of Product: The quality of woolen products depends on (a) the quality of wool, (b) knitting technique, and (c) wool yarn dyeing facility. Exporters have reported that the wool quality is not always sufficient and that there is a lack of laboratory equipment to crosscheck the quality and grade of wool supplied by the importers. They also complained about a lack of sophisticated knitting technology and inadequate dyeing facilities.

Productivity: Productivity of the trained and skilled workers is good.

Availability and Quality of Labour Force: Skilled and semi-skilled workers are available for further increase in production in case foreign market demand surges. Workers are trained on-the-job.

Labour Cost and Overall Production Cost: Labour cost has increased slightly due to recent national inflationary pressure. Overall production cost is average.

Level of Processing Technology: Various types of process include (a) hand-knitting, (b) hand-driven machine-knitting, (c) motorized and computerized machine, (d) hand- and foot-driven weaving loom, and (e) hand molding and felting. The types of technique used depend on the buyer's requirements.

Cost and Quality of Infrastructure: Overall cost of infrastructure is low; however, costs of electricity and transport are considered high.

Efficiency of Domestic Supporting Industries: It is estimated that about 1,200 to 1,500 MT of annually required wool and woolen yarns are imported from Australia, China, and New Zealand. The imported wool is supplied mainly to two spinning mills in Kathmandu, which supply white yarns to knitters. Knitters give these yarns to dyeing plants to dye according to the buyer's colour combination requirements. Exporters and knitters have realized the limited capacities of existing spinning and dyeing plants in Kathmandu to meet foreign market demand.

Domestic Demand: Approximately 10-15 per cent of the total output is sold in the domestic market, particularly to schools students, security guards, police, and the army.

Business Environment: Quality of communication and air freight services is very good.

Government Initiatives and Donor Involvement: Wool products are included in the list of priority export products as identified in the Government's recent Commercial Policy 2009.[86] The government has indicated that a feasibility study will be undertaken for an integrated programme of wool and woolen goods production and Tibetan types of wool will be developed. Recently, two separate business institutions, Woollen Products Development Association (WPDA) and Felt Industries Association of Nepal (FIAN), have been established for the promotion and development of woolen products in Nepal. Both these associations have contemplated some programmes like sheep farming development, product design and development, human resource development, and marketing promotion as priority activities and are expecting technical support from the government and donors.

Prospect for Domestic Supply Conditions: Increasing domestic production of wool has a high potential, especially by using Vyanglung (a type of sheep carrying high quality wool which can survive in the high mountain regions of Nepal) sheep. But the population of Vyanglung is currently only 4-5 per cent of the 8.2 million

[86] Ministry of Commerce and Supplies, *Commercial Policy 2065.*

sheep population, which produces about 590 MT of wool.[87] About 29 MT of *Pashmina* would be available from the current Chyangra population in Nepal.[88] About 50 per cent of mountain surface (35 per cent of total land) is covered by snow, which offers unique prospect for the development of sheep farming. Pasture land of the country is 12 per cent of the total surface and further extension of pasture land is possible.[89] The most suitable districts are Mustang, Manang, Humla, Jumla, Mugu, and Dolpa. There is long-run prospect for developing wool within the country to assure a permanent source of quality raw materials for export growth of woolen products. In case of wool products, more than 20 districts have production potential.[90]

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: It is estimated that currently 10,000 to 15,000 people are getting full employment from knitting and felt products in Nepal. If a favourable business environment prevails and if growth in external market demand continues, the present production can easily be increased by 50 per cent to 6 to 7.5 million pieces and additional full-time jobs can be created for 5,000 people.[91]

Gender Impact: Women workers and entrepreneurs have taken important roles in knitting, felt making, finishing and packing activities. It is estimated that more than 75 per cent of full-time engagement are occupied by women.

Contribution to Skill Development: Traditional skill is passing through the younger generations, but further training activities are required for quality improvement, design and product diversification.

Impact on Development of Disadvantaged Regions: At present export earnings are trickling down mainly to families in four or five districts in and around Kathmandu valley. There is prospect for expansion into disadvantaged regions.

Energy and Water Constraints: Wool spinning is electricity-intensive and washing and dyeing processes are highly water-intensive.

Environmental Impact: Except for the possible chemical dyeing use, wool products are considered environmentally friendly.

Market Attractiveness Index

EU markets, Japan, and Canada appear to be the most attractive markets. The USA is not listed, mainly due to the lack of preferential access.

[87] Ministry of Agriculture and Cooperatives, Agri-business Promotion and Statistics Division, Statistical Information on Nepalese Agriculture, 2004/05, p. 41.
[88] Dr. Chetraj Uprety, Raw Pashmina Production Possibility in Nepal, Smarika, Nepal Pashmina Industry Association, AGM, 2066 (Feb 2010)
[89] Ministry of Agriculture and Cooperatives, Statistical Information on Nepalese Agriculture 2004/05, Dec, 2005.
[90] Some of such districts are Ilam, Dhankuta, Dolakha, Sindhupalchowk, Dhading, Tanahu, Nawalparasi, Tansen, Kaski, Dang, Bardiya, Kailali, and Surkhet.
[91] Based on the discussion with the Presidents of Woollen Products Development Association (WPDA) and Felt Industries Association of Nepal (FIAN).

Table 2.43

Attractive Markets for Wool Products

Attractive markets for Wool products (weighted index of five products)							
Top 10 - Weighted Market Attractiveness Index							
Rank	Country	Exports Nepal (2008)	World market share	Growth rate (2004-2008)	Tariff for Nepal	Tariff advantage	Main competitors
1	Germany	2,106	8.2%	10.4%	0%	5%	China, Italy
2	France	682	6.1%	14.3%	0%	5%	China, Italy
3	UK	1391	7.1%	12.2%	0%	5%	China, Italy
4	Italy	988	5.7%	10.0%	0%	5%	China
5	Spain	0	2.7%	18.6%	0%	4%	Italy, China, France
6	Japan	1521	9.9%	0.0%	0%	6%	China, Italy, UK
7	Canada	2158	2.5%	12.3%	0%	12%	China, Italy
8	Belgium	64	2.3%	12.7%	0%	4%	China, France, Italy
9	USA	2776	23.7%	-0.9%	10%	0%	China, Italy
10	Hong Kong (SARC)	6	7.9%	-1.6%	0%	0%	China, Italy, Japan

Note: Attractive markets calculated using data for the five major Nepalese export products (6110.11/12, 6116.91, 6117.10 and 6505.90) and 2008 export values as weights.

Attractive markets for Wool products (weighted index of five products)					
Top 10 by size, growth, openess and current exports					
Rank	top10 SIZE	top10 GROWTH	top10 OPENESS	top10 current exports from Nepal (US$ 1,000 in 2008)	
1	Germany	France	India	USA	2,776
2	Japan	Spain	Kyrgyzstan	Canada	2,158
3	UK	Russia	Iceland	Germany	2,106
4	USA	Germany	New Zealand	Japan	1,521
5	Hong Kong (SARC)	UK	Canada	UK	1,391
6	France	Italy	Japan	Italy	988
7	Italy	Poland	Netherlands	France	682
8	Spain	Kyrgyzstan	Australia	Austria	293
9	Canada	Austria	Poland	India	271
10	Belgium	Belgium	UK	Switzerland	236

13) Tourism

Background

Tourism is a major foreign exchange earner for Nepal and its revenues significantly exceed the revenue of each single merchandise export product. With estimated revenue of US$352 million in 2008 and 500,000 visitors, tourism revenue is 37 per cent of all merchandise export and three times higher than revenue from carpets--the major export product of Nepal. This makes tourism by far the largest export industry of Nepal, except for the even higher revenues generated by the Nepalese migrant workers. Nepal has quite obviously a comparative advantage for certain tourism sectors due to its cultural and natural heritage. However, developments in 1999-2002 have shown that the sector is particularly vulnerable to political instability. Though tourist arrivals have recovered in recent years, numbers would certainly fall again if the political situation deteriorated. Apart from political instability and conflicts between employers and workers--major problems for any sector in Nepal--the tourism industry suffers from insufficient transport infrastructure (road, air, and electricity).

The Ministry of Tourism and Civil Aviation (MoTCA) is the main tourism regulator[92] and the Civil Aviation Authority of Nepal (CAAN)[93] acts as the regulator in civil aviation. Nepal Tourism Board (NTB) has been acting as the national tourism organization since December 1998 to address the pressing need of the tourism industry by designing specific brand image and supporting promotional campaigns.

In 2011, Nepal is celebrating Nepal Tourism Year, with the aim of increasing the number of arrivals to one million, which would require doubling of the current number of arrivals.

Index 1: Export Performance

Table 2.44
Export Value of Tourism, 2004-2008 (US$1,000)

2004	2005	2006	2007	2008
180,000	148,000	163,000	231,000	352,000

Source: MOTCA (2008).

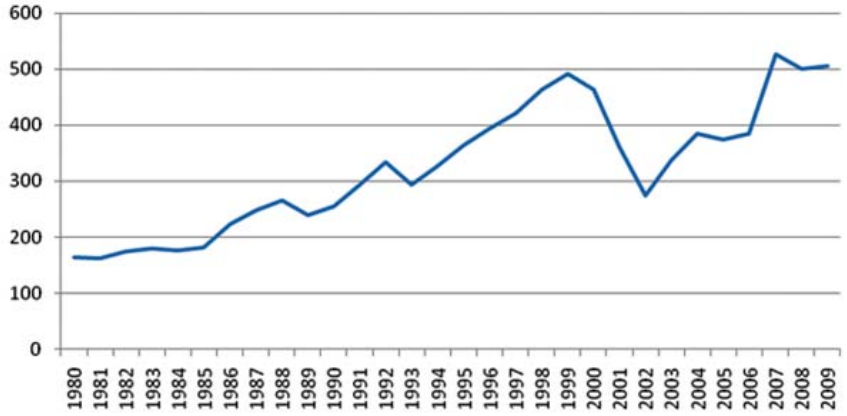
Although the measurement of export revenue accruing from tourism is problematic[94], the numbers of arrivals can be used as a proxy. MoTCA also provides statistics on the average length of stay, which has been pretty stable since 1980 (10-12 days per visitor, with a temporary decline to 8 days in 2002). Tourist arrivals grew steadily from almost zero in the 1960s to 500,000 in the late 1990s, but then dropped to almost half of its peak between 1999 and 2002 due to the political situation in Nepal. They have since steadily increased to just above their pre-crisis level.

[92] MoTCA, as tourism regulator, deals with registration, licensing, categorization of star hotels, providing facilities and incentives, and monitoring and evaluation.

[93] CAAN came into existence in December 1998 and acts as the regulator in civil aviation. It provides Air Operator Certificate (AOC) and enters into air service agreements with different countries. At present, the GoN has entered into AOC agreements with 35 countries, but only 18 airlines have schedule flights so far. Prior to liberalization in 1993, the civil aviation department used to perform the activities of CAAN.

[94] The government's accounting system captures only the contribution of hotels and restaurants rather than the total contribution of the travel and tourism sector, which is expected to be much higher than this figure. This implies the need to introduce Tourism Satellite Accounting adopted already by a large number of developed and developing countries.

Figure 2.4 Tourist Arrivals 1980-2009



Source: MOTCA (2009). 2009 data estimated based on trends in air arrival figures.[95]

Types of Exported Services: The majority of foreign tourists visit Nepal for sightseeing (30 per cent) and trekking/mountaineering (20 per cent). Around 10 per cent of visitors come for pilgrimage, mainly from Sri Lanka and India. Travel for business or conferences counts for 6 per cent of arrivals (MoTCA, 2008).

Current Export Destinations: In 2008, out of 500,000 visitors, the majority were residents of India (84,000), Sri Lanka (38,000), China (36,000), UK (30,000), USA (28,000), and Japan (22,000). The share of Indian arrivals has been relatively stable with 20-30 per cent since 1990.

Nepal's World Market Share: Nepal has a negligible share in global revenue from tourism (0.04 per cent). However, Nepal compares well with other destinations in the region. In 2008, Nepal received 500,000 visitors, comparable to the numbers in some of the other countries in the region.[96] Tibet's fast-growing market received 365,000 international visitors in 2007.[97]

Export Prospect: With very promising world market prospect (see below), the outlook for Nepal is very positive. Forecasts for Nepal's tourism sector are provided by the World Travel and Tourism Council, with an expected annual real growth rate of 3.9 per cent between 2010 and 2019.[98] Nepal has attracted more and more visitors from countries such as Korea (South) and China in recent years. However, the major factor for future export prospect is clearly the political situation in Nepal. The fall in tourist arrivals in 1999-2002 has shown how vulnerable the sector is. At the same time, tourist arrivals had grown continuously within the region, which clearly shows that this was a period of missed opportunities for Nepal.

[95] See http://www.ftnnews.com/content/view/8226/32/
[96] India (5.4 million), Sri Lanka (438,000), Pakistan (823,000), Bhutan (28,000). Source: UNWTO World Tourism Barometer, September 2009
[97] Source: http://www.china.org.cn/english/travel/240898.htm
[98] World Travel & Tourism Council (2009). Travel & Tourism Economic Impact – Nepal. Available at www.wttc.org.

Index 2: World Market Conditions

Table 2.45
Total World Export Value of Tourism, 2004-2008 (US$1,000)

2004	2005	2006	2007	2008
n/a	680,000,000	745,000,000	857,000,000	944,000,000

Source: UNWTO (2009b).

Market Access Conditions: There are no particular foreign barriers in this sector.[99] Numerous barriers exist in Nepal, in particular a lack of transport infrastructure.

Major Competitors in World Market: Major direct competitors seem to be other South Asian countries that offer tourists a somewhat similar natural and cultural heritage, such as India (in particular the Himalayan regions), Bhutan, Tibet or Sri Lanka. However, these destinations can also be complementary. A lot of visitors combine a visit to Nepal with a visit to India (31 per cent) or Thailand (14 per cent), which are also major transit countries for flights to Nepal. Few people currently combine it with Tibet, which is probably related to the stringent visa regulations applied by China for visits to the Tibet region.[100] The same applies to Bhutan, which is pursuing a policy to limit the number of tourists and keeping revenue per visitor high. Policy changes that make visits to Tibet or Bhutan easier could offer new opportunities for visitors, but are also a potential threat for Nepal.

World Market Prospect: Tourism is a fast-growing market around the world. Global international visitor arrivals have grown by 4.3 per cent per annum between 1995 and 2008 and this growth is expected to continue. The UNWTO forecasts a 4.1 per cent annual growth rate until 2020, and an even faster growth of 6.2 per cent in South Asia.

Index 3: Domestic Supply Conditions

Nepal ranks very low in the World Economic Forum's 'Travel & Tourism Competitiveness Index' (WEF, 2009b), which takes into consideration the regulatory framework, infrastructure, and human and natural resources. It ranks 23rd out of 24 ranked destination countries in Asia and the Pacific, and with a similarly low rank across all indicators. Some of the indicators appear questionable or plainly wrong, but it is clear that overall Nepal suffers from a lot of infrastructural and institutional constraints that also affect the tourism industry.[101]

Tourism Infrastructure: A particularly popular attraction for tourists in Nepal is trekking routes; however, some of them have been converted into roads, with obviously positive effects for the local population, but which has negatively affected trekking activities (eg Annapurna Trekking, which used to take 20 days before, which has now been reduced to 9 days). According to industry sources, more careful planning and development of new trekking routes is necessary. Hotels often do not have enough capacity.

Labour Cost and Overall Production Cost: Industry sources see no significant labour cost advantage compared to competing countries, mainly because of low labour productivity and labour unrests.

[99] One particular exception that may be seen as a foreign barrier is the Chinese "Approved Destination Status" policy, but Nepal has been an "approved destination" since 2001.
[100] It is relatively expensive and complicated to get a permit for direct travelling from Nepal to Tibet.
[101] One indicator measures visa requirements, where Nepal ranks 131st out of 133, but it seems to be based on wrong information..

Transport Infrastructure: Infrastructure, in particular air and road transport infrastructure, has a major importance for the industry and is also a particular area where the GoN's policies can have a significant impact. Seventy-five per cent of international visitors arrive by air (MoCTA, 2008), and domestic flights are also crucial for the accessibility of some of the main tourism areas.

International air transport is currently limited to Kathmandu airport (Tribhuvan International Airport, TIA). TIA has a limited capacity and is currently open only until 12.30 am, mainly due to infrastructural constraints. Similarly, a lot of smaller airports and airfields across the country require upgrading. Some have even fallen into disuse.[102] The capacity of TIA will not be sufficient for the expected increase in air traffic over the next years. To address these constraints, a US$80 million project by ADB is underway.[103]

On a different matter, opening up additional airports, in particular Pokhara airport, for international traffic is also under consideration. This has not been achieved so far and should be a priority for the GoN as it would both help to increase visitor arrivals to these places (with Pokhara having a great potential for visitors from India in particular) and to reduce transit traffic in Kathmandu airport. It appears that flights between Pokhara and some cities in India will start soon, also because of a new air services agreement signed between Nepal and India, which explicitly allows for international flights between regional airports. But problems remain, both in Nepalese legislation and in high landing fees for small aircraft--which would be used for flights from Pokhara--in Indian airports. The number of seats that Nepalese and Indian airlines are each allowed to offer per week has been increased from 6,000 to 30,000.[104] Several Indian airlines are now planning to offer additional flights between Kathmandu and several Indian cities.

Similar air services agreements have recently been concluded or renewed with several other countries, including Qatar and Singapore. Currently, Nepal Airlines Corporation, the state-owned flag carrier, is the only Nepalese airline providing international flights, with only one or two aeroplanes for international flights and a market share for incoming visitors of only 6 per cent (MoCTA, 2008). There should, therefore, be no reason to not unilaterally liberalize air access of foreign airlines even further if current regulations prevent airlines from offering air services to Nepal.

Efficiency of Domestic Supporting Industries: In efficiency of domestic supporting industries, industry sources see the efficiency of hotels as high, airlines average and transport companies low. For hotels, the efficiency of grocery suppliers is high but the sole energy supplier (NEC) low.

Business Environment: Tourism services in Nepal are regulated by various acts and the country opened up foreign investment in travel agency and tour operator service only after WTO membership, which is limited to 51 per cent. However, Foreign Direct Investment (FDI) in hotel industry has been opened up to 80 per cent foreign equity. Nepal's Foreign Investment and Technology Transfer Act (FITTA), however, allows 100 per cent investment in hotels, above the minimum WTO commitments. Nevertheless, unstable government is considered to be the main obstacle to attracting FDI.

Government Initiatives and Donor Involvement: The GoN has taken tourism as a priority sector. It has produced New Tourism Policy 2008, Nepal Tourism Vision 2020, and declared new tourist destinations and 2011 as the tourism year. The donors involved in the sector include UNDP, DFID and SNV-Nepal. UNCTAD has recently been involved in this sector.

[102] There are 47 domestic airports, of which 32 are in operation. Attempts have been made recently by Nepalese airlines to revive some of those airports. See http://nepalitimes.com/issue/2009/11/1/Headline/16427c.

[103] "Air Transport Capacity Enhancement Project", see http://www.adb.org/Projects/project.asp?id=38349. The project will be funded by a US$10 million grant and US$70 million loan.

[104] http://www.nepalitimes.com/issue/2009/10/30/Nation/16446.

There are also about 24 private associations related to travel and tourism services ranging from the Hotel Association of Nepal (HAN) to Nepal Association of Tours and Travel Association (NATTA) to Nepal Association of Rafting Association (NARA), etc.

Statistics on the sector are easily available and an exit survey has also been undertaken in 2008.

Prospect for Domestic Supply Conditions: Industry sources are generally optimistic about the future of tourism services in Nepal. They see new opportunities, such as opening of new trekking routes, various types of adventure tourism, including cycling and jeep drive, canoeing, nature walks, and bird watching. Farm tourism and religious tourism are other potentials. Better infrastructure and better visa facilities for cross-border tourism from Tibet and India could add value to the current services.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: It is estimated that tourism in Nepal provides direct employment to about 237,000 people and indirect employment to about 548,000 people (WTTC, 2008). This is roughly in line with estimates by MoCTA reported in ZRS (2008).

Gender Impact: No estimate is available on the share of women in employment. Their share is low at managerial level, and the share of women receiving training in Nepal Academy of Tourism and Hotel Management (NATHM) is only 15 per cent.

Contribution to Skill Development: Several institutions and universities provide education in the field of tourism, such as the NATHM and the International School of Tourism and Hotel Management (ZRS, 2008). The universities in Nepal, including constituent and affiliated campuses, also provide degree and non-degree courses on tourism.

Impact on Development of Disadvantaged Regions: The sector contributes in terms of development of disadvantaged areas and rural areas because a lot of the activities take place in rural areas. However, large parts of Nepal, such as the Far Western Region, receive very few visitors.

Energy and Water Constraints and Environmental Impact: The sector does not have a particularly negative impact on the environment, but it can lead to problems in certain regions (garbage, high use of wood for energy).

Market Attractiveness Index

We are using statistics on tourism expenditure by country to calculate an index of attractive markets, based on both absolute expenditure (in 2008) and growth in recent years. Germany ranks highest, but some other countries are emerging as major markets, such as Saudi Arabia, Iran, and China. India (not shown) ranks 21st with a current expenditure volume of US$9.6 billion and 20 per cent annual growth.

Table 2.46
Attractive Markets for Tourism

Attractive markets for Tourism			
Top 10 - Weighted index for size and growth			
Rank	Country	Tourism expenditure (US$ billion, 2008)	Average annual growth (2000-2008)
1	Germany	91	8%
2	Saudi Arabia	6	81%
3	USA	80	3%
4	UK	69	9%
5	France	43	13%
6	Iran	9	43%
7	China	36	16%
8	Russian Federation	25	16%
9	Italy	31	10%
10	Ukraine	4	35%

Source: Based on UNWTO World Tourism Barometer, October 2009.

14) Labour Services

Background

Over 1.5 million Nepalese are currently working abroad, with remittances in 2009 estimated at US$2.7 billion. This makes labour services by far the largest foreign exchange earner of the Nepalese economy. As a comparison, revenues from tourism are US$352 million, and all goods export in 2008 was only around US$1 billion. Remittances are 17 per cent of GDP, one of the highest shares in the world.[105]

Temporary migration has a long history in Nepal.[106] Previously limited to the British army and the Indian army, migration has now spread to more than 100 countries. Additionally, people are at liberty to go to any country around the world on their individual effort. Unlike the history of Nepalese male workers going abroad, the history of women migrant workers started only after the promulgation of the Foreign Employment Act 1985, but most migrant workers are still men.

Most Nepalese working abroad are low-skilled and therefore earn relatively low salaries, typically less than US$200 a month. Transaction costs are high and could cost 25 per cent of the salary earned over a two-year period.

As noted in the previous chapter, from an export perspective, what is relevant are remittances from temporary migrant workers. Transfers from Nepalese that are permanent overseas residents are not exports. Balance of Payments (BoP) data do not distinguish between the two types of transfer. However, in the case of Nepal, it can be assumed that a great majority of BoP transfers are from temporary migrant workers.

[105] Nepal ranks 14th in the world in the share of remittances in GDP (World Bank, 2007 data).
[106] The tradition of Nepalese youth going for foreign employment can be traced back to the early 19th century, when the East India Company started recruiting Nepalese youth in the army. Since then, the Nepalese people have continuously been engaged in foreign employment.

Index 1: Export Performance

Table 2.47
Remittances 2005-09 (US$1,000):

2005	2006	2007	2008	2009
913,000	1,357,000	1,427,000	2,205,000	2,738,000

Source: Nepal Rastra Bank, Balance of Payments

Remittances cannot be perfectly measured, but, according to Pant (2006, 2008), the GoN has been successful in its policy of increasing the share of remittances going through official channels. The share was only 20 per cent in 2000/01, but 91 per cent in 2007/08.

In terms of the number of migrant workers, it is estimated that 1.5 million Nepalese were working abroad in the mid-2009 and since 2005 around 200,000 people have left every year with official permission from DOLEP. Recent statistics from DOLEP are as follows:

Table 2.48
Temporary Nepali Migrant Workers

Year	2005/06	2006/07	2007/08	2008/09
Number of departed workers	182,000	205,000	249,000	220,000
Share of women	n/a[107]	0.2%	1.9%	3.9%

Source: Ministry of Labour and Transport Management, Foreign Employment Department, 2010

Numbers decreased slightly in 2008/09, apparently due to the impact of the global economic recession. However, we were told that there has been a gradual improvement in more recent months, and the remittances data has also only shown a temporary decline (see below). The percentage of women has slightly increased, but because women are banned from seeking employment in the Middle East, a lot of them go unrecorded through unofficial channels.

The main destinations for migrant workers are India, Malaysia, Qatar, Saudi Arabia, UAE, Kuwait, Bahrain, South Korea, Hong Kong, Oman, and Israel. By far the largest host country is India (77 per cent, 2001 data), but with relatively small flows of remittances from migrant workers in India (25 per cent, see Pant 2006) due to the much lower salaries earned in India. Also, workers going to India are not recorded in DOLEP's statistics. The remaining 75 per cent of remittances are mainly sent from the Middle East and South East Asia. The latest data available for FY 2008/09 shows that the main destinations during that period were Qatar (35 per cent), Saudi Arabia (22 per cent), Malaysia (16 per cent), UAE (14 per cent), and Bahrain (3 per cent), together accounting for 90 per cent of departing workers.

Types of Exported Services: It is estimated that around 70 per cent of the Nepalese going abroad are unskilled workers, 27 per cent are semi-skilled (eg carpenters), and 3 per cent are skilled workers (engineers, nurses, etc). A large share works in construction and manufacturing. Workers typically receive time-limited contracts, after which they have to leave the host country and usually return to Nepal, and possibly leave again after a while. Typically, contracts last two years in the Middle East and three years in Malaysia (extendable up to four years).

[107] Ministry of Labour and Transport, Department of Foreign Employment started to have the breakdown of male/female only for the last three years.

Salaries and Transaction Costs: Nepalese migrant workers in the Middle East typically earn around US$200 a month, plus possibly overtime payments and typically food and accommodation is provided as well. However, the worker often has to bear additional costs for flights, visa, medical certificates and a fee to foreign employment companies (FECs). These costs typically add up to around US$1,200, which is 25 per cent of the total salary over a two-year contract. In some cases, the employer would bear a large part of the costs. The GoN has regulated the maximum fees that FECs are allowed to charge for workers going to those countries with which labour agreements exist (US$850-1,100, depending on the destination, and including costs for flight and visa). The overall transaction costs are relatively high in the case of Nepal compared to other countries in the region (Khatri, 2009). The involvement of middlemen can incur extra costs to workers. In addition to the problems faced in Nepal, workers face problems in the destination countries, again due to the use of middlemen by employers who might capture part of the rent arising from work permits.

Workers' savings are estimated at around US$150 per month, including overtime work. Remittances are sent through banks, money transfer companies, and informal banking channels *(hawala/hundi)*. A portion of the remittances is used to pay back the loans borrowed earlier to go abroad, with the remainder being used to meet household expenses. Remittances are also found to be typically used to buy land and housing. Some people argue that only a small proportion of migrants use the remittance directly for productive investment like agriculture, manufacturing and trade (Shrestha, 2008).

Migration to India is usually informal, with much lower salaries and relatively small amounts sent back to Nepal.

Nepal's World Market Share: Nepal's share in world remittances inflows is 0.6 per cent.

Dynamism of Exports: There has been a significant increase both in the number of people working abroad and in remittances. Figure 2.5 shows monthly remittances inflows for Nepal. There has been a strong upward trend in recent years, but growth has slowed since the second half of 2008, most certainly due to the global economic crisis.

Figure 2.5 Monthly Remittances for Nepal

Source: World Bank.

Index 2: World Market Conditions

Table 2.49
Global Remittances Inflows 2005-09 (US$ billion):

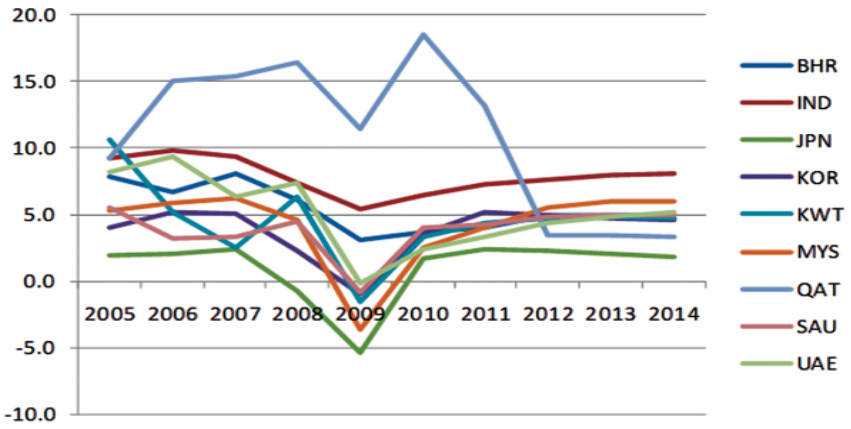
2005	2006	2007	2008	2009
275	317	385	444	n/a

Source: World Bank.

There is a clear upward trend in global remittances, despite a temporary downturn during the global recession in 2008/09.

Prospect for Nepal in the Global Labour Market: Leaving aside India, the majority of current migration is to a few countries in the Middle East (Saudi Arabia, UAE, and Qatar) and Malaysia. This means that at least in the medium run the prospect for Nepalese to work abroad depends mainly on the demand for unskilled labour in these economies. Figure 2.6 shows GDP growth projections for those countries and some other destinations of Nepalese workers. If GDP growth is a good indicator for future demand for migrant workers, then the outlook looks relatively good because most of these countries are expected to return to their pre-crisis growth rates.

Figure 2.6 Current and Projected GDP Growth Rates for Major Host Countries



Source: IMF World Economic Outlook. Data for 2009 onwards are projections.

Index 3: Domestic Supply Conditions

How is the Sector Organized? Nepal has entered into labour agreements with several main receiving countries (Qatar, Saudi Arabia, Malaysia, and South Korea). There are around 600 FECs operating in Nepal and usually owned by Nepalese. Some provide only recruitment service and others a range of additional services like training, medical preparation, etc. People wanting to work abroad can use their services and it is estimated that around 55 per cent do so. The remaining 45 per cent use informal channels, eg they would typically travel to India and then from there to the final destination country. Due to the large number of FECs, including those operating from abroad, there is a high level of competition between them.

Availability and Quality of Labour Force: There is a large availability of workers for foreign employment. However, most of the labour force going abroad is of unskilled category. The lack of skills is partly due to lack of formal training and partly due to the lack of training facilities mainly at district level.

Efficiency of Domestic Supporting Industries: According to industry sources, the efficiency of local agents (FCEs) and training centres is low.

Business Environment: The general macro-economic environment, government's administrative services and judicial services are reported to be problematic. There are more than 1,000 cases relating to foreign employment pending in the Department of Labour and more than 300 cases in the Supreme Court. However, institutional cases are not more than 40.

The labour export in Nepal is governed by the Labour Act 1992, Foreign Employment Act2007 and Foreign Employment Regulations 2007, Immigration Act 1993 and Regulations 1995.

Government Initiatives and Donor Involvement: The GoN has the policy of promoting foreign employment as there is a lack of alternative opportunities in the country. International Labour Organization (ILO) and United Nations Development Programme (UNDP) are some of the donor agencies involved. Nepalese embassies abroad have not been able to provide quality service due to a lack of resources. The government has, so far, entered into labour service agreements with six countries. Recently, the government is trying to form an alliance between and among government, FECs, and NGO/INGOs for the development of this sector.

Prospect for Domestic Supply Conditions: Prospect of integrating employment with other services like training, travel and health checkup at company level. However, district-level training and awareness are to be taken by the government.

Sending unskilled and semi-skilled manpower rather than unskilled at present, increasing training facilities, including languages of the source countries, and international marketing could have value addition.

Index 4: Socio-economic Impact

Migration and Poverty Reduction: There is evidence that remittances had a significant impact on poverty reduction in Nepal in recent years. According to Khatri (2007), official data suggests that the poverty rate fell by 11 per cent due to migrant remittances. However, there is also some evidence that migrants rarely come from the poorest households, who might not even be able to find access to such opportunities (ILO, 2004).

Current Employment and Job-Creation Prospect: With an estimated 1.5 million Nepalese working abroad, the 'sector' is obviously creating a large number of jobs. In addition, it is estimated that there are around 25,000 people working in FECs in Nepal.

Gender Impact: Migration is predominantly by men. Only 4 per cent of those migrants using formal channels in 2008/09 were female, and it is estimated that less than 10 per cent of all migrant workers (including those using informal channels) are women. The GoN has put a ban on migration of women to countries in the Middle East, mainly due to numerous reports of female workers--who usually work in private households--facing harassment and sexual abuse. Women who seek employment in those countries, therefore, have to go through informal channels. This explains why their share is much higher than their share in formal migration, but it remains low.

The Foreign Employment Act 2007 has removed the need for women to have the permission of their husbands/parents to seek foreign employment, but there remain high social barriers for women to seek foreign employment.

Contribution to Skill Development: There is some contribution to skill development because of some training provided to migrant workers. However, as most of them do low-skilled work abroad, the contribution to skills through migration ('brain gain') appears limited.

Impact on Development of Disadvantaged Regions: Many of the migrant workers come from disadvantaged rural areas in Nepal and contribute positively to the development of these regions through remittances.

Market Attractiveness Index

An index of attractive markets for labour services (ie potential destination countries for Nepalese migrant workers) was calculated using the World Bank data on remittances outflows by country. However, one caveat is that remittances also include transfer payments by 'permanent' migrants. For example, most remittances sent from the USA would fall under this category. Some of the current destinations of Nepalese migrant workers, such as Saudi Arabia and Malaysia, can be found on the list. No data is available for Qatar and UAE, two of the current major destinations. Whether additional countries could become future destinations for migrant workers depends obviously on a large number of factors, in particular whether countries provide access to the market.

Table 2.50
Attractive Markets for Temporary Labour Services

Attractive markets for Labor Services		
Top 20 - ranked by remittances outflows		
Rank	Country	Remittances sent from country (US$ billion, average for 2007 and 2008)
1	United States	46.4
2	Russian Federation	22.0
3	Switzerland	17.6
4	Saudi Arabia	16.1
5	Spain	14.9
6	Germany	14.3
7	Italy	12.0
8	Luxembourg	10.1
9	Netherlands	8.1
10	Malaysia	6.4
11	China	5.1
12	United Kingdom	5.0
13	France	4.5
14	Oman	4.4
15	Japan	4.4
16	Norway	4.2
17	Kazakhstan	3.9
18	Kuwait	3.8
19	Korea, Rep.	3.8
20	Belgium	3.4

Source: World Bank, based on IMF Balance of Payments Statistics 2008.

15) Information Technology and Business Process Outsourcing Services

Background

Technological advancements over the last years have opened up opportunities for trade in information technology (IT) and business process outsourcing (BPO) services. This includes a wide range of services, from low-skilled services, such as data entry or call centres to high-skilled services, such as software development, graphic designing or medical prescription transcribing. What all these activities have in mind is that they can be traded internationally via telecommunication networks and that they are labour-intensive. This can open tremendous opportunities for a landlocked, low-wage country like Nepal, and there are promising signs that entrepreneurs have started to export such services from Nepal.

The GoN sees IT and related export services as a priority area. There has been an increase in both homegrown business and foreign subsidiaries in the IT sector over the past few years, the domain of work being data processing, call centre operations, medical prescription transcribing, map digitization, animation, etc. The availability of qualified graduates with English proficiency, expansion of communication facilities, and low labour costs have attracted many local as well as foreign investors and has helped this sector to grow fast. However, a lack of required infrastructure, corporate practice, and quality control measures, including limited international standards/certifications like ISO 9001, and a low scale of transactions have not only forced this industry to struggle in the competitive market, but also restricted Nepal from participating in bigger opportunities. Furthermore, existence of incoherent standards of education offered by different universities and an insufficient supply of qualified personnel, as well as a lack of research and development (R&D) assistance at universities has constrained growth. But the overall outlook for the industry looks very promising.

Index 1: Export Performance

Export Value: No reliable data is available about the export value of the IT sector. A lot of companies are very small and may not be registered. The services are usually provided 'cross-border', with obvious problems in measurement. An extensive study undertaken in 2004 came to the conclusion that the annual export value of IT services was US$5.4 million (Mount Digit Technology [MDT], 2004). The discussion about an estimated export value with a couple of surveyed firms has shown a figure far less than the MDT estimate of US$5.4 million, indicating the need for an extensive survey to quantify the actual exports. We assume that the current value is significantly higher than that. There are at least 10 large companies with 50 or more employees, plus a larger number of small companies that often consist of 15-20 people. From discussions with industry experts, our estimate for the number of employees in the IT and BPO export sector is 2,500. A respondent at the High Level Commission for Information Technology (HLCIT) estimated the current export revenue at US$10 million. This estimate is likely in the right order of magnitude. One of the companies visited during the fieldwork (see Box 2.1) has an export value of around US$1 million and several such companies with a similar size exist.

Box 2.1. A Nepalese IT success story

The ITC team visited IT/Grafi Offshore Nepal, a joint venture between Nepalese individuals and a Belgian IT company, which started in 2002. Currently, it employs 100 professional staff, around half of whom work as programmers and the other half as graphic designers. Marketing is provided by the Belgian counterpart and most of the clients are in Europe. The Managing Director is very optimistic about the development of this sector. In fact, one of the problems is the tough competition for skilled workers, which shows that the sector is thriving. Programmers earn US$600 per month on average, which is a very high salary by Nepalese standards, and it can even be significantly higher, depending on the skills. All work is done for foreign clients.

Types of Exported Services: There is a large variety of exported services, including web solutions, software development, E-business, graphics, and call centres. However, services that require a constant and stable connection to foreign clients have been constrained by limited reliability and bandwidth.

Current Export Destinations: IT and BPO services are exported to a range of countries, in particular EU members, USA, and Japan, and also Australia and New Zealand. Some companies, such as IT/Grafi Offshore Nepal, are joint ventures, with the foreign partner usually doing all the marketing, whereas only the IT work is done in Nepal. Most of the clients appear to be European or US companies though. Industry sources say that there is currently very little IT service trade with India.

Potential Export Destinations: There could be a great potential for collaboration between Nepalese and Indian firms. India is the world's leading country for IT and BPO outsourcing, but because of that there could be a demand from Indian companies for subcontracting such services to Nepal. Industry sources argue that India's IT labour costs, when adjusting for the better availability of skills, are currently rather lower than in Nepal. But with increasing salaries in India, Nepal could have a cost advantage in certain areas.

Trade Balance: There are no figures on import of such services to Nepal. However, IT services require inputs such as IT infrastructure. Though some industry sources argued that taxes are high for those inputs, at least the customs duties are zero for most IT products.

Index 2: World Market Conditions

World Market Prospect: World market prospect is very promising for this sector. The size of the global IT/BPO sector is estimated at around US$300 billion, one half of which is IT services and the other half BPO services. However, only 10 per cent of that has been 'offshored' so far (McKinsey, 2005), leaving a large potential for future offshoring to locations having a comparative advantage (which are not necessarily always low-wage countries). However, estimates regarding the size of the global market vary widely, also because it highly depends on the exact definition of the sector and whether one looks at the overall market or only the part that is traded internationally.

Nasscom, the Indian service industry association, expects a 10 per cent annual growth rate of the global IT and BPO markets. India is the world's leading exporter of IT and BPO services, and the sector has grown tremendously over the last years. Nasscom estimates export revenues from the IT and BPO sector for India of around US$47 billion in FY 2009, with 1.8 million employees and a share in export of 16 per cent. In addition, the size of the domestic market is estimated to be US$24 billion, which is expected to grow at 20 per cent per annum over the next years.[108]

Major Competitors and Nepal's Competitiveness: India is the world's leading exporter of such services. A.T. Kearney, a consulting company, provides a ranking of major markets which compares their competitiveness (A.T. Kearney, 2009). India is ranked first, followed by other Asian markets (China, Malaysia, Thailand, and Indonesia). The main criteria used are financial attractiveness, labour availability, and business environment. Unfortunately, Nepal has not been included in that or similar rankings, which also indicates that Nepal's IT sector is not yet recognized globally as an important player in this sector. This is a problem that is also mentioned by people from the industry. Despite its potential and promising development, Nepal is not yet widely seen as a potential offshore centre, partly because of political turmoil and partly because it is somehow overshadowed by its larger neighbour, India, the world's leader in the IT/BPO offshore industry.

[108] See http://www.nasscom.in/upload/60452/Executive_summary.pdf.

The World Economic Forum has published the Global Information Technology Report, which compares the competitiveness of the IT sector across most countries, including Nepal (WEF, 2009a). On average, Nepal has ranked in the lowest 5 per cent in recent editions (127th of 134 in 2008/09), and the ranking is similar across almost all indicators, such as 'broadband cost', indicators on the legal framework or government's IT policies. Though one may question the accuracy of some of the indicators, it is clear that Nepal is lagging behind other countries in the region. While Nepal ranks 127th, China is ranked 42nd, India 54th, Sri Lanka 72nd, and Pakistan 98th.

Index 3: Domestic Supply Conditions

Producers: Though there is not any readily available data regarding the firms providing export services, the interviews and discussions with the IT companies indicated the existence of about 10 bigger companies employing about 100 employees and about 100 small firms employing 15-20 employees on average. A survey from 2004 identified 24 export-oriented IT companies. The eight companies interviewed by ITC for this study are found to provide services like web application, web designing, desktop application, digitization, CAD-based engineering designing, software development, programming, graphic solution, customized application development, client-based outsourcing, image processing, mapping, telemarketing, customer care, etc. The call centre had the highest number of employees (175), and total employment in the eight firms is around 550.

Production Capacity: The main services are client-based outsourcing, software development, web designing and web application, graphics, customized application development, and business intelligence for retailing.

Quality of Service: Industry sources rate the overall quality of IT services as lower than in competing countries such as India. However, a detailed evaluation of this indicator is not possible. It is clear that Nepal's IT industry is not comparable to the one of India, for instance. However, some providers that ITC spoke to are confident that they are able to provide the quality demanded in international markets.

Productivity: Though the labour cost in general is lower, the labour productivity is also often low. Some of the interviewed companies have clearly stated that the labour costs in Nepal are about one-third of overseas costs, though it is around in the same range between Nepal and India. The universities and institutions in Nepal produce required quantity of IT professionals, but the companies are concerned about maintaining the quality in IT-producing institutions.

Availability and Quality of Labour Force: In 2004, the total ICT workforce in Nepal was estimated at 16,000, of which only 7 per cent (1,120 persons) were working in export-oriented companies (MDT, 2004). The eight companies interviewed during the field work employ 550 persons. Based on this and other information, we estimate that around 2,500 people are working in the IT and BPO export sector.

The availability of skilled personnel is a key factor for all industry sources that ITC spoke to. There is high competition between Nepalese companies for workers, with often high incentives provided to workers if they are willing to move to another company. There is also a significant brain drain, with workers often leaving abroad after they have received training at the company. But overall, industry sources believe that the labour force will not be the main constraining factor for future growth. Overall, interviewed companies have rated the quality of the education sector as good, though some expressed concerns that required skills are not always available.

Labour Cost and Overall Production Cost: There is no significant labour cost advantage compared to other low-cost suppliers because of low labour productivity. The overall production cost is generally low, but it is not considered to be lower than India. However, labour costs in India are increasing fast, which could offer new opportunities for Nepal.

Cost and Quality of Infrastructure: The cost and quality of infrastructure is a major problem for the sector. Electricity, telecommunication, and oil/fuel (for backup power) are essential infrastructure components. Companies face load-shedding up to 18 hours per day. Electricity generated by diesel is much more expensive, which is made more critical due to occasional shortage of fuel.

Regarding telecommunication infrastructure, previously Nepal only had a satellite connection. Now the country has a fibre-optic cable routed through India and another one with Tibet/China has recently been connected as well. Though there are plans to increase the bandwidth capacity, the existing capacity is still seen as a constraint and some respondents said it was insufficient to provide IT services that require constant connectivity to the client. Data bandwidth cost is very high, according to some industry sources, five times higher than in India.[109]

Domestic Demand: The domestic demand for IT services comes from government, travel and tourism industry, banks, engineering consulting houses, and other IT companies, but the services provided are often very different than the ones provided by export-oriented firms.

Business Environment: The general business environment is not good, in particular due to poor infrastructure (mainly electricity). Service providers reported also about a lack of venture capital. crimes, inflation, and the unstable political situation have also been stated as being hindrances to investments in the sector. However, the country has a favourable FDI regime, with no legal restrictions for repatriating earnings. Administrative support is not considered to be good due to some informal costs.

Government Initiatives and Donor Involvement: Government initiatives include the formulation of the Information Technology Policy 2000 and its subsequent revision in 2004, the passing of the Electronic Transaction Act 2061 and the establishment of HLCIT. Private sector exporters are provided with VAT (Value Added Tax) exemption in the foreign currency earned (0 per cent VAT for software export). There is a UNDP project on ICT for Development. UNCTAD (2010) currently completed the policy review of the sector.[110] ADB is implementing a US$25 million project that is primarily addressing access to ICT services in rural areas of Nepal.

The major institutions involved in the development of the IT sector in Nepal include the HLCIT, National Information Technology Centre of Nepal, Nepal Academy of Science and Technology (NAST), Computer Association of Nepal (CAN), Internet Service Provider Association of Nepal (ISPAN), IT Park[111], and FNCCI.

Prospect for Domestic Supply Conditions: There are prospect for adding new products like CAD, 3-D animation and developing software for new sectors such as banks, transport and telecommunication R&D, better training, quality education and better internet connectivity could improve value addition.

[109] See Artha Express, http://www.arthaexpress.com.np/news.php?ncat=9&nid=649. An optical fibre backbone has been laid across the East West Highway of Nepal and so the country has an optical fibre backbone in the entire length. The country is now connected to India through fibre links via different connecting points and it is also now connected with China through a 110 km long optical fibre backbone, offering Nepal the leverage to establish a transit communication route between China and India. The fragmented effort of acquiring bandwidth from international network service providers is also responsible for increased cost of bandwidth.

[110] According to the report, despite having lots of challenges and problems, Nepal has plenty of opportunities for local and export-oriented IT and computer services. The US, EU, Asia Pacific countries and Japan are the main export destinations.

[111] Currently, the only IT park of Nepal is located at Banepa, which is an outskirt of Kathmandu. Due to the frequent strikes and blockade of road and traffic, it is still not fully occupied. Recently, HLCIT signed an MoU with IBM, which has already established a research centre in the IT Park.

Market Attractiveness Index

No MAI could be calculated for this sector due to a lack of data.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: There are no reliable estimates for the number of employees in the industry, except for a 2004 survey by MDT. According to that survey, around 16,000 professional IT workers existed in Nepal in 2004, of which only a small share of around 1,100 were working in export-oriented companies. Estimate in this study, based on interviews with industry experts and several companies, is 2,500 employees in export-oriented companies.

The average salary was estimated to be US$400 per month in 2004 (MDT). Currently, programmers often earn well above US$500 a month, with salaries reaching US$2,000 in some cases.

Gender Impact: In 2004, only 14 per cent of the employees in the sector were female (MDT, 2004). Similar to other countries, many areas within IT such as programming are male-dominated, but this is not necessarily true for other services, such as graphic designing or call centres.

Contribution to Skill Development: We rank the sector as very high in terms of skill development. The industry provides very good rewards for skilled IT personnel; so it is a major incentive for people to acquire skills such as programming. Some of the companies provide in-house training for new staff.

Impact on Development of Disadvantaged Regions: The 2004 MDT survey estimates that 69 per cent of the IT workers are located in Kathmandu valley and 31 per cent in urban centres outside the valley. Industry sources told ITC that currently most of the export-oriented IT companies are located in Kathmandu. In any case, the prospect for such services to be located in remote rural areas is very limited.

Energy and Water Constraints: The cost of electricity is not a major cost factor for IT firms, but a regular supply of electricity is obviously necessary, which is a major constraint at the moment, with load shedding of up to 18 hours a day. Even the availability of fuel for backup power has been a problem at times. Backup power is also about four times as expensive as electricity from the grid.

Environmental Impact: none

16) Health Services

Background

There is no doubt that international trade in health services will gain importance in the future. With ageing populations in rich countries and steadily increasing health care costs, more and more people are seeking health care services abroad. Several countries, for example Thailand or India, are already attracting large numbers of foreign patients. Whether this will become a significant export sector for Nepal remains a question.

As other services, trade in health services can occur in different forms:

- Mode 1: cross-border (e.g. telemedicine, laboratory services)
- Mode 2: consumption abroad (e.g. patients travel to another country for treatment)
- Mode 3: commercial presence (e.g. foreign company opens a hospital), and
- Mode 4: presence of natural persons (e.g. doctor travels abroad to treat patients).

Most of these modes occur in Nepal, and some of them as both export and import. There is 'consumption abroad' (mode 2) between Nepal and India, with Nepalese seeking treatment in India and vice versa. Many tourists are receiving treatment in Nepal, though they usually do not travel to Nepal for that purpose. Some Indian health providers have opened hospitals in Nepal (mode 3), with some Indian doctors and nurses working in these hospitals (mode 4). These hospitals are usually linked to medical colleges. There are also a large number of Nepalese doctors and nurses who are working abroad. However, we will not focus on the latter aspect of health services export.

Despite numerous problems in the healthcare sector, Nepal has at least two significant advantages: a tradition of Ayurvedic medicine and a moderate climate. The climate makes it very suitable for Indian medical colleges to open branches in Nepal.

The Three-year Interim Plan (TYIP) of Nepal recognizes the potential for health service trade and incorporates strategies like establishing, promoting, and expanding telemedicine, developing and expanding Ayurvedic and other alternative health service systems, providing computers and internet access to facilitate telemedicine, collecting information regarding herbs and intellectual property, and enhancing research activities. However, no concrete strategies have been delineated for mode-specific supply of this service.

Information on trade in health services is scarce. There are no reliable statistics and, therefore, our assessment relies mainly on the information obtained on the ground. One study was undertaken in 2008 to assess the potential for health services export (SAWTEE, 2008).

Index 1: Export Performance

Export Value: No reliable statistics exist for the export value of health services. The NRB data seems to grossly undervalue even the assumingly existing low health services export (SAWTEE 2008). SAWTEE (2008) undertook a survey in several institutions that receive foreign patients (all of them being from India and often with family links to Nepal). An estimate of export value was only given for one institution, Birat Nursing Home (US$22,000 annual income). Scattered information collected during the fieldwork from several other institutions suggests very low export values as well (see below for more details). Data for some of the leading hospitals, which may also treat foreign tourists, are not available.[112]

[112] For example Norvic International Hospital.

Current Export Destinations: Most of the trade in health services occurs with India, and as both export and imports. In fact, all foreign patients in several healthcare institutions identified in the SAWTEE study (2008) were from India. According to industry sources that ITC spoke to, there are occasionally patients seeking treatment in gynaecology, obstetrics and eye health services from other countries, including Tibet (China), Afghanistan, the Maldives, Germany, and NRN. The other major part is treatment of tourists, mainly from developed countries (EU, USA, Japan).

Trade Balance: If one includes Nepalese medical workers abroad, then Nepal is probably a net exporter of medical services. No reliable data exist on the value of 'mode 2' imports from India. Nepal is also importing health services through 'mode 3'. Indian medical schools and teaching hospitals affiliated to them are providing medical services. Staff consist of both Nepalese and Indian doctors and nurses, but practically all patients are Nepalese.

Export Prospect: We rate the prospect for health services export as rather poor. Nepal does not have a developed healthcare sector that can provide services according to international standards, except may be in a few institutions. The existing trade is mainly local trade across the border, where Indians living relatively close to the border and often with personal links to Nepal seek treatment in Nepalese health institutions. Other foreigners receiving treatment in Nepal are usually tourists or expatriates who do not come to Nepal for medical purposes. Ayurvedic medicine could be a niche in which Nepal can become more successful. But the available information is too scarce to make any definite judgment on the export potential. A more detailed study by health sector exports, possibly along Lautier's 2008 study of Tunisia, would have to be undertaken to properly assess the potential. Whether such exports are desirable is another question that needs to be carefully evaluated (see below).

Index 2: World Market Conditions

Global Trade in Health Services: Health services, like most other services, are still mainly 'produced' and 'consumed' locally. But there has been a strong upward trend in international trade in healthcare. Some countries report these trade flows in their BoP statistics, but unfortunately some of the new emerging exporters of healthcare services, including Thailand, Singapore, India, and Malaysia, do not. Therefore, using BoP statistics would give us a fairly incomplete picture of the global market. Lautier (2008), in a paper that assesses the Tunisian potential for health exports, provides an overview of the global market by combining official statistics and estimates, resulting in an estimated size of the global trade of US$11.8 billion for 2003 and annual growth rate of 15 per cent. If we assume a 10 per cent annual growth rate for the following years, then the 2008 size of the global market would have reached US$19 billion.[113]

The US has an estimated market share of 27 per cent, but some developing countries are emerging as major players in global health trade. Data from Thailand show that 1 million foreign patients were treated in 2004, resulting in export revenue of US$500 million. India received 150,000 medical tourists in 2005 (WHO, 2008), including from developed countries such as the USA and the UK, apart from countries around the region.

Index 3: Domestic Supply Conditions

Medical Services in Nepal: Health services in Nepal are being provided by four sectors, namely the government, community (called health cooperatives), NGOs, and private sector. Export of health services is being carried out by NGOs (i.e. Tilganga Eye Hospital) and private health sectors (hospitals and nursing homes). Ayurvedic

[113] Recorded trade flows based on BoP statistics have grown by 10 per cent annually between 2003 and 2007 (Source: TradeMap, based on IMF data).

medical services are being provided by Ayurveda hospitals. The association of the private sector health service providers, called Association of Private Health Institutions of Nepal (APHIN), has about 40 registered members, with only about 27 estimated to be active. The Ministry of Health and Population is the regulator in the health services of Nepal.

The services provided include gynaecological and obstetric (including IVF), cancer treatment, laparoscopy surgery; orthopedics, general surgery and urology; cardiac, neurosurgery, general surgery/medicine; and eye health services, intra-ocular lens production and harvesting corneas – eye bank. The cost of providing an IVF service ranges between NRs 25,000 to 300,000. There is a state-owned Ayurveda Hospital, with services provided to foreigners by this hospital being estimated at only 2 per cent of the total (US$1,500 in FY 2007/08). Norvic International Hospital in Kathmandu reports that 20 per cent of its patients are foreigners. In B&B Hospital (Kathmandu), the foreigners' share in treatment is estimated to be 2-3 per cent (US$30,000) and for NGO/INGO staff working in Kathmandu 5 per cent (US$60,000).

Quality of Service: Overall, the quality of medical services in Nepal is low, in particular in rural areas. No reliable source has been found that assesses the high-quality segment of medical services in Nepal. According to industry sources, certain treatments, such as eye treatment service and gynaecological service, including IVF, are rated to be very good. Similarly, the quality of orthopaedic surgery is considered to be in line with international standards. The quality of Ayurvedic health services provided is rated low, though expected to improve in the future.

Availability and Quality of Labour Force: Nepal, as many other developing countries, has a shortage of medical personnel. According to WHO statistics, the number of doctors/nurses per 10,000 inhabitants is very low (2/5) compared to other countries in the region, such as India (6/13), Sri Lanka (6/17) or Thailand (4/28). There is also anecdotal evidence that a lot of doctors and nurses are migrating, e.g. to the UK and the USA. In some of the medical schools, practically all graduated doctors migrate. This does not mean that there is no availability for exporting health services, especially if such work were better remunerated, but Nepal certainly has no abundance of doctors or other health workers.

Labour Cost and Overall Production Cost: Though there is some labour cost advantage, there is no advantage in terms of overall costs, mainly because of high equipment (mainly imported) and energy costs.

Business Environment: The country's accession to the WTO and its commitment to liberalize health trade is opening many doors for health service export. Nepal has not put major specific limitations in this subsector, except in market access in mode 3 where foreign service providers must be incorporated in Nepal with a maximum foreign equity capital of 51 per cent. NRB (2005) projects that the WTO membership will result in an increase in aggregate services-related credit and debit flows by 150 and 155 per cent respectively, implying Nepal remaining a net importer of health services for some time.

Government Initiatives and Donor Involvement: The GoN provides some tax holidays and customs reduction in the import of ambulance (1 per cent customs). This is limited to one ambulance for 50 hospital beds and two for 100 beds). No specific initiatives have been taken to improve competitiveness, except an accreditation workshop mentioned by one interviewee. Customs exemption and tax incentives are provided to the eye health sector as well. USAID is involved in the development of the eye care sector. WHO is also involved in Nepal's health sector.

Prospect for Domestic Supply Conditions: There is a huge demand of health services within the country. Better infrastructure, better equipment and international marketing could raise the working conditions and working environment, in terms of both domestic and foreign supply. There is potential of expanding preventive and curative health services with rehabilitation in case of Ayurvedic medicine.

Index 4: Socio-economic Impact

Overall Impact of Health Services Exports: It is not clear whether an increase in health services exports is desirable. Exports of health services could lead to crowding out of health services to poor people within the country, or an even stronger concentration of health services in urban areas. On the other hand, such exports generate revenues, which could have a positive effect on the overall quality of the health sector and also lead to improvements for healthcare for the domestic population (see Lautier (2008) for an overview of this debate). There is, therefore, no clear-cut answer whether health services exports are actually desirable in the case of Nepal and should be promoted by the GoN or donors. But significant 'exports' take place in any case through migration of doctors and nurses from Nepal. A thriving healthcare export sector in Nepal could possibly reduce this outflow because it would offer better-paid jobs for healthcare workers in the country, but not necessarily to the benefit of health services for the local population.

Current Employment and Job-Creation Prospect: No data is available about employment provided as a result of exports, but it is certainly not a significant number, excluding those Nepalese health workers who work abroad.

Gender Impact: The sector as a whole provides opportunities for women in the sense that the percentage of women employment in the institutions interviewed ranged between 70 and 90 per cent.[114]

Contribution to Skill Development: Being a very skill-intensive sector, heath services exports would certainly have a positive impact on local skills.

Impact on Development of Disadvantaged Regions: The eye health services are available in 11 districts of Nepal, implying some impact on disadvantaged regions. In case of Ayurveda service as well, there is one regional hospital, one district Ayurvedic primary health care in each district, and one dispensary in all VDCs of Nepal. However, as outlined above, thriving health services exports could channel scarce resources to urban areas that are already better served by medical services.

Energy and Water Constraints: The energy shortage has not affected the health sector as much as other sectors, as the government provides uninterrupted electricity supply to hospitals.

Market Attractiveness Index

No MAI could be calculated for this sector due to a lack of data.

[114] The women employment in Norvic is about 70 per cent, in B&B 80 per cent in Om Hospital 95 per cent.

17) Education Services

Background

Nepal is not widely regarded as an exporter of education services, but rather as an importer: much more Nepalese students are studying abroad than foreigners studying in Nepal. However, exports in education services do take place and the question whether Nepal has a significant potential to become a well-recognized "education exporter" has already been raised in a study undertaken by SAWTEE (2008).

Exports in education services mainly take place as "mode 2" trade: foreign students come to Nepal to receive education. However, "mode 3" (commercial presence) also plays a major role, though as an import. There is of course also an export in "mode 4" through temporary migration of Nepalese who might work as teachers abroad, but this will not be further evaluated here. Nepal "imports" education via mode 4 as well.[115]

Two main factors seem to support education export from Nepal. First of all, subsidiaries of Indian medical schools have opened up in Nepal. They primarily cater to Indian students who seek to eventually get access to the Indian medical system, but studying in India might be more expensive or impossible due to limited seats for medical students. Second, Nepal offers a natural advantage in terms of its geography and climate, compared to many places in India, for instance. The hilly environment is similar to that of Darjeeling and Dehradun, the traditional education service zones of India, indicating a potential to replicate such education servicing zones in Nepal. Lower living costs are also an advantage.

Index 1: Export Performance

Export Value and Trade Balance: There is no reliable data on the export (or import) of education services in Nepal. However, several estimates have been made in the past. There is NRB data on trade in education services recorded in the BoP for the years 2000-04. It shows a wide trade deficit with imports of around US$13 million per year and exports less than US$4 million per year (see SAWTEE 2008). However, these figures are not reliable and seem underestimated. India is the main source of foreign students, and transfers with India are often informal.

There are estimates on the number of foreign students in Nepal based on the visas issued for FY 2008/09. Accordingly, the number of foreign students reached 1,043, up from 683 in 2001-03, but these numbers do not necessarily include all Indian students[116,117]. Numbers obtained from medical colleges during the fieldwork only suggest that there are currently around 1,100 Indian students studying for medical degrees in Nepal, and 250 students from third countries. The number of foreign students in other fields is probably rather low. The trend of inflow of foreign students in Nepal seems to be increasing, though there is no system of properly recording the number of foreign students in Nepal, implying the need of government attention in this regard. The number of Nepalese studying abroad is much higher. It is currently estimated at 18,000 (Source: GoN/ MOE: Higher Education and Technical Education Department).

A rough estimate of the export value can be derived from the number of foreign students (roughly estimated at being around 1,500), their average spending per year (US$1,800 per year according to SAWTEE 2008), and

[115] Education through "mode 1" – cross-border supply, i.e. "distance learning" – is also possible, though there seem no such exports. Some Nepalese students are studying at foreign "open universities" and others through distance learning.

[116] The foreign students affiliated to various educational institutions are as follows: TU/ International Relation Centre: 180, TU/Rector's Office: 180, TU/ Bishwobhasa (International Language) Campus: 235, Kathmandu University: 401, CTEVT: 17 and Miscellaneous (BPKIHs/Dharan, Eastern University, Bouddha University, Mahendra Sanskrit University, Ronast, etc): 30 (Source: GoN/Ministry of Education, Kesharmahal). In outward students, highest numbers are found to go to Australia, followed by USA, UK, Cyprus and Japan. Cyprus appeared only in 2008.

[117] Shrestha (2004).

the tuition fees. But tuition fees in particular vary widely. For example, the annual tuition fee for Manipal School in Pokhara is around US$13,000 for non-Nepalese students, but some students receive partial or full scholarships.[118] The number of foreign students is currently around 320; so the overall tuition fees could be around US$4 million. Typical fees for other medical degrees are usually around US$5,000-10,000 per year. In the absence of detailed data, we estimate that the total exports are above US$10 million, but an appropriate survey would be required to get a more accurate number.

With a significant share of revenue being generated from tuition fees in Indian-owned medical colleges, it is clear that they cannot fully be counted as Nepalese export revenue. In fact, they may well count as Indian export revenue through 'mode 2' (commercial presence) and 'mode 4' (Indian teaching staff in medical colleges). Therefore, the overall importance of education services exports would be overstated if one classifies all revenue from tuition fees as 'export' (see also Box below).

Types of Exported Services: Most foreign students in Nepal visit universities and out of those a large share is enrolled in medical or technical studies (62 per cent for Tribhuvan University, see SAWTEE 2008).

Current Export Destinations: The majority of foreign students in Nepal are from India. This is confirmed by a survey done by SAWTEE (68 per cent from India) and also by the respondents in several universities. Most other students come from the rest of the SAARC region or are non-resident Indians from the USA and other countries.

Potential Export Destinations: The main potential is most probably within the region, in particular India.
Dynamism of Exports: There is no data to allow for a proper analysis of trends, but from the anecdotal evidence that it is available, it appears that the inflow of foreign students into Nepal has only slightly increased in recent years.

Export Prospect: No quantitative assessments can be made about export prospect. Nevertheless, there is potential for education exports in areas that are linked to Nepal's history and culture such as religious or language studies. For the remainder, the potential depends a lot on the Indian market and how Nepalese schools compare with those in India in terms of access, costs, quality and whether the degrees are recognized in India. If Nepal becomes competitive in all of these areas, which is currently not assured, in particular regarding the recognition of degrees, then there could be a large potential for Indian students (and colleges) to move to Nepal, which is then in fact a mixture of 'mode 3' import and 'mode 2' export.

Index 2: World Market Conditions

Global Market for Education Services: Globally, exporters of higher education services are predominantly developed countries (EU, USA, Australia, and Japan). These countries host the majority of students studying abroad, whereas the number of foreign students in developing countries, and in South Asia in particular, is very small. Source countries are both developed and developing countries. China is leading, followed by India, with shares of 15 per cent and 6 per cent respectively. However, only 1 per cent of India's tertiary-level students are studying abroad. Nepal, in contrast, has a much higher share of 5 per cent and a total number of students abroad of 14,575 (UNESCO, 2009).

Globally, 2.7 million students are studying abroad (UNESCO, data from 2007), and this number has grown by 4 per cent annually since 1995. BoP statistics show part of the expenditure of trade in education (242 - Personal travel - Educational expenditures). Measured by this, global exports of education services were US$40 billion. However, there is a range of difficulties in defining and measuring global trade in education; so this number

[118] Source: http://www.educationworldonline.net/index.php/page-article-choice-more-id-2022

should be interpreted cautiously. What is clear is that the market is growing, in terms of both value and volume (number of students abroad). But it is mainly developed countries that export such services.

As it relates to Nepal, we do not think that world market trends--although they seem positive--will have a direct effect on the export potential of education in Nepal. The Nepalese exports depend mainly on Indian students. There is also a growing trend in Indian students seeking degrees abroad; the number of outgoing Indian students has increased from 113,000 in 2003 to 153,000 in 2007 (UNESCO database).

Index 3: Domestic Supply Conditions

Higher Education in Nepal: Six universities and two university-level institutes provide higher education in Nepal. The oldest and biggest is Tribhuvan University, established in 1959. The number of students studying in TU constituent and affiliated campuses, as of 2007/08 stood at 171,000 and 119,000 respectively. Other large universities are Kathmandu University (KU), Purbanchal University (PU), and Pokhara University (PokU).

There are several subsidiaries of Indian universities that usually work in collaboration with Nepalese universities. Several such institutions have been set up in recent years, and they play a particularly important role for the export of medical education. They are mainly attracting Indian students, but also provide education to Nepalese students at lower or zero cost (see below for details).

Nepal Sanskrit University (NSU), established as the second university of the nation, has 13 constituents and 18 affiliated campuses. The university is opening new faculties for the overall development of Yoga and Ayurveda. Lumbini Bouddha University (LBU) was established with the objective of providing Buddhist education, but is still in the preliminary stage with only two officials and four staff.

Nepal is also in the process of opening universities in the Mid-western and Far-western Development Regions and also an open university and agriculture, forestry, and animal science universities.

Out of the education areas that attract foreign students, TU Institute of Engineering (IoE) has four constituent and eight affiliated campuses. The targeted admission for the year 2009 is 624 in the constituent and 2090 in the affiliated campuses under both regular and full fee programmes. Around 8 per cent of the full fee programme is reserved for foreign students in the constituent campuses and they are also eligible to apply in the affiliated campuses.[119] In the MBBS programmes of TU Institute of Medicine, 15 seats are reserved for foreign students, where students from India, Maldives, and Sri Lanka are studying.[120]

[119] Foreign students are classified into three types: those who have passed from Nepalese campuses and higher secondary schools, students of SAARC countries and students coming from countries other than SAARC. The fee charged for foreign students is more than double under full fee programmes.

[120] TU/IOM has seven constituent campuses, 10 affiliated campuses. Maharajgunj Campus is the central campus. It has four certificate level, 11 Bachelor level, and 26 post-graduate levels. The four newly started M Ch programmes include Surgical Gastroenterology, cardiothoracic and vascular surgery, urology and neurosurgery. Current number of students is 900 and new students enrolled in 2008/09 are 258.

Box 2.2. Medical Colleges in Nepal: Who trades what with whom?

When we look at trade in education services in Nepal, then a major part of that story is the story of the medical colleges that are set up by Indian colleges, usually in collaboration with Nepalese universities. From a trade perspective, India exports education services to Nepal through commercial presence (mode 3), but mainly to Indian students in Nepal. Some of the students, in the case of Manipal College in Pokhara around 40 per cent, are Nepalese, but a large share of them receives tuition waivers. Almost all graduates from these schools--Nepalese, Indian, and others--leave Nepal soon after graduation and seek to get recognition for their medical degrees in India and elsewhere. The total number of students at 14 medical colleges for which numbers could be obtained is as follows: 1,004 Nepalese students, 1,074 Indian students, and 253 students from third countries.

Attached to these colleges are teaching hospitals, in which mainly Nepalese patients receive treatment at low costs.[121] These colleges rely on tuition fees of foreign students and, according to respondents, they are in Nepal for mainly two reasons: limitations in the Indian medical school system and the pleasant climate, with the first one being the main reason.[122]

The Medical Council of India regulates recognition of medical degrees in India. There is no automatic recognition of the degrees obtained in Nepal.[123] Available seats in Indian schools are well below demand, which drives students to foreign institutions, but this business model highly depends on whether they stand a chance to get their degrees recognized in India and how much more difficult it is to get a recognized degree in a private or public school in India itself. There is a debate on possible reforms of India's medical education system, which could also have large effects on the business model of medical schools in Nepal.[124]

Quality of Education: The quality of an education system is difficult to assess or to compare with other countries and we do not attempt to do that here. A large number of global 'university rankings' exist, but they usually do not include any Nepalese institution. Respondents in Nepal rank the quality of engineering and medical education--the two main areas for foreign students at the moment--as high. TU's engineering school, IoE, is rated fourth in Asia, according to an IoE respondent. However, it seems clear that the quality of the education system is not the main driver for the majority of foreign students to come to Nepal. Information obtained from respondents and results from a survey by SAWTEE (2008) show that most foreigners choose Nepal because of limited availability of seats in their home country (mainly India), rather than because of a superior education system. Most student respondents in the SAWTEE survey are, however, relatively satisfied with the quality of education that they receive in Nepal.

Education Costs: Living costs are low in Nepal and lower than in many places in India. According to the SAWTEE survey, and confirmed by respondents in the education sector, lower living costs are one, though not the main factor for Indian students to study in Nepal. Tuition fees are another main factor of education costs, but very difficult to compare across institutions and countries.

Business Environment: As in all sectors, the unstable political situation was raised by respondents as being a major obstacle for the sector. More specific about the education sector, the SAWTEE survey found that respondents were satisfied with investment regulations for schools with foreign affiliation and that visa regulations for foreign students are simple. The education tax (applied to private colleges) was mentioned by several respondents as an impediment, but it has already been lowered from 5 per cent to 1 per cent.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: The employment range is between 30 in the International Language Campus to 1,000 in Nepalgunj Medical College. It is 351 in Maharajgunj Campus, 500 in Nepal Medical College and 350 in the IoE, but we have no reliable figures how many of these jobs are related to

[121] Nepal Medical College Teaching Hospital provides free services, including food, medicine, operation and investigation for 100 beds out of its 700 beds. The college also provides 10 per cent free scholarship to government-nominated medical students from the Ministry of Education.
[122] A similar type of medical schools exists in several Caribbean island nations, such as Dominica and Grenada. These schools mainly cater for students from the USA, who can get their degrees recognized in the USA, but with easier accession to schools and lower tuition and living costs. The natural environment is arguably an additional advantage. Local students and patients also profit from these institutions.
[123] See http://www.mciindia.org/KNOW/rules/elig_cert.htm for more recent information on recognition issues.
[124] See for example http://knowledgecommission.gov.in/downloads/documents/wg_med.pdf .

foreign students. The medical schools that are mainly set up for foreign students also provide jobs, especially in the training hospitals that they are affiliated with. A number of teachers are foreigners, especially from India.

Gender Impact: The sector does not have any obvious gender bias.

Contribution to Skill Development: We rank the education sector as very high in terms of this indicator. It is obviously what the whole sector is about, but there are also direct effects on Nepalese students who get educated in schools that are mainly catering for foreigners, and often at reduced costs (see Box 2.2).

Impact on Development of Disadvantaged Regions: Some medical colleges are located outside Kathmandu valley, including the Mid-western and Far-western Development Regions. Sanskrit University is located in Dang, again in the Mid-western Region. However, there is no particular impact on disadvantaged regions.

Energy and Water Constraints: Low.

Environmental Impact: No negative environmental impact.

Market Attractiveness Index

We calculate an index of attractive markets (i.e. potential source countries of outgoing students), based on statistics on the number of outgoing students by country. China and India appear as the most attractive markets because of the high number of students they send abroad and the high growth rates. Obviously, a lot of other factors would have to be taken into consideration because some of these markets may still provide little potential for Nepal as a supplier of education services.

Table 2.51
Attractive Markets for Education

Attractive markets for Education services			
Top 10 - Weighted index for size and growth			
Rank	Country	Students abroad (2007)	Growth rate (2003-2007)
1	China	421,109	7.5%
2	India	153,311	8.0%
3	Republic of Korea	105,738	4.2%
4	Uzbekistan	31,889	26.2%
5	Germany	77,546	4.8%
6	Bolivia	8,161	23.8%
7	Viet Nam	27,866	16.7%
8	Nepal	14,575	19.8%
9	Lao PDR	3,550	22.3%
10	Belarus	14,802	18.2%

Source: Based on UNESCO statistics, with equal weighting of the number of students abroad and the growth rate.

18) Engineering Services

Background

Engineering services are one of the professional services like legal services, accounting, auditing and bookkeeping services, taxation services, etc. In Nepal, professional services are protected under FITTA[125] 1992 (as amended in 1997) regarding the establishment of a foreign company, or foreign investment, in the engineering consultancy services in Nepal. Nepal Engineers Association (NEA) and the Society of Consulting Architectural and Engineering Firms (SCAEF) are the main national-level organizations in Nepal.[126]

Trade in engineering services can take place in different forms. A construction company could provide construction and engineering services in another country, using both expatriate and local staff and could possibly subcontract parts of the work to local companies. Individual engineers could work abroad (which many Nepalese engineers have been doing), and engineering services could also be 'offshored', which is called 'engineering services outsourcing' (ESO). The latter is seen as a very promising export sector in India and could also be the most promising field for Nepal. This resembles somewhat the IT and BPO industry, in which India has been very successful in recent years and in which Nepal is now also emerging.

Overall, Nepal seems to be rather a net importer of engineering services, but information on this sector is very scattered and no official statistics on exports or imports of such services are available. There are some examples of Nepalese firms that have entered international markets and are successfully offering engineering services, as well as individual Nepalese engineers working abroad. But, overall, the main potential, and also the main focus of Nepalese engineers[127], seems to be better participation in the domestic large-scale construction projects (e.g. hydropower, road construction, housing).

Index 1: Export Performance

Engineering Services Exports: There is only anecdotal evidence, but no readily available data on engineering services exports provided through modes 1 and 3.

Under mode 1 (cross-border supply), although Nepalese engineering firms are not as developed as in the case of IT services, some firms have already started providing offshore services like Architectural Design Forum (ADF) and CAD, which provide engineering designs to foreign partners, and WELINK, which exports software programs (see Box 2.3).

Box 2.3 ADF and WELINK: Two examples of engineering services exporters

ADF[128]: ADF provides architecture and engineering services, including building and construction designs. Although they have not been involved in construction work abroad, they do building design for foreign clients, mainly in the Netherlands and the USA. Established in 2001, it currently has 20 employees. Prof. Mahesh Shrestha from ADF sees a lot of potential for Nepal in the area of building and interior design.

WELINK Consultants[129]: WELINK is an engineering company established in 1988, and employs 100 employees, though all are not for export service. Of its three main services, two, namely GIS mapping and software development, are being provided to both Nepalese and foreign clients. Mr. Saroj Basnet, Director of the company, says that its export component is about 15-20 per cent of its total business and its three foreign markets are Afghanistan, Kenya, and the Philippines. He also sees a potential to expand its export services to other countries.

[125] Foreign Investment and Technology Transfer Act 1992 of Nepal.

[126] SCAEF was formally registered with the Government of Nepal in November 20, 1990. The government recognized SCAEF as National Body on August 16, 1995. The Public Works Directives published in January 2002 made it mandatory for consulting firms to be registered with professional societies for getting shortlisted for participation in proposal preparation. Only since February 22, 2005, the government's line Ministry Physical Planning and Works designated to look after the interest of consulting industry.

[127] See for example documents at http://www.scaef.org.np/

[128] See http://www.adf.com.np/index.html

[129] See http://www.welink.com.np/wa/

Under mode 4 (presence of natural persons), individual consultants working abroad have already shown their capability of handling larger construction projects. Some Nepalese engineering firms have started providing engineering services related to construction in countries such as Bhutan, Afghanistan, Tajikistan and several African countries, which mainly means that they send some of their engineers to these countries without establishing a commercial presence there. According to respondents from the industry, the entry to India is difficult because Indian engineers are very capable themselves and also because of the intensity of competition in that market.

A large number of individual engineers are known to have left the country for foreign employment, though the available data is scattered.[130] It is estimated that the brain drain of government engineers has reached more than 300 hundred in the last two years.[131] Most engineers going abroad are also known to work as engineers there.

There is no evidence of exports in the field of industrial engineering.

Imports of Engineering Services: Large-scale construction projects in Nepal usually involve foreign firms. Nepal has made some commitments in GATS after joining the WTO in 2004. There are no restrictions on this service under modes 1 and 2. Under mode 3, however, physical presence of foreign firms is allowed with only up to 66 per cent foreign equity capital to firms incorporated in Nepal. Regarding mode 4, there is a restriction as in the case of all other services (horizontal commitments), i.e. the number of foreign employees in Nepal cannot exceed 15 per cent of the number of local employees.

Index 2: World Market Conditions

The global market for engineering and construction services is estimated by the WTO to have reached a size of US$4.7 trillion in 2007[132], but most of these services are not traded internationally. Global spending on engineering services alone, which includes not only engineering for construction but also enginerring for manufacturing (e.g. automotive industry, telecom, aerospace), is estimated to be US$750 billion per year and to reach US$1 trillion in 2020, but with only US$10-15 billion offshored (Nasscom, 2006).

Official BOP statistics give an incomplete picture of the global trade in engineering services, but there is a clear upward trend. Exports of 'architectural, engineering, and other technical consultancy services' have doubled between 2003 and 2007 and reached US$13.7 billion. India is the second largest exporter and importer for this category of services, after Germany. But many countries, including China, do not report this data.

ENR publishes an annual list of the top 225 international contractors.[133] The industry is dominated by European and US firms, with a few Chinese companies emerging as major players. None of the top 225 is from Nepal, and only two are from India. But India is one of the fastest-growing markets in terms of construction spending, with annual growth of 8 per cent (WTO).

A study by the Indian IT and BPO industry association, Nasscom and Booz Allen Hamilton ('Globalization of Engineering Services: The next frontier for India'., Nasscom 2006) is very optimistic about the outlook for India as an exporter of engineering services, with a potential for 2020 of US$50 billion (which is equal to today's export revenue in IT and BPO services), but it is expected that the potential can be fulfilled only if engineering

[130] According to an interview with Foreign Employment Association, out of total migrants, the percentage of skilled labour is around 2.5 per cent, which includes engineers and surveyors as well.
[131] See Nagarik daily, 31 December, 2009, www.nagariknews.com .
[132] See http://www.wto.org/english/tratop_e/serv_e/construction_e/construction_e.htm
[133] See http://www.wto.org/english/tratop_e/serv_e/construction_e/construction_e.htm

education is strengthened and engineering services exports also require enhanced manufacturing capabilities. For example, even if certain engineering services in the automobile industry could be offshored from, say, Germany, then it is hard to imagine that these services could be offered successfully by countries that do not have automobile manufacturing capabilities themselves. The main competitors for engineering offshoring are seen in large developing countries, such as China, Vietnam and Nigeria, but for complex tasks, China and India are expected to capture most of the market.

Where does Nepal fit in that emerging market? We expect that could have a potential as an offshore destination for Indian firms, similar to the IT and BPO industry (where this offshoring from India to Nepal has also not happened on a large scale yet). But for Nepal to become an 'independent' exporter of engineering services, Nepalese firms would have to find niche markets where engineering capabilities can compete at global level. This is difficult to imagine, given the lack of advanced domestic manufacturing industries. There might be some potential in specialized engineering and construction services, e.g. those related to hydropower.

Index 3: Domestic Supply Conditions

The Nepalese Engineering Sector: There are more than 400 consulting firms officially registered in Nepal. Of this, 64 professional architectural and engineering firms are members of SCAEF, which, according to industry sources, makes up for 90 per cent of the sector in Nepal. Nepalese consulting firms have acquired skills and know-how by working with expatriate firms in the projects financed by multilateral and bilateral funding agencies, and some have developed and acquired the needed professional experience to meet international standards. According to industry sources, construction projects in most areas, except those requiring very complicated technology, can now be handled by Nepalese consultants. SCAEF member firms are involved in projects with total project cost of US$464 million and recently Nepalese consultants have been given opportunities by the government and donors to act as lead firms in association with expatriate firms (Business Initiative 2006).

Quality of Service: According to industry sources, Nepal is able to provide high quality engineering services. However, no neutral assessment is available for the sector.

Availability and Quality of Labour Force: Industry sources rank the availability and quality of workers in the industry as medium. Brain-drain is a problem, as many engineers are working abroad, though this also shows that they are successful in 'exporting' their skills. The quality of engineering education is considered good, in particular that of TU (Institute of Engineering).[134]

Labour Cost and Overall Production Cost: Lower labour cost but not significant advantage in terms of production cost due to high costs of some components like equipment and machineries (mostly imported) and high energy cost.

Domestic Demand: There is high demand from government sector for infrastructure projects.

Government Initiatives and Donor Involvement: Consulting Services Development Act jointly with the private sector is in progress.

[134] See http://scaef.org.np/conference/conference/pdf/Session-4/8.per cent20Engineeringper cent20Educationper cent20inper cent20Nepalper cent20prospectsper cent20andper cent20challengesper cent20PPT.pdf for a discussion on current technical education in Nepal.

Index 4: Socio-economic Impact

Current Employment and Job-Creation Prospect: The SCAEF member firms are estimated to have given full-time permanent jobs to 2,563 persons, but most of them are working for domestic projects. The major and leading consulting firms have more than 100 staff each. There is only anecdotal evidence about export-oriented employment numbers and it seems to be very limited, apart from engineers working abroad. The sample of five interviewed companies employs a total of 300 engineers, but it is not known which share of that can be considered export-related.[135]

Gender Impact: Women employment in the sector is low (15-20 per cent).

Contribution to Skill Development: Being a high-skilled activity, exports of engineering services could positively contribute to skill development, in particular through exposure with international engineering know-how.

Impact on Development of Disadvantaged Regions: There is no particular impact on disadvantaged regions through export of engineering services.

Environmental Impact: None.

Market Attractiveness Index

We have taken an MAI for the construction industry provided by Davis Langdon, one of the leading global construction consultancies. The index is based on a survey of industry experts. Numbers show the number of respondents that state that a particular market will rank highest in the category. Overall, UAE, China, and India are ranked as highest.

Table 2.52
Attractive Markets for Engineering

Attractive markets for Engineering services					
Top 10					
Rank	Country	Fastest growing	Most profitable	Most open	Overall index
1	UAE	8	15	12	35
2	China PRC	21	7	4	32
3	India	5	2	2	9
4	Brazil	4	3	0	7
5	Quatar	3	2	0	5
6	USA	0	0	5	5
7	Nigeria	1	2	1	4
8	United Kingdom	0	0	4	4
9	Turkey	1	0	0	1
10	Saudi Arabia	1	0	0	1

Source: The table is taken from Davis Langdon and Seah International, *World Construction 2009.* The report is available at http://www.davislangdon.com/upload/StaticFiles/EMEper cent20Publications/Otherper cent20Researchper cent20Publications/10654_Constructionper cent20Trendsper cent207.pdf

[135] ADF, which mainly exports its services, employs only 20 people and WLINK, for which exports constitute only 15-20 per cent of sales, employs a total of 100 persons.

19) Hydropower[136]

The structure of this sector profile is slightly different from those of other sectors due to the particularities of the electricity sector.

Background

Nepal does not export significant amounts of electricity at the moment. In fact, small amounts of electricity are currently imported from India because there is not enough electricity generation in Nepal and load-shedding of 16 hours per day is common at certain times. Peak supply is around 700 MW, of which 650 MW is from hydropower and the remainder from thermal power. However, supply during the dry season is less than 400 MW. Domestic demand is estimated at around 800 MW, so there is a significant gap. Electricity prices in Nepal are relatively low. Prices are around 9 NRP (US$0.12) for private and 7 NRP (US$0.10) for industrial users, but costs are many times higher for self-generated electricity during blackouts. Apart from the political situation and labour issues, power supply is seen as the major problem for most companies that were interviewed during the preparation of this study. Therefore, the most pressing issue is to improve power supply in Nepal, but export of electricity could become a major source of export earnings in the long run.

Potential for Hydropower Exports

There are currently no exports of hydro-energy from Nepal. However, it is useful to assess briefly the potential exports and export revenue that could be earned from hydropower.

It is estimated that Nepal has a potential of 83,000 MW of hydropower capacity, out of which 43,000 MT has been identified as economically viable. Total revenue from hydropower, once a significant share of the potential is tapped, could reach many billion US dollars per year, of which of course a significant share needs to be used to finance the initial construction costs. The key issue is whether Nepal will be able to capture a large share of the rent that can accrue from hydropower. It is argued that India, the main potential buyer, does not believe in 'avoided cost' pricing but has been insisting on a 'cost plus' approach for hydroelectricity, which would mean that any rent is actually captured by India, rather than Nepal. That would mean that there would be few welfare gains for Nepal from such projects, even if electricity exports reach levels many times higher than exports of other goods and services. Obviously, royalties need to be modest so as to assure the financial viability of any hydropower project. It is impossible to assess the potential gains for an individual hydropower project, but it is very likely that economic rents would accrue in most projects, i.e. the overall costs per kWh, including all capital costs for the dam and transmission lines and maintenance costs, would be below the price that can be obtained in the Indian market. As Nepal could provide peak load, the revenue could be even higher if peak load would be priced accordingly, i.e. similar to marginal costs of peak load generation which should be above average costs.

One way to capture that revenue would be to tax foreign investors accordingly, e.g. by some amount per kWh. Another option would be for the GoN or other domestic entities to invest in hydro projects themselves, as it is happening in Bhutan with financing through loans from India.

A very rough calculation shows the order of magnitude of potential revenue that could be accrued by Nepal assuming that foreign investors are financing all projects and are then taxed by applying royalties payment per kWh. If Nepal would receive a modest royalty of US$1 ct/kWh, then an installed capacity of 10,000 MW could

[136] We classify exports of hydropower as a service export, but it should be noted that electricity exports could also be considered as falling under goods exports. Whether electricity is a good or service can have important legal consequences, but it hardly matters for the context of this study.

generate revenue of US$350 million per year. Shah (2008) has a similar estimate for potential government revenue. Bhutan apparently receives revenue per MW in that magnitude[137] and West Seti would generate revenues of around US$0.9 ct/kWh.[138] Table 2.51 shows some additional scenarios.

Table 2.53
Potential Annual Tax Revenues from Hydropower for Different Production Levels and Royalty Rates

Potential annual revenue from royalties for different scenarios (US$ million)					
Royalty per kWh in US$ cents					
Installed capacity	0.25 US$ cents	0.5 US$ cents	1 US$ cents	2 US$ cents	5 US$ cents
1,000 MW	9	18	35	70	175
5,000 MW	44	88	175	350	876
10,000 MW	88	175	350	701	1,752
50,000 MW	438	876	1,752	3,504	8,760
100,000 MW	876	1,752	3,504	7,008	17,520

Note: Assumes 40 per cent utilization rate.[139]

Potential revenues for a wide range of royalty rates can be calculated. Which ones are actually achievable depends on many factors. One factor is the alternative cost of producing electricity in India or other importers, which depends heavily on the future prices of coal and natural gas. But even with a modest royalty of 0.01$/kWh, the revenue could reach several billion US dollars if most of Nepal's hydropower potential were utilized. However, this is a very long-run scenario.[140]

There could also be a potential to import off-peak energy from India and sell it during peak demand.[141] Such trade can generate substantial additional revenue (see Box 2.4).

Some respondents in Nepal have argued that improving the electricity supply in Nepal should be a key priority for GoN before electricity could be exported. However, both issues are not directly related. Some projected hydropower projects are located far from Nepal's economic centres and are mainly built for export to India (e.g. West Seti). Nepal could try to enter similar arrangements with foreign investors who could build dams under a build-own-operate-transfer (BOOT) scheme which also serve the domestic market.

Potential Markets for Hydropower Exports

The major potential export market is India. Electricity deficits within India are highest in northern India with a current peak load deficit of 5,500 MW (15 per cent). In Uttar Pradesh alone, the deficit is at 3,460 MW, and 500 MW in Bihar, and 15,000 MW in the whole country, compared to a country-wide peak load of 104,000 MW.[142] The bulk of electricity generation in India is from coal and India is currently a net importer of coal due

[137] See for example http://www.sari-energy.org/PageFiles/What_We_Do/activities/Bhutan/Overview_of_Bhutan-India_Cooperation_in_the_Power_Sector.pdf
[138] Own calculation, based on ADB (2007).
[139] We assume a 40 per cent utilization rate. Similar assumptions are for example made by Ram Manohar. Nepal's rate is around 43 per cent (see Shah, 2008). India had an average rate of 38 per cent in 2007/08. (see http://www.cea.nic.in/hydro/Hydroper cent20Performanceper cent20Reviewper cent20per cent28Summaryper cent29per cent2007-08.pdf)
[140] India's peak load is currently only around 100,000 MW, so there would not even be demand for such amounts of energy.
[141] Most of India's electricity comes from coal-fired power plants which are difficult to regulate, whereas hydropower has the advantage that it can be regulated very quickly to meet demand.
[142] See CEI (2009).

to constraints in domestic supply.[143] Most of the additional generation capacities in the future are likely to be coal-powered as well. It is difficult to compare the costs of these different types of energy generation, but it is very likely that hydropower could be cost-effective compared to coal- or gas-fired plants in India, also because price increases for coal and gas are likely to occur in the future, whereas the cost of hydropower does not depend on commodity prices (except for initial costs of construction materials).

There is also a large deficit and increasing demand in Bangladesh,[144] and the distance to Bangladesh should not pose any problem to transmission, however the required transit through India could add difficulties. China could be a destination as well, but the potential is likely to be limited because border areas to Nepal are hardly populated and transmission to urban centres in China could be prohibitively expensive.[145]

Constraints on Hydropower Export

Why is Nepal utilizing only around 1 per cent of its hydropower capacity, which is not even enough to keep up with the domestic demand, despite the obvious fact that the production and export of large amounts of hydroelectricity would be feasible from both technical and economic points of view? First of all, the lack of political stability in recent years likely has been a major deterrent for any foreign investor in hydropower. Any investment in hydropower would be risky because a large initial investment would have to be made and revenues have to be accrued over a long time horizon.

According to ADB (2009), the major reasons private investments have so far been limited to small-scale projects are (i) lack of transparency and accountability in the licensing process, (ii) incompatibility and inconsistencies in legal and regulatory frameworks, (iii) difficulties in raising non-recourse finance, (iv) discriminatory tariff-setting for projects greater than 5 MW, (v) inadequate transmission network capacity to evacuate power, and (vi) political risk.

Numerous government agencies are involved in the power sector, which makes the process complicated and less transparent, and could lead to delays. The NEA has a monopoly for most of electricity production and transmission in Nepal and there is no autonomous regulator (see Shah 2008). However, the latter is mainly a problem for investments in hydro projects for the domestic grid.

The licensing process seems to be particularly problematic, as outlined in detail by Acharya (2009). Licences for hydropower projects are issued even if there is little evidence that the licensee is capable of developing a hydro project and are also issued at very low cost, which is attracting rent-seekers who hope to eventually resell the licence to actual investors. Apart from causing a revenue loss, this could also hinder or delay actual investments.

The proposed Energy Act is also seen as not attractive to potential foreign investors as it lays down numerous conditions that hydropower developers have to fulfill and very high tax and royalty rates (Acharya, 2009). This might be a slightly biased view coming from potential investors. However, it is clear that if tax rates and additional requirements were set too high, then it would deter investors; if set too low, then there would be little welfare gains for Nepal.

The role of India is also crucial: Any potential investor also faces the additional risk that India would in most cases be the only buyer of electricity (apart from local sales) and would thereby have some degree of

[143] http://www.eia.doe.gov/cabs/India/Electricity.html
[144] See for example http://www.energybangla.com/index.php?mod=article&cat=PowerSector&article=2436
[145] China has already indicated that there is little interest in importing hydropower from Nepal because transmission costs are too high and there is not enough demand in adjacent regions to justify such investments.

monopsony power. Several potential hydropower projects in Nepal could also have significant impact on river flows in India. This impact could indeed be positive, e.g. for flood control or to improve irrigation, but it certainly adds significant complexity to any such projects. India is proposing a 'cost plus' approach for possible projects in Nepal, which would give little welfare gains to Nepal.[146] India's policy towards Bhutan has been remarkably different. Several large hydropower projects in Bhutan have been financed through Indian grants and loans, but are fully operated and owned by Bhutan. India pays around US$4 ct/kWh for electricity from Bhutan[147], which, together with the grant element, provides for significant net revenue for Bhutan.

Despite these barriers, several large hydropower projects have been proposed in Nepal. The West Seti Hydroelectric Project, a 750 MW project with US$1.6 billion investment in western Nepal, is the one that is the most advanced. However, most recent reports from early 2010 suggest that the future of the project is unsure as the licence has not been renewed and the company has apparently stopped operating. It is supposed to be constructed under a BooT scheme with private investment mainly from China and Australia and possibly also from the ADB. Most of the power will be exported to India and sold to Power Grid Ltd, an Indian state-owned company, which is the major grid owner in the country. Nepal will receive revenue through a 10 per cent share in sales value and royalties based on capacity. With a proposed price of US$0.05/kWh and annual generation of 3.6 TWh, the annual gross revenue would be US$182 million[148], of which around US$33 million per year would go to the government (around US$0.01/kWh) over the 30-year licence period, after which the GoN would take ownership and receive the full revenue.

Box 2.4 Hydropower in Bhutan and Switzerland

Bhutan could serve as an example for Nepal as regards export of hydropower. Since the completion of the Tala project in 2008 (1,000 MW), generation capacity is now at 1,500 MW, most of which is exported to India. Gross revenue from electricity exports reached US$255 million in 2008 (Source: TradeMap), which is very significant compared to the GDP of US$1.4 billion. There are plans to upgrade the capacity to 10,000 MW by 2020. So far, such projects have been funded through grants and loans by the government of India.

Switzerland is another example of a country that benefits substantially from hydropower and hydro storage capacities. It has an installed hydropower capacity of 13,400 MW and imports cheap electricity from neighbouring countries when prices are low and then exports when prices are high. Although the import and export volumes are similar, the generated annual revenue due to price differences has been US$1-2 billion in recent years. Average prices for imports in 2008 were US$6 ct/kWh, but export prices were US$10 ct/kWh. In comparison, electricity from West Seti" despite mainly supplied as peak load, is expected to be priced at a flat rate of US$5 ct/kWh.

Socio-economic Impact

It is not possible to come to a general conclusion of the socioeconomic or ecological impact of hydropower in Nepal. The overall impact has to be evaluated on a case-by-case basis. The maintenance and in particular the construction of hydro dams and transmission lines could create a significant number of jobs and could also provide ample opportunities for domestic skilled workers such as engineers. However, there are obviously potential negative effects, such as relocation of villages. For example, West Seti, when completed, would require resettlement of 13,000 people (ADB, 2007). There are effects on river flows which could negatively affect agricultural activity, although a dam could also help to reduce the risk of flooding in the monsoon season and allow for increased irrigation in the dry season.

There can be significant effects on river flows in India, which need to be taken into consideration. In particular, if there are positive side effects on flood control and/or improved irrigation in India but without a related contribution by India to the cost of the hydropower project, then projects may not be realized even if there were net welfare gains from doing so.

[146] See http://www.cea.nic.in/hydro/nepal.pdf for details on some of the proposed projects (not including West Seti).
[147] The actual price differs for each project. See http://www.cea.nic.in/hydro/bhutan.pdf
[148] Own calculations based on ADB (2007).

Market Attractiveness Index

We do not provide an MAI for hydropower for the obvious reason that exports can only take place to countries that are close to Nepal. As outlined above, this is first of all India, but Bangladesh could in principle also be an attractive market for energy exports.

2.3 Five Additional Export Potential Sectors

In addition to the 19 sectors that were identified and evaluated in this study, a few other sectors were frequently mentioned by several stakeholders. These sectors are analysed briefly here. The information contained in this section might be useful for an upcoming update of this study. The sectors are:

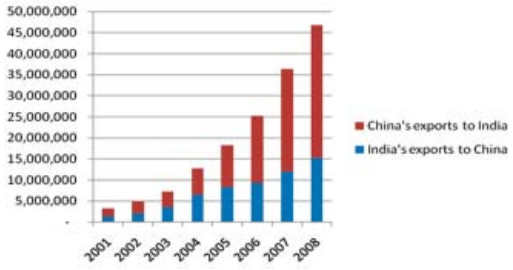
- transit trade,
- sugar,
- cement,
- dairy products,
- transformers.

Transit trade could play a role for the border regions of China and India, but less so for the bulk of the trade between China and India, which will continue to be routed by sea. Sugar exports have benefited from the special conditions of the EU market, but preferences are eroding significantly, so there may not be such a great potential in the long run. There is potential for cement export to China and India, owing to the good quality of the material extracted in Nepal. There seems to be a potential for dairy products, in particular milk powder, though the main potential will initially be within Nepal. Transformers are a niche product for Nepal with, possibly, only a small potential for future export.

Transit Trade via Nepal and Related Services

The prospect of Nepal to become a transit hub and to earn export revenue through the export of transit-related services was raised several times during the preparation of this study. We, therefore, take a very brief look at this issue. Apart from providing services for transit between China and India, Nepal could indirectly gain from lower transport costs due to better and more frequent connections to both India and China. Export of Nepalese goods to China, which is up to now very low, could also increase, and such transit trade would also possibly allow Nepal to source cheaper imports, in particular from China. Total trade between India and China has grown by around 46 per cent per year since 2001 and has reached US$47 billion in 2008. As a comparison, this is twenty times higher than the total trade between Nepal and India (US$2.3 billion). Currently, most of the trade between India and China is by sea. Most of India's exports to China is in commodities, such as iron ore, cotton, and chemicals, whereas China mainly exports electronics and machinery.

Figure 2.7 Exports from India and China to Each Other's Country



Source: TradeMap.

The possibility of direct land transports between China and India is very limited, and trade by land is estimated at only around US$100 million per year.[149] There is a border in Sikkim (via the Nathu La mountain pass), which was re-opened in 2006, and two other borders via mountain passes in north-western India. All of those passes are very high (Nathu La being the lowest at 4,300m) and only open for a few months in summer; so it is hard to imagine that they will become major transit routes in the foreseeable future. Plans exist for future transit connections via Myanmar. A possible transit route via Nepal would be via Terai–Kathmandu–Zhangmu (border)–Lhasa and then on by railway to coastal China.[150] The total road distance from Kolkata to Kathmandu is around 900km and 1,000km from Kathmandu to Lhasa. Lhasa–Shanghai is around 4,400km by train (see the map below).

However, potential that products currently shipped from coastal areas in India to China's coast will in the future be transported overland is limited. That is where most of China's industrial areas are located. Even if the road/rail infrastructure were upgraded significantly and border procedures were simple and reliable, the transport cost for most items would be higher than for transport by sea, especially for commodities that make up a large part of trade between the two countries (e.g. iron ore). Even a railway connection from Lhasa via Kathmandu to India–which so far is not much more than a vague idea–might not change much. Most trade between China and Western Europe goes by sea, even though railway lines exist. But transit trade could play a role for products produced closer to Nepal, such as Tibetan products and exports from Indian states bordering Nepal. Such trade already occurs to some extent, for example in garlic, footwear or temperate fruits like apple and pears. A more detailed study would be required to assess transport costs and feasible products that could be supplied and demanded from the bordering states or cities.

Nepal would benefit greatly from any upgrade in road and rail infrastructure and a simplification of border procedures. Therefore, the government should be open to any support from both China and India to help upgrading the transport infrastructure.

Figure 2.8 India-China Land Corridor

Note: Routes shown do not follow actual road/railway/shipping routes.
Source for Map: CIA World Factbook.

[149] See http://www.chinadaily.com.cn/china/2006-07/06/content_634734.htm
[150] Extension of the railwayline towards the Nepalese border is under consideration.

Not discussed here is the possibility of Chinese or Indian companies using Nepal as a manufacturing location to serve the other market and take profit from easier access to that market. Currently, Nepal enjoys significant preferential access to the Indian market, but not to China. If rules of origin allow, then Chinese (or other) manufacturers could add value in Nepal and then export to India.[151] But there is no guarantee that the preferential access to India will remain, and such preferences will erode in any case with the ongoing trade liberalization. That, plus the additional costs that would probably occur compared to production in China, makes it doubtful that this will ever happen on a large scale in the near to medium term.

Sugar

Nepal produces around 110,000 MT of raw sugar per year, but is a net importer of sugar with consumption being around 150,000 MT.[152] Most sugar is imported from India (mostly refined sugar, but also some raw sugar). There is therefore no potential for 'normal' exports. However, Nepal has exported raw sugar to the EU in recent years, where free access is provided for LDCs through the 'everything-but-arms' initiative and prices well above the world market can be achieved. Like many other LDCs, Nepal imports raw sugar for domestic consumption to be able to export more of its own sugar to the EU. Annual exports since 2003 were around €5 million or 10,000 MT. However, it is questionable whether these exports will continue since the EU is drastically cutting down sugar prices in its heavily regulated market. At the moment (early 2010), world sugar prices are very high and have reached the level of the (reduced) EU price; so at the moment such exports to the EU would make little sense. But a premium over world market prices will probably remain in the medium run, though it will be much lower than it used to be. Some industry sources estimate the premium to go down to a maximum of 100 €/t, which may hardly be enough to cover additional transport costs for both exports to the EU and imports from third countries such as India or Thailand to cover domestic demand.

Cement

Several participants of a workshop held in November 2009 in Kathmandu suggested that cement should be included in the export potential assessment as there were a potential for export to China.

According to trade statistics from China and India, Nepal does not trade cement with China currently and is importing substantial amounts of cement from India (US$40-45 million per year). Imports in 2008 were 684.000 MT at 60 US$/MT. According to a study from 2008, domestic production covers only 35 per cent of demand, the remainder being imported from India.[153] Therefore, there may not be great potential for significant exports in the near future. However, there is potential for increased production because Nepal has large deposits of limestone, and, therefore, also for export to border areas in India or possibly Bangladesh, depending on the location of such production. In addition, Nepal's limestone presumably is of higher grade than that available in India. Prohibitive road transport costs with China might preempt exports to that country. They are currently estimated at 60-70 US$/MT/1,000km in Nepal,[154] which is approximately the distance between Kathmandu and Lhasa. In comparison, transport costs on the Golmud-Lhasa railway are only around US$14 /MT/1,000km, making cement produced in China much more cost-competitive, at least in Lhasa.

[151] This could also work in the other direction, but Nepal currently has no preferential access to China, whereas India is granted some preferences under the Asia-Pacific Trade Agreement.
[152] See for example http://www.gorkhapatra.org.np/gopa.detail.php?article_id=28620&cat_id=27 .
[153] "P. R. Pandey & N. Banskota, Process of cement production in Nepal, Bulletin of the Department of Geology (2008).
[154] Information obtained from ITC consultant in Nepal.

Dairy Products, specifically Milk Powder

Sujal Daity Ltd, a milk powder factory in Pokhara, was visited in the course of the fieldwork. It is fully Nepalese-owned and produces mainly skimmed milk powder, and also flavoured milk, yoghurt, and whitener. Milk is supplied by and collected from 3,000 farmers in the region, most of them small-scale producers. The company assists farmers in raising productivity through several training measures.

The current production of milk powder is 5 MT/day, which is below the capacity of the plant. The constraining factor is the lack of milk supply, which is currently at 60,000 l/day. Milk is bought for 24 NPR/l from farmers. This is similar to the current farm gate prices in the EU.[155]

The company has not yet exported milk powder, but has received positive feedback from potential buyers in Pakistan and the Middle East and sees itself as being able to compete in terms of both price and quality, even in markets where Nepal does not enjoy any tariff advantage (as in the UAE). The main problem is that, so far, the company is unable to supply the quantities needed by potential buyers, who prefer buying in bulk. Shipping facilities and costs are not seen as problems, according to a company representative.

The sector appears to have a very positive socio-economic impact as it provides cash income for a large number of subsistence farmers. It also seems internationally competitive. However, Nepal is currently a net importer of dairy products.[156]

Micro-Transformers and Distribution Transformers

Since the early 1990s Nepal has developed a technical expertise and engineering production base to manufacture and export electrical and electronic components. Production and supply of such items are on a contract manufacturing basis. There are two very different types of transformers that are currently exported: micro-transformers and electrical distribution transformers. Micro-transformers are, for example, used in the automotive and telecommunication industry and their production involves certain steps which are difficult to automate. Components of such parts are imported into Nepal, manually assembled and then re-exported. The leading company involved in this business is Nepal Bayern Electric,[157] which currently employs 130 workers. One could in fact speak of an export of assembly services, rather than an export of micro-transformers. According to trade data, annual exports of such products have been US$1-2 million per year between 2004 and 2007, with a significant drop to US$0.6 million in 2008. However, a more appropriate export measure would be the value added as the export is practically an export of assembly services, with inputs being imported by Nepal Bayern Electric (NBE). With currently 130 workers employed (down from a peak of 550), the annual value added should be somewhere around US$200.000.[158]

Large transformers, used for electricity distribution, are mainly manufactured for the domestic market, but are currently also exported, mainly to Bhutan. The main company involved is Nepal Ekarat Engineering Company Ltd (NEEK).[159] Export statistics for distribution transformers are inconsistent. Currently, NEEK is the only exporter and Bhutan is the only export destination, with annual exports in recent years being around US$200.000-300.000. Currently, NEEK is working to supply 1,100 units of distribution transformers to Bhutan and they have stated that they see a potential for export in the Middle East and Africa (e.g. Kenya). Smaller companies find it difficult to take part in international tenders for distribution transformers because they lack the required experience.

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[155] Source: http://www.clal.it/en/index.php?section=confronto_est
[156] Annual imports of milk and milk powder were US$5-7 million in recent years. Exports were only US$200,000 in 2008.
[157] Nepal Bayern Electric, (NBE), www.nbe.com.np
[158] This is a very rough estimate based on an annual salary of US$1,000 and some overhead costs.
[159] Nepal Ekarat Engineering Company Ltd. (NEEK), http://www.neek-transformer.com

The industry is electricity-intensive and frequent interruptions have caused problems. Self-generation costs are 200 per cent higher than power from the grid. Transportation of distribution transformers to Bhutan requires trans-shipment through India, which adds additional costs and potential delays.

A significant increase in exports of transformers, in particular distribution transformers, may not be for the near future. Such exports have been erratic in recent years, but it is hard to imagine that distribution transformers will become a major export item, given the high transport costs and no evidence for particular comparative advantages in this sector. Labour-intensive assembly of micro-transformers or similar electronic components might have greater potentials. These exports rely on low labour costs, but suffer from low labour productivity. It is a sector that has probably less in common with distribution transformers than with the garment sector, where Nepal's competitiveness is problematic when compared to more efficient low-cost producers such as Vietnam or China, especially once preferential access is gone.

Chapter 3
Access to the Indian Market

NTIS 2010

3.1 Introduction

The objective of this and the following chapter is to analyse some of the key constraints and opportunities related to market entry by Nepalese exporters in the country's two giant neighbouring markets, India and China, and provide advice on how to address some of the constraints, including capacity development through technical assistance.

This chapter looks at access to the Indian market. The chapter focuses first on a detailed review of non-tariff barriers (NTBs) and, then, on impediments that are not traditionally considered as NTBs but are incidental or essential to trade (i.e. transportation and/or distribution issues, infrastructural facilities, political stability, rule of law, etc.). Much of this analysis is based on information collected through extensive discussions with relevant Nepalese businesses, trade associations, traders, GoN officials, and other stakeholders in Nepal as well as in India. To the extent possible, this part of the analysis also seeks to identify issues specific to the 19 export potential sectors reviewed in Chapter 2. These two sections are followed by a short one that describes the views of Indian businesses and officials with respect to Nepalese export opportunities in their market.

On the basis of sections, the chapter identifies key challenges and opportunities before Nepalese exporters in entering key destination markets in India and provides a number of specific recommendations and conclusions.

3.2 Background: Nepal-India Trade and Transit Agreements

Nepal is a landlocked country, surrounded by India on three sides (east, west and south) and Tibet (AutonomousRegion of China) in the north. International trade before the 1950s was mainly with these countries, with nearly 90 per cent conducted with India. The essentially open border of 1,800 km facilitates trade, but also makes it hard to control. It also makes unquantifiable the enormous amount of informal trade and smuggling.

Nepal's trading relationship with India was first codified in 1950 with the Treaty of Trade and Transit, which lowered tariffs and tax duties on goods passing between Nepal and India. In successive modifications and renewals of the treaty (notably in 1960), transit facilities for trade between Nepal and other countries were established in India at the port of Kolkota (formerly Calcutta.) The treaty was renewed till March 1989 when delayed negotiations led to its expiration, and all but two trading points were closed for a year. This blockade crippled the Nepalese economy. The resulting strife was partly responsible for the downfall of the Panchayat political system and the establishment of parliamentary democracy with constitutional monarchy. The 1990 Interim Government successfully reinstated the treaty. As a result, a five-year Treaty of Trade was signed in December 1991.

Duty-free (customs) access for Nepalese exports to India on a non-reciprocal basis was first given in 1971, but with 90 per cent Nepalese/Indian material content requirements. This was gradually reduced when the treaty was periodically renewed, and, in 1993, it was brought down to 50 per cent of Nepalese/Indian material content and Nepalese labour content. Under the 1996 Trade Treaty, India agreed to provide access, free of customs duties and quantitative restrictions, to all articles manufactured in Nepal, with the exception of three groups of items (alcohol, tobacco, and cosmetics). The value addition (material content) norm for such duty-free entry was removed in 1996. It was alleged that this had resulted in a surge of imports into India of some products from Nepal with little or no value addition such as acrylic yarn, zinc oxide, *vanaspati* (vegetable fat), and copper products. The Government of India (GoI), therefore, notified the GoN in September 2001 of its intention to seek some modifications in the treaty before extending its validity.

The treaty was due for renewal in December 2001. Both parties agreed to extend it for an interim period of three months until March 2002 to provide more time for negotiations. Following several rounds of bilateral talks between September 2001 and February 2002, the Indo-Nepal Trade Treaty was revised and renewed in March 2002 for a period of five years. The revised treaty strikes a balance between safeguarding the Indian domestic industry and providing an impetus to the industrial growth and economic development of Nepal. Continued access to the Indian market is provided for Nepalese manufactured goods on a non-reciprocal duty-free basis. Important modifications were made with respect to the rules of origin and tariff rate quotas applicable to a number of sensitive items. The Nepal-India Treaty of Trade was renewed again for five years in March 2007, without any change or modification.

Nepal and India also signed a separate Treaty of Transit in 1991. This treaty was valid for seven years and has subsequently been renewed in 1999 and thereafter in 2006 for seven years. This treaty provides transit facility to Nepal via Kolkota and fifteen transit routes to Kolkota are designated from the Nepal-India border. Twenty-two crossings along the Nepal-India border are designated for bilateral trade.

A cooperation agreement to control unauthorized trade was also signed between the two countries in 1991 for five years and was extended together with the Treaty of Trade in 1996, 2002, and 2007 (the latter with validity until March 2012). Under this agreement, both countries agree to cooperate to prevent infringement and circumvention of laws of either country in regards to matters related to customs, narcotics, foreign trade, and foreign exchange. This agreement prohibits re-exportation of goods imported from either party to third countries without manufacturing activity. The agreement also prohibits re-exporting goods imported from third countries to India without manufacturing activity.

In general terms, these treaties and agreements have helped expand trade between Nepal and India. However, the deficit in trade in goods on Nepal's side has been expanding dramatically every year. The trade performance for the period 2004-09 is shown in table 3.1.

Table 3.1

Trade in Goods Nepal-India 2004-09 (in millions of Nepali Rupees)

Year (July-July)	Export from Nepal			Import to Nepal			Deficit	
	Total	To India	%	Total	From India	%	Total	With India
2004-05	58,706	38,917	66.29	149,474	88,676	59.33	90,768	49,759
2005-06	60,234	40,715	67.59	173,780	107,143	61.65	113,546	66,428
2006-07	59,383	41,729	70.27	194,695	115,872	59.51	135,312	74,143
2007-08	59,267	38,556	65.05	221,938	142,376	64.15	162,671	103,820
2008-09	66,444	40,080	60.32	264,033	150,103	56.85	197,589	110,023

The Nepal-India Trade Treaty was renewed in March 2007. It provides for rules of origin criteria with the inclusion of value addition requirements and changes in the Harmonized System Code of manufactured articles as the qualifying clauses for duty-free access to the Indian market. The list of insufficient working in manufacturing process has also been provided in the qualification clauses. Four products (vegetable fat, acrylic yarn, copper products, and zinc oxide) have been included again under a tariff rate quota system. Safeguard provisions were introduced for the first time in the Nepal-India Trade Treaty in 2002 and they were included as a separate protocol to Article IX of the 2007 treaty. The treaty is effective until March 2012.

Nepal acceded to the World Trade Organization (WTO) in 2004 and also joined the regional trading arrangements of South Asian Free Trade Area (SAFTA) and Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC). Similarly, the country participated in Asia Pacific Trade Agreement (APTA) as an observer of this trading bloc. With the advent of SAFTA and BIMSTEC, Nepal is bound to reduce its tariff rate with member countries of these trading blocs according to the provision of the respective agreements. Currently, Nepalese manufactured commodities enjoy duty-free access to Indian markets on a non-reciprocal basis. Trade treaty obliges both parties to provide unconditionally to each other treatment not less than favourable than that accorded to any third country with respect to customs duties and charges, import regulations, and quantitative restrictions.

In addition, India is bound to provide preference to the products of other countries under the framework of regional trading arrangements and bilateral free trade area agreements. The country is bound to reduce its Most Favoured Nation tariff rates due to its bilateral agreements with some of the neighbouring countries and as a member of the various regional trading arrangements. Besides, India has introduced Duty-Free Tariff Preferences Scheme for all Least Developed Countries around the world with a commitment of giving duty-free access to them over the next five-year period. It has already signed Free Trade Area agreements with Singapore, Thailand, and the Association of Southeast Asian Nations (ASEAN) and some Latin American countries like Brazil and Peru. India will also provide tariff preferences to SAFTA, BIMSTEC, and APTA countries, which of course will result in preference erosion for Nepalese exports to India. The paradox arising from this complex web of India's bilateral and regional preferential trading arrangements is that, comparatively speaking, India would have enjoyed a higher degree of preference for its exports to Nepal than what Nepalese products could enjoy on the Indian market vis-à-vis their non-Indian competitors.

In view of the above facts, the two countries commenced negotiations in order to find a solution to this 'paradox', although, technically speaking, the treaty was to expire only in 2012. As a result of these negotiations, a draft new Treaty of Trade and draft Agreement on Unauthorized Trade were finalized and initialled in August 2009. The new Treaty of Trade (valid for seven years) and new Agreement to Control Unauthorized Trade (also valid for seven years) between the two countries were signed in October 2009.

3.3 NTBs Constraining Nepal-India Trade

The following categories of NTBs were analysed through discussions with business executives, business associations, and government officials in both countries:

- Import policies such as import charges other than tariffs, quantitative restrictions, import licensing, and customs barriers;
- Standards-related measures, including standards, technical regulations, and conformity assessment procedures;
- Government procurement restrictions such as 'buy national' policies and closed bidding;

- Export subsidies such as export financing on preferential terms and agricultural export subsidies that displace exports in third country markets;
- Weak intellectual property protection such as inadequate patent, copyright, and trademark regimes;
- Barriers to trade in services such as limits on the range of financial services offered by foreign financial institutions, regulation of international data flows, restrictions on the use of data processing, quotas on imports of foreign films, and barriers to the provision of services by professionals;
- Investment barriers such as limitations on foreign equity participation and on access to foreign government-funded research and development consortia; local content, technology transfer, and export performance requirements; and restrictions on repatriation of earnings, capital, fees, and royalties;
- Government-tolerated anti-competitive conduct of state-owned or private firms that restricts the sale or purchase goods or services in the foreign country's markets such as cartels, abuse of dominant positions, monopolies of state intervention agencies;
- Trade restrictions affecting electronic commerce, including tariff and non-tariff measures, burdensome and discriminatory regulations and standards, and discriminatory taxation;

The findings discussed here are divided into 'Generic Issues' and 'Sector-specific Issues' focusing on the issues affecting some of the Export Potential Sectors identified in Chapter 2.

Generic Issues

Import Policies

- Nepalese manufacturing products that are accompanied by certificates of origin get customs-free privileges (facilitated customs clearance). The current treaty is not clear about the export procedure for Nepalese products other than manufacturing products and primary products. For example, it appears that Nepalese handicraft products (which are neither primary products nor manufactured ones) have to pay customs duties to enter India;
- Weak formal border infrastructure is an impediment to formal trade. Out of 22 official border crossings (27 in the new agreement), only three have quarantine check facilities and only two have food testing facilities on the Indian side. They also appear not to be sufficiently equipped;
- Not all 27 recognized border crossings are authorized to clear all kinds of cargo. Indian customs appear to allow clearance of specific products only through designated border crossings. This practice limits trade performance and adds cost to Nepalese exports;
- Currently, only the Kolkota Port is allowed for transit of Nepalese products to sea. Transit to Bangladesh and Bhutan via India is provided through land routes. Nepal's long-standing request for additional port facilities on India's western coast for west-bound cargo is still under consideration. Port facility to Nepal from Vishakhapatnam (also in the east and 400 km far from Kolkata) was agreed in August 2009, but it has yet to be formalized;
- Only one of the 27 crossings is connected by Indian Railways. The procedures agreed for the movement of Nepalese cargo by rail are complicated. Not all types of bilateral cargo (i.e. open cargo and liquid cargo) are allowed by rail;
- Collection of a variety of allegedly arbitrary additional duties by Indian customs can cause damage to Nepalese exports and add to the unpredictability, unreliability, and intrinsic instability of trade relations;
- The lack of clarity and transparency by Indian authorities in the notification or interpretation of applicable rules, procedures, and customs duties often hampers Nepalese exports. It takes on average three to six months for Nepal to get clarification when confusing new rules are notified in India.

Most issues reported above relate to infrastructural, regulatory, institutional or geographical weaknesses and 'bottlenecks'. With respect to such impediments, it is difficult to see a truly protectionist or WTO-illegal 'hidden agenda' on India's part. The lack of adequate control, certification and inspection facilities at all border checkpoints and customs entry points is a deficiency that must be addressed by both countries, if necessary with recourse to international donors' programmes and dedicated capacity-building projects.

Some issues, however, are matters for which Nepal should demand effective and immediate cooperation by Indian authorities. For example, import duties must be systematically applied in a non-discriminatory fashion by Indian customs authorities at all points of entry. The applicable import and customs rules and procedures must be published, notified, interpreted, and applied in a consistent and transparent manner. These are clear obligations and commitments that India has undertaken to implement and comply with within the framework of both the WTO system and the bilateral treaties. To date, Nepal seems to lack a more formal system to record such issues as they arise and to ensure they are duly brought to the attention of government officials for prompt negotiation and resolution with Indian authorities.

Standards-related Measures

- The lack of adequate quality, metrology, and inspection/certification facilities at the border or at the airport leading to issues in certifying the weight, safety, and quality of products, stands out as a powerful non-tariff barrier;
- Testing facilities are missing at border crossings and quarantine is often required. This places export crops from Nepal, such as ginger, at a comparative disadvantage;
- Fumigation of pallets and wood products, as well as the heat treatment to deal with possible pests in exported products, are trade impediments in terms of both costs and time consumption;
- It takes an average of four o five days, sometimes seven days, to clear agricultural produce through customs and get the necessary SPS certification at the Indian border, with resulting high costs of truck-retention at customs and storage.

These issues may be unfortunate from the point of view of Nepalese exporters, but are legitimate prerogatives of India, as of all other WTO members. The frustration of Nepalese exporters largely reflects the weak state of the current standard and SPS infrastructures in Nepal and the weak 'culture' of standards among producers and exporters. This issue is addressed more fully in Chapters 7 and 8 of this report.

Anti-competitive Conduct of State-owned or Private Firms

- Nepalese exporters point to the deleterious effect of Indian Railways' monopoly. Indian Railways charge the same fees for containers transported by rail to Kolkata than those charged by Indian truckers even though operating costs are much lower. This affects the competitiveness of Nepalese products and encourages widespread corruption at the border.

The suggestion is for the GoN to address such issues bilaterally with Indian authorities and/or that Indian importers of the affected Nepalese products consider a legal recourse in front of the Indian Competition Authority. This latter course of action might not be easy and might not guarantee a positive outcome, but it might be considered in one of the high potential exports, in order to create a precedent and act as a 'pilot' project.

Government Procurement Restrictions, Export Subsidies, Intellectual Property Protection, Barriers to Trade in Services, Restrictions Affecting Electronic Commerce, and Investment Barriers

No significant issues were identified in those six areas by Nepalese exporters through discussions with stakeholders and informed parties.

Sector-specific Issues

With respect to the export potential products and services reviewed in Chapter 2, the critical NTBs affecting agricultural commodities or semi-processed agro-food products exported from Nepal appear to be related to the application of and compliance with Indian standards and technical regulations. In addition, traders find it difficult to comply with a wealth of import regulation permits and licences.

In regards to selected garments and handicrafts, the key trade obstacle appears to be the application of erratic and discriminatory duties at Indian central level or at Indian state level. These instruments do seem to place Nepalese goods, often effectively, at a competitive disadvantage vis-à-vis competing Indian products.

A number of other constraints affect negatively Nepal's export performance in those key sectors, but largely as a result of domestic Nepalese shortcomings and self-inflicted deficiencies, whether in relation to infrastructure, regulatory framework, law and order, political stability, investment-friendly policies, etc. These are reviewed in greater detail below and must also be the object of urgent and well-planned actions if real progress is to be achieved on the export performance front. The resolution of India's NTBs and trade impediments alone will not make a real difference without effective and long-lasting improvements on the domestic front.

With respect to the potential service exports reviewed in Chapter 2, it would seem that the great majority of trade impediments are the result of domestic shortcomings on the Nepalese side in such areas as the lack of tailor-made policies, weak infrastructural facilities, political stability conducive to development and attraction of necessary foreign investment, and others. Most are discussed in greater detail in Chapter 10.

3.4 Other Impediments to Nepal-India Trade

As indicated above, it appears that many impediments that affect Nepal's export performance to India negatively are either Nepalese domestic in nature or Indian issues that do not fit within the traditional categories of NTBs. Nevertheless, both sets of issues are critical to Nepal's ability to trade and must be addressed for Nepalese exports to be competitive. These are addressed below.

It must be noted again that, in addition to formal trade, there is a large volume of informal and 'unauthorized' trade between Nepal and India, 35 to 40 per cent of formal trade by some estimates. One of the reasons for such a large volume of informal trade does reflect attempts by traders to bypass constraints arising from NTBs or some of the 'other' impediments discussed herein. While informal trade does not fall directly within the scope of this report, it is clear that such phenomenon must be taken into account when corrective measures are being considered and implemented to reduce the impact of NTBs and trade impediments.

Nepalese Domestic Issues

Nepalese stakeholders point to a number of issues:

- The example of soap production and export is cited often to show the deleterious effects of unreliable trade and development policies on Nepal's export development. Soap production and trade with India started initially to cater to demand in the border areas but expanded later to large cities like Delhi, mainly because of favourable investment packages being offered by Nepal, duty-free access to India, and access to relatively cheap raw materials and skilled labour. In recent times, however, this export has basically died out. There remains some but limited production for domestic consumption. The progressive deterioration in the investment climate in Nepal (strikes, blockades, racketeering by gangs, absence of law and order, and uncertain political situation), improvements in India's competitiveness in neighbouring border areas, and the loss of the artificial advantage given by tariff preferences, have resulted in the demise of this Nepalese industry. This also appears to be the case with a number of other sectors;
- Nepal still lacks a long-term and effective industrial policy, impairing the development of its exports. Investment cannot occur without stable, sustainable, and credible government policies and business climate. There is an urgent need for stability, political vision, and medium- to long-term development policies for strategic sectors;
- Government's unstable policy vis-à-vis export crops is also hampering proper development of such. GoN's periodical ban of certain export (e.g. lentils in 2009) on grounds of insufficient stocks for domestic consumption ultimately affects traders, damages Nepal's export image, and creates confusion among farmers;
- Quality of domestic production, especially agricultural produce and commodities, needs to improve for Nepalese producers to compete with Chinese and Indian producers, particularly on the Indian market;
- Transport costs are a serious and constant problem, especially for the low value products such as raw materials or most agricultural commodities;
- Adequate cold storage facilities and cold transport equipment are lacking, affecting quality. Refrigerated systems of transport, storage and handling at airport must be improved for achieving an increase in trade in high value perishable goods such as floriculture products. This is a key and potentially very lucrative sector. The lack of investment in such infrastructure appears to prevent the full development of exports of horticultural products from Nepal;
- The lack of scale on the Nepalese side can also be a problem, making Nepalese products non-competitive in India. For example, 60,000 tonnes of ginger were allocated to Nepal in 2008. While 300 sellers were necessary to assemble this quantity in Nepal, only four buyers imported the whole quota in India. This reflects the fact that it is too costly and difficult for small Indian buyers to get import permits in India. This Indian NTB, coupled with the absence of scale on the Nepalese side, limits export opportunities;
- Large corporations and trading houses in Nepal seem no longer to be investing in export trade (and in domestic production), but mostly in import trade. The money is there. It is easier and safer to import motorbikes or TVs to sell to Nepalese families that have money to spend from remittances than in producing something in Nepal for export. Too many law and order issues make domestic production too risky;
- Political instability is a major domestic issue. So is the very rigid Nepalese labour law. Lawlessness, strikes, transport stoppages are national phenomena that make Nepal not efficient and not competitive. They also make Nepal not appealing and not interesting for purposes of foreign investment;
- The weak SPS infrastructure within Nepal is a serious constraint that can be addressed only through more thorough commitment on the part of GoN and mobilization of technical assistance from development partners;

- Nepalese export taxes on most agricultural products (levied as of last year), plus local development taxes, are burdening Nepalese agricultural products and making them less competitive;

These and other shortcomings create impediments that only Nepalese policy-makers and government officials can address, be it with their own resources or with support from development partners.

Indian Domestic Issues

Nepalese exporters point to the following issues on the Indian side that, they claim, appear to be having a negative effect on Nepal's export performance and trade opportunities:

- Corrupt practices at the border, especially where no SPS laboratory is available for certification and Nepalese products (especially agricultural ones) can only go through by facing other 'discretionary' costs of doing business, is often referred to as an impediment;
- Tampering with the seals of containers (i.e. stealing goods and re-sealing) appears to be extensive;
- Indian states bordering or nearby Nepal (Bihar, Uttar Pradesh, Himachal Pradesh, Uttaranchal and Sikkim) are less developed than other Indian states and are benefiting from attractive development incentives, including to industries that compete directly with Nepalese products. Some Nepalese manufacturers have begun shifting investment to those locations;
- Several Indian states apply different, non-transparent and discriminatory rules, additional taxes, additional technical barriers to trade and/or standards on Nepalese exports in contradiction of WTO commitments and national treatment obligations and Nepal -India treaty obligations;
- Nepalese garment exports to India are subject to recurrent countervailing duty (CVD) by India. In truth, this is little more than an excise duty that is meant to mirror the excise duty levied on domestic producers. Allegedly, Indian garment producers are usually waived this levy, with a consequent National Treatment violation, if confirmed. On top of the regular CVD, India now appears to be levying an additional CVD of 4 per cent (for a total of 8 per cent) and charging it not on the FOB price but on the retail price. This appears to be, if anything, WTO illegal.

GoN officials need to put in place a system to record and address such issues with their Indian counterparts. Some issues do suggest conduct by national or sub-federal Indian authorities that might be illegal under a number of international obligations and commitments. Nepal should address these issues through consultations with India, either within the framework of the bilateral treaties or within the WTO framework, including, if need be, by means of WTO dispute settlement.

3.5 Selected Views from India on Nepal-India Trade

The following section reflects some views on Nepal-India trade from an Indian perspective based on in-depth discussions with a number of government officials, diplomats, trade associations, and individual businesses from that country.

- Specific provisions in the current Treaty of Trade are aimed at tackling the issue of standards, especially for agro-food trade. India has been offering financial, technical, and scientific assistance to improve Nepalese laboratories and capacity to certify products for the last three years. Apparently, GoN has not taken up India on this offer thus far;
- India is providing assistance to Nepal to develop integrated border posts. This effort is entirely funded by India, on both Indian and Nepalese sides of the border. In the absence of any formal complaints by either the GoN or Nepalese traders about border or administrative delays during 2008 and 2009,

India's view is that there are no current issues with respect to quarantine for perishable goods;

- Nepal needs to address the issues of political stability and law and order to encourage foreign investment. Law and order (including a serious reduction in the number and effects of strikes) must be improved and guaranteed. In addition, the right policies must be in place to attract foreign investments and stimulate economic activities. Infrastructure is weak at all levels and the existing one is fast deteriorating. Nepal's labour law also appears to be too rigid and hostile to investment. No Indian investment has taken place since 2008 and no new investment is likely to take place until some of these issues are tackled;
- India believes Nepal has potentials to further develop export of apples, horticulture products, floriculture products, and medicinal herbs and essential oils. In floriculture, bilateral trade could be developed so that Nepali flowers be gathered into economically viable quantities and qualities and exported to third markets via India;
- Tourism, especially religious, gambling and adventure tourism, retains huge potentials. India has recently liberalized the air transport services opening up opportunities for more seat capacity on the India-Nepal air route. Nepal could also become once again a place where Indian movies are shot and consideration should be given to the re-development of a domestic film industry. Sports and entertainment services (i.e. golf, cricket, others) could be further developed and promoted, particularly because of the very good year-round climate and outdoor conditions in Nepal;
- Nepal has a recognized competitive advantage in medical plants and herbs. Herbs for traditional and religious medicines and herbal teas also stand out as potential lucrative sectors in which to concentrate development efforts and attract investment. Related health services could be provided from Nepal to most countries in South Asia;
- Cement may be a sector to further develop for both domestic and export needs. Hydropower is also a key sector that could give Nepal important economic and geo-political benefits;
- Nepalese producers and exporters need to develop branding and marketing.

These observations reflect the fact that there is genuine and considerable interest from India's business community for Nepal as both an FDI destination and a trading partner. The current perception, however, is that Nepal is at present a risky place to do business, largely because of domestic deficiencies in policy, infrastructure, regulatory environment, and labour relations.

3.6 Recommendations: Challenges and Opportunities Shaping Nepal-India Trade

In general, the field work carried out in support of this chapter confirms many of the export opportunities identified in Chapter 2, including in ginger, tea, lentils, medicinal herbs and essential oils, tourism, hydropower, health services, education, or IT and BPO services, at least in so far as Nepal-India trade is concerned. It also suggests other possible areas, including horticulture and floriculture.

The field work also points to a number of challenges, many of which are examined in more detail in some of the remaining chapters of this study:

- Most issues pertaining to the category of import policies appear to relate to infrastructural, regulatory, institutional weaknesses and bottlenecks. As indicated, it is difficult to see a truly protectionist or WTO illegal 'hidden agenda' on the part of India in these trade impediments. The lack of adequate control, certification and inspection facilities at all border checkpoints and customs entry points is an institutional and infrastructural deficiency that must be addressed by both countries, if necessary with recourse to development partners' programmes and dedicated capacity-building projects;

- Some import policy issues do require more direct negotiations between the two countries and may require more effective cooperation by Indian authorities. For example, import duties must be systematically applied in a non-discriminatory fashion by Indian customs authorities at all points of entry. The applicable import and customs rules and procedures must be published, notified, interpreted and applied in a consistent and transparent manner. These are clear obligations and commitments that India has undertaken to implement and comply with within the frameworks of both the WTO system and the bilateral treaties. The same applies to NTBs whenever they are applied in a discriminatory manner. However, to respond effectively to those challenges, GoN needs to develop a much clearer negotiations agenda and put in place a formal structure to allow traders to lodge complaints and give officials the tools to monitor and incorporate those issues in negotiations.
- With respect to standards and technical regulations, the main challenge is on the Nepalese side. It includes building up domestic capacity in areas of standards, certification, controls, metrology and other areas, strengthening capacity at border crossings, and developing a 'culture' of standards among producers and exporters;
- In the area of trade in services, it also appears that the great majority of the challenges rest in the hands of Nepalese policy-makers and government officials to develop policies and institutions that are supportive of the development of those sectors;
- With respect to trade facilitation, improvements must be found in both further investment in border facilities and negotiations of trade facilitation instruments that can improve on current delays, costs and competitiveness losses resulting from border controls and clearance, including of SPS controls;

In addition to the issues taken up in greater detail in the following chapters, this review also points to the need for GoN to develop its capacity to formulate a more comprehensive trade negotiations agenda at all levelsmultilateral, regional and bilateral–and to equip itself with more formal tools to develop such agenda, develop supporting policies, monitor export business performance, monitor issues and complaints, develop response mechanisms, including through negotiations with trading partners, etc.

The Nepalese business sector remains ill-informed about the international trading system–multilateral (WTO) and regional (RTAs)–and a great deal of education and dissemination seems needed at that level. The planned Nepal Business Forum, including its Technical Committee on Trade, is likely to be a useful place to develop some of the capacity needed and a more regular and more formal channel for exchange of trade issues between business and government. But additional capacity is likely to be required also within the government, in the legal community, among academics and consultants that have a key role to play in shaping and formulating policies and solutions to trade issues.

Chapter 4
Access to the Chinese Market

4.1 Introduction

This chapter follows the structure of the previous chapter and looks at access to the Chinese market. The chapter focuses on a discussion of tariff barriers, a detailed review of NTBs and, then, on impediments that are not traditionally considered as NTBs but are incidental or essential to trade (i.e. transportation and/or distribution issues, infrastructural facilities, political stability, rule of law, etc.). Much of this analysis is based on information collected through extensive discussions with relevant Nepalese businesses, trade associations, traders, GoN officials, and other stakeholders in Nepal as well as in China. To the extent possible, this part of the analysis also seeks to identify issues specific to the 19 export potential sectors reviewed in Chapter 2. These two sections are followed by a short one that describes the views of Chinese businesses and officials with respect to Nepalese export opportunities in their market.

On the basis of these sections, the chapter identifies key challenges and opportunities before Nepalese exporters in entering key destination markets in China and provides a number of specific recommendations and conclusions.

4.2 Background

Nepal's trade with China is not as important as with India. However, it is a trade that offers huge potential and looks posed for great expansion in the years to come, even though the current picture is not very promising. Nepalese goods exports to China decreased from Rs. 2.348 billion in 2003/04 to Rs. 736.405 million in 2007/08 (as a share of total goods export, exports to China decreased from 4.4per cent in 2003/04 to 1.2 per cent in 2007/08).

The deficit in trade in goods with China increased from Rs. 6.95 billion in 2003/04 to Rs. 21.52 billion in 2007/08. As a share of Nepal's total trade in goods deficit, the deficit with China increased from 8.5 per cent of total to 11.91 per cent in 2007/08. This reflected a surge in goods imports from China.

The main Nepalese goods exports to China are cereals, vegetable fats, oil, metal-based items, jewelry, handicrafts, wooden products, hides and skin, carpets, wool, apparel, and articles of textiles. In general, Nepalese exports to China are of low value-added as compared to the products from other SAARC countries like India, Pakistan, and Bangladesh. Indeed, the trend in Nepal's recent exports is in contrast with that of other SAARC countries. In contrast, between 2004 and 2008, Chinese imports from SAARC countries grew from US$8.36 billion to US$21.53 billion.

In general, there is lack of consistency and growth in nearly all exported Nepalese products, with the exception of cereals, metal-based products, wooden items, edibles, and carpets. In addition, the range of Nepalese products that can be offered to the Chinese market is quite limited, whereas China has a wide range of products to offer (from consumer items to industrial products of high value-added nature).

To mitigate these observations, it must be noted that there is sizeable informal and unrecorded border trade between China and Nepal. The Trade and Payment Agreement of 1981 allows traditional barter trade by residents of the two countries within 30 km of the border. There is no study to quantify the actual volume of this informal border trade. The products involved in border trade are handicrafts, food items, agricultural produce, etc. In addition, it seems that there is some amount of informal exports from Nepal to China of products of third country origin.

Two trade treaties govern trade between Nepal and China, including the Tibet Autonomous Region (TAR):

- The 1981 Trade and Payment Agreement between Nepal and China PRC; and
- The 2002 Agreement on Trade and Other Related Matters between Nepal and TAR.

The Trade and Payment Agreement lasts three years with automatic renewal at the end of the period. The 2002 Agreement between Nepal and China PRC on trade-related matters between Nepal and TAR is valid for ten years and is subject to renewal. The applicable trade policy states that all products, except for the goods of archaeological and religious importance, explosive materials, goods relating to environment and wildlife conservation, and other goods prohibited by various international treaties and conventions, shall be opened for export.

There are differences in border crossings in the Agreements of 1981 and 2002. The Agreement of 1981 lists Kodari, Yari, and Rasuwagadi on the Nepalese side and Nyalan, Kyerong, and Purang on the Chinese side. Two crossings were added in the 2002 Agreement. They are Olangchung Gola on the Nepalese side and Rino on the Chinese side. Rasuwagadi (Timure) traditionally is a much used entry point for Nepalese and Tibetan traders. The Chinese government is constructing a 17 km road between Syafrubesi and Rasuwagadi road. Also, the Chinese government is developing Kerung town as a trade centre 25 km from the border.

The 2002 Agreement deals mainly with the movement of residents of the border districts with tourism and trading practices. Residents of border districts are allowed to carry on traditional trade on barter under provisions of Article 8 of the Trade and Payment Agreement of 1981. Following the introduction of a new trade treaty between Nepal and India, there is a perceived need to bring changes to the Nepal-China treaties, too. For instance, there is a need for dedicated provisions regarding trade in services (in core sectors such as tourism, health, IT, or education).

In 2005, the GoN and the Government of the People's Republic of China (GPRC) signed a Memorandum of Understanding (MoU) on the formation and operation of an Inter-Governmental Trade Cooperation Committee (IGTCC). The IGTCC includes senior government officials and border authorities from the two countries. It meets at least once a year alternately in Kathmandu and Lhasa. The IGTCC has the authority and responsibility for facilitating trade, investment, and matters of mutual interest, for facilitating transportation, resolving problems that may arise, and making policy recommendations to the respective governments for strengthening bilateral trade and economic cooperation. The MoU is set to remain in force for a period of five years, with automatic extension of another five years if no party decides to terminate it. The MoU also provides a forum for addressing issues that may arise from the implementation of the 1981 Trade and Payment Agreement and the 2002 Agreement on trade-related matters between Nepal and Tibet.

4.3 Tariff Barriers

Nepalese exports to China are subject to tariff and non-tariff regimes. As of 2007, tariff rates are as follows:

- The average applied MFN tariff rate for all goods is 9.7 per cent. The average applied MFN tariff rate for agricultural products is 15.3 per cent and 8.8 per cent for non-agricultural products.
- The preferential tariff rate applied under the bilateral free trade agreement ranged from 3.5 per cent to 9.1 per cent.
- As of 2007, China unilaterally applied preferential tariff rates to 37 LDCs that ranged from 9 per cent to 9.5 per cent, depending on the origin of goods. China's preferential rules of origin for LDCs state that

products must be wholly produced in the country of origin or the value of non-originating parts used in the manufacture of goods may be up to a maximum to 60 per cent of the FOB value of the product.

- The current average Chinese tariff rate on most of the exportable products of Nepal ranges from 10 per cent to 35 per cent. However, Nepalese exporters often complain that the actual import tariff is not known in advance and Chinese authorities do not share the tariff information. So, it is difficult to estimate the tariff and cost of goods to be expected in China.

Import prohibitions are often imposed by China on grounds of public interest, environmental protection or in accordance with international commitments. Prohibited products may include some products of animal origin, opium, mineral products, chemicals, rawhide, waste skin and leathers, used clothes, ash of precious metals, bare metals, used articles falling under HS section 16 and 17 (machinery and transport equipment). Under China's foreign trade law, temporary import restrictions or prohibitions may be imposed. For example, China restricted some handicraft products from entering TAR between June and August 2009. The actual reason was never disclosed by the authorities concerned and also never known to the exporters. These practices often hurt trade and undermine stable, predictable, and sustainable trade patterns.

The GoN has proposed that China offer a preferential tariff rate on 497 products. So far, China has offered preferential tariff reduction on 278 products, for which a zero per cent tariff rate would apply. However, there is no formal agreement as of yet. However, this preferential treatment of a zero per cent rate of duty alone would not be sufficient for Nepalese products to gain and maintain market access in China. Besides tariff advantages, Nepal needs to build up infrastructure for addressing China's NTBs, applied standards, technical regulations, certification requirements, and other trade impediments. For instance, Nepal cannot truly enjoy the benefits from current preferential treatment because of rules of origin. Nepal's limited production capacity in many product areas is a limiting factor and so are the infrastructural weaknesses and the difficulty in meeting the quality, safety, and technical requirements imposed by China.

As of 2006, China granted duty-free market access to the following LDCs in the Asia Pacific region and for the following product categories: Afghanistan (286), Bangladesh (87), Cambodia (418), Laos (330), and Myanmar (220). The tariff treatment accorded by China to exports of LDCs is as follows:

Table 4.1

Chinese Imports from LDCs in US$ Million in 2005

Sector	Total	Dutiable	Duty Free Percentage
Total	15,267.1	1,138.8	92.5
Agricultural	672.7	672.5	0.0
Non-agricultural	903.1	450.3	50.0
Raw Materials	15.9	15.9	0.0
Minerals/Petroleum	13,675.3	0	100.0

Fifty per cent of non-agricultural products imported from LDCs benefit from duty-free access, whereas raw materials, minerals, and petroleum products enjoy 100 per cent duty–free access. The dutiable imports from LDCs account for only 7.5 per cent of total goods imports from LDCs (i.e. US$1,138.8 million).

With respect to Nepal, the relevant tariff rates applied by China to Nepalese products in 2008 were as follows: the lowest applied rate was 3 per cent, on cardamom, and the highest, 35 per cent, on imitation jewellery. The tariff rates on uncooked pasta and tea, ginger, and honey were 15 per cent. The rates on medicinal herbs and essential oils ranged from 5.8 to 20 per cent. Gems and jewellery enjoyed 17 to 20 per cent tariff rates. Woolen products enjoyed rates ranging from 14 to 20.7 per cent, while fashion items were charged fairly high tariffs. Pashmina products, which are one of the prominent Nepalese exports to China, enjoyed 14 to 16 per cent tariff rates. This is clearly not a landscape of meaningful duty-free and preferential market access for Nepal other than in relation to the basic commodities and raw materials for which China has an insatiable appetite.

The sectors below have been identified by the EPA team of the ITC as the final list of products and services sectors for which it appears Nepal enjoys a great export potential. To the extent relevant, reference will be made to them when dealing with the perceived NTBs and other trade impediments that appear to limit Nepal's export performance and trade development. Occasionally, reference will be made also to other products or sectors that have emerged, during the fact-finding mission in Nepal, as holding a comparable degree of export potential (if anything, in the eyes of the interviewed Nepalese counterparts).

4.4 NTBs Constraining Nepal-China Trade

The approach followed here is similar to that used in the previous chapter. The following categories of NTBs were analysed through discussions with business executives, business associations, and government officials in both countries:

- Import policies such as import charges other than tariffs, quantitative restrictions, import licensing, and customs barriers;
- Standards-related measures, including standards, technical regulations, and conformity assessment procedures;
- Government procurement restrictions such as 'buy national' policies and closed bidding;
- Export subsidies such as export financing on preferential terms and agricultural export subsidies that displace exports in third country markets;
- Weak intellectual property protection such as inadequate patent, copyright and trademark regimes;
- Barriers to trade in services such as limits on the range of financial services offered by foreign financial institutions, regulation of international data flows, restrictions on the use of data processing, quotas on imports of foreign films, and barriers to the provision of services by professionals;
- Investment barriers such as limitations on foreign equity participation and on access to foreign government-funded research and development consortia; local content, technology transfer, and export performance requirements; and restrictions on the repatriation of earnings, capital, fees, and royalties;
- Government-tolerated anti-competitive conduct of state-owned or private firms that restricts the sale or purchase of goods or services in the foreign country's markets such as cartels, abuse of dominant positions, monopolies of state intervention agencies;
- Trade restrictions affecting electronic commerce, including tariff and non-tariff measures, burdensome and discriminatory regulations and standards, and discriminatory taxation;

The findings discussed here are divided into 'Generic Issues' and 'Sector-specific Issues' focusing on issues affecting some of the Export Potential Sectors identified in Chapter 2.

Generic Issues

Import Policies

- There is strong demand in Tibet for Nepalese wheat flour and rice because of their higher quality than the ones that can be obtained on the Chinese market. However, China isrestricting trade increasingly by levying higher taxes and tightening NTBs such as SPS rules or certification requirements;
- Handicraft (metal and wood) exports to Tibet have been affected recently by a ban on metal-based religious handicrafts, with no clear explanation from China;
- The lack of transparency on all aspects of China's trading regime is the single most serious issue affecting Nepalese exports;
- Arbitrary customs valuation and incorrect application of tariffs at the border are recurrent issues;
- New high customs and SPS requirements and high taxes being imposed by China have undermined Nepalese exports of vegetable ghee, rice, and wheat flour.

All these issues are clearly matters for which Nepal can demand effective resolution from the competent Chinese authorities. Import duties must be applied in a non-discriminatory fashion by Chinese customs at all border crossings. The applicable import and customs rules and procedures must be published, notified, interpreted, and applied in a consistent and transparent manner. Customs valuation and application of tariffs at the border must occur on the basis of correct and non-discretionary rules. These are clear obligations and commitments by China within the framework of the WTO and the bilateral treaties.

To address issues such as these effectively, as noted in the previous chapter, GoN needs to put in place a formal system to record, monitor, and respond to the issues and complaints raised by Nepalese exporters and traders.

Standards-related Measures

- There is a lack of transparency on the part of Chinese authorities with respect to SPS regulations, procedures, and technical requirements. This is particularly the case with respect to agricultural commodities and agro-food products, but it also applies to handicrafts and manufactured products.

Again, applicable SPS regulations, procedures, and technical requirements must be published, notified, interpreted, and applied in a consistent and transparent manner. Transparency is crucial and is an obligation under the WTO system and the bilateral treaties.

Barriers to Trade in Services

The following issues emerged from discussions with relevant Nepalese stakeholders and informed parties:

- Tour operators are concerned about China's latest travel policies on Tibet, including unexpected travel bans for foreign tourists, internal visa requirements, transport link cancellations, that are affecting Nepal's ability to link its destination with Tibet;

- Similarly, a bus service between Lhasa and Kathmandu, recently initiated for Tibetan tourists to Nepal, had to be stopped abruptly because of China's restrictive visa policies and lack of transparency. Such abrupt changes in Chinese policy undermine indirectly the reliability of the Nepalese tourism industry to the outside world, including Tibetan tourists.

While such issues do not appear to be violations of China's commitments and obligations under the WTO or bilateral treaties, unpredictable and unannounced measures by China do not contribute to creating a stable environment within which Nepal can develop sustainable exports.

Government Procurement Restrictions, Export Subsidies, Intellectual Property Protection, Investment Barriers, Anti-competitive Conducts of State-owned or Private Firms, Restrictions Affecting Electronic Commerce

No such impediments or related restrictive policies were reported during the discussions held in Nepal with relevant stakeholders and informed parties.

Sector-specific Issues

With respect to trade in the agro-food sectors identified in Chapter 2, NTBs, especially SPS standards are clearly a major impediment to Nepalese exports. Clearly, a lot of capacity-building is needed within Nepal to help exporters comply with the SPS standards not only in China but anywhere else where exports expansion is being sought. However,there is, also an issue arising from a lack of transparency on the part of China with respect to requirements, the legal bases for those, and the procedures to be followed in accessing China's market.

In relation to selected handicrafts, the key trade obstacle appears to be the application of erratic and discriminatory duties, together with the arbitrary application of customs valuation rules and the occasional introduction of trade restrictions and import bans justified on the basis of unknown or (presumably) religious grounds. The combination of these instruments appears to often effectively place Nepalese goods at a competitive disadvantage vis-à-vis similar Chinese products.

Traders also find it very difficult to comply with a wealth of import regulation permits and licences (as applicable) that often discourage or actually prevent trade even in those few instances where Nepalese goods are competitive and sought after by Chinese (mainly Tibetan) importers and consumers.

With respect to the potential service exports identified in Chapter 2, most impediments to trade would seem to be Nepalese domestic in nature, though, as indicated above, there are Chinese issues affecting Nepalese exports to Chinese tourists.

4.5 Other Impediments to Nepal-China Trade

Nepalese Domestic Issues

- No Nepalese agricultural commodity is currently exported through formal channels to China. There is probably a fair amount of informal trade. Cost-competitiveness of Nepalese products is a factor, including infrastructural deficiencies, cost of transport, customs compliance, and standards compliance. Nepal's inability to guarantee reliable supply quantities is another critical shortcoming;
- Infrastructural improvements are crucial for Nepal to access mainland China's markets with its products, particularly agricultural products that are dependent on rapid transportation and those that are subject to standards and technical regulations;
- At present, there is only one operational border crossing with appropriate customs facilities, and trade is very congested and limited;
- In the area of manufactured products, Nepal needs to compete on the basis of quality, branding, and design. Pashmina is a good example of a sector that must create a recognizable brand, focus on quality, and respond to consumer preferences. Pure focus on price will not suffice to retain or improve market share in China;
- In the agro-food sector, one comparative advantage of Nepal over Chinese (Tibetan) is the high value sector of highland/high hills products, especially organic products. There appears to be a market for these products in China (as in India). However, work must be done to improve production, transport and storage facilities, and the regulatory framework to comply with Chinese standards;
- An effort should be made to attract Chinese investments. Special Economic Zones (SEZs) are required to address this objective. Chinese investments in SEZs would probably focus on electronics and software design ventures. Political stability and law and order, together with investment-friendly labour laws, are some of the critical factors in order to attract such investments.

Many of those impediments internal to Nepal are not unlike those already identified in the case of Nepal-India trade and are addressed in greater detail in other chapters of this report.

Chinese Domestic Issues

Nepalese exporters point to several issues on the Chinese side that appear to be having a negative effect on their export performance and trade opportunities:

- Customs facilities and border infrastructure need to be greatly updated and upgraded to take full advantage of improved transport links between Lhasa and Beijing;
- There is huge 'informal' trade in handicrafts between Nepal and China. It is a market with huge potential, but it must be formalized to expand to a much larger scale. Informal trade currently occurs particularly because of restrictive Chinese policies affecting 'formal' trade in these products. This leaves exports mostly in the hands of a plethora of mainly Chinese traders that purchase handicrafts in Nepal and then resale in China, all the way to the specialty stores of Beijing and mainland China;
- While negotiations are underway for duty-free access to China, the key problems are a serious lack of transparency of the applicable Chinese rules and procedures.

Some of the issues listed above reflect specific conducts by Chinese authorities or by authorities at China's sub-federal level that might be illegal under WTO obligations and commitments. For instance, the application of discretionary, non-transparent and discriminatory rules or additional taxes on Nepalese goods may well violate China's WTO commitments. Nepal needs to address these issues in consultation with China, either within the framework of the bilateral treaties or within the WTO framework, included if needed by means of WTO dispute settlement.

4.6 Selected Views from China on Nepal-China Trade

The following section reflects some views on Nepal-China trade from a Chinese perspective based on discussions with a number of Chinese government officials and diplomats.

- With respect to Nepal's request made for duty-free access for 457 products, China appears to believe that, even with zero per cent duty, many Nepalese products will still not be competitive in China. Nepalese products still have a way to go to be price- and quality-competitive with Chinese products;
- Nepal has no particular competitive advantage in developing manufacturing industries, where both China and India are much more efficient neighbours;
- Trade facilitation infrastructure remains a big impediment to trade. There is only one operational official border crossing between China and Nepal. China currently is building an ICD for trucks and other infrastructural projects are being launched. A second ICD is planned; so, trade facilitation should improve. In addition, China is assisting Nepal with road construction and maintenance, but this is planned for a later stage;
- As in the case of trade with India, Nepal has difficulty in meeting the quantities demanded by the Chinese market;
- China also points to the low quality of Nepalese goods as an additional impediment to greater access to the Chinese market. Nepalese producers also have difficulty in meeting standards. A way forward could be development of joint standards (mutual recognition) and joint customs procedures and guidelines in relation to a number of traded products. China is willing to assist Nepal in this respect;
- Discussions are being held for cooperation in SEZs. Chinese companies could come to SEZs in Nepal and produce for re-export to China. At the moment, however, Nepal's political instability is a deterrent to Chinese investment;
- Trade in services between the two countries is at an early stage of development, particularly for health services, tourism services (where there is a great potential), and IT-related services and industries. Also, hydropower is a sector with medium- to long-term huge potential for Nepal. The IT and computer software sector in China could benefit from certain Nepali skills such as Nepal's English language proficiency and/or software skills, which are relatively weak in China;
- China believes that Nepal is a key transit location. Instead of focusing on local processing industries, Nepal should focus on services industries and transit services for the growing China-India trade.

These observations do reflect Chinese interest in seeing trade with Nepal expand. They also reflect the view that political stability and improved labour relations are some of the prerequisite to new investments required to turn opportunities into reality.

4.7 Recommendations: Challenges and Opportunities Shaping Nepal-China Trade

The fieldwork associated with the preparation of this chapter confirms the validity of many of the export potentials reviewed in Chapter 2 as far as Nepalese exports to China are concerned. The fieldwork also points to challenges, many of which are reviewed in greater depth in other chapters of the report.

- Medicinal herbs, wheat flour, and handicrafts are the key products currently being exported to China, mainly Tibet. A growing Chinese middle class seems interested in Nepalese wooden handicrafts on religious ground or for interior decoration. Jewelry also appears to have good potential. Additional focus could be placed on export of tea, high value fruits such as apple and orange, tomato, floriculture, red lentil, Basmati rice, ginger, and medicinal herbs and essential oils. However, Nepal needs to increase volume and quality, including improving SPS compliance and good agricultural practices for agro-food and improving standards compliance, design, branding and merchandising, and packaging for processed goods;
- Floriculture, which is a high value export, has high potential. Currently, it is exported mainly to Japan and Gulf countries via air freight, still in relatively small quantities. But there is clearly a lot of potential for trade with China (as well as India and other countries);
- Another potential high value export is horticulture, including strawberries, apple, and orange. The biggest hurdle for those is SPS requirements;
- High mountain mineral water and instant noodles appear to have a significant market potential in China;
- TAR and Hong Kong are major destinations for Nepalese exports. The main exports and greatest potential are in handicrafts, handmade jewelry, and selected agro-food products. Nepal could invest to develop products that appeal to consumers in these target markets;
- With respect to services, the tourism and health services sectors clearly stand out as the two key sectors for development. For example, Tibetans could be attracted to state-of-the-art medical and health facilities in good climate conditions. However, these services depend on the existence of the right domestic infrastructure, institutions, and political and economic stability;
- Nepal was designated as an approved destination for Chinese tourists in 1997-99. Three Chinese airlines serve Nepal. However, the technical shortcomings of Nepal's infrastructure, including a single international airport with a single runway, large and high altitude holding patterns that result in higher fuel consumption, high airline fuel charges, and the inability to fly-in with large aircraft with high efficiency and returns, continue to impair the development of the tourism sector. It is currently cheaper for Chinese tourists to fly to Europe than Nepal;
- With respect to the promising sector of energy-related services, while hydropower has great potentials to meet both domestic and export needs, it is a long-term project;
- There is also significant interest from China in mineral resources. Chinese exploration is underway in Nepal, with particular interest in copper, gold, and zinc.

The findings of this review of Nepal-China trade challenges and opportunities point to many of the same issues as those raised in the previous chapters. The issues of supply capacity, standards compliance, trade facilitation, investment environment are addressed in other chapters.

However, this chapter also points to the need for GoN to develop a comprehensive trade negotiations agenda and formal mechanisms to monitor complaints from the business community and develop responses through more consistent and focused negotiations with trading partners, especially with a potentially large partner such as China. The chapter also points to the need to push forward on incomplete tariff negotiations.

Chapter 5
Investment Environment

NTIS 2010

5.1 Introduction

Investment—foreign or domestic—and trade are closely correlated. In particular, investment can bring access to foreign markets and global value chains, improve productivity through new technologies and management skills, and provide the much-needed capital to implement investment projects. This explains the focus on investment climate and investment promotion in this chapter. Specifically, this chapter identifies and recommends concrete actions to enhance Nepal's investment and trade position. It does so by focusing on key macro-level investment climate constraints as well as investment promotion issues at institutional and policy level. The chapter draws, in part, on the wealth of existing analyses, documents, and action plans prepared in recent year and focusing on these topics.

The most obvious relationship between trade and investment promotion strategies is that new investment projects may give rise to increased exports from the host location. This link is particularly strong when targeting foreign investments in export-oriented industries. Furthermore, foreign investment may give rise to local sourcing and increased inter-firm trade at local level, thus inserting Nepalese companies in global value chains. Even though trade can be a substitute for investment and vice versa, earlier studies indicate that the sequence of causality in Nepal seems to run from investment to trade.[1] This is an important observation as it underlines the importance of creating an attractive investment climate and effective investment promotion regime in Nepal as a means for supporting the trade agenda.

Nepal is among the more liberalized economies in the South Asia region. The overall legal and policy framework in relation to trade and investment is not restrictive. In fact, the 1992 Industrial Policy, including the Foreign Investment and Technology Transfer Act 1992 and the 'single window policy', gave priority to investment promotion as a means to accelerate industrialization of Nepal. To comply with its WTO commitments, the Government further liberalized the investment regime and opened up service sectors to foreign investors in December 2005. However, it has been slow in implementing those policies, thus delaying growth opportunities in this area. At the moment, these policies are being updated to further enhance the policy and institutional framework for investors in Nepal.

5.2 Recent Investment Performance

In spite of the visible and important steps taken in the last two decades to improve the trade and investment policy framework, Nepal's investment performance has been poor. Despite the introduction of more liberal investment and trade policies in the country, the stock of foreign direct investment (FDI) stood at a meagre 1.0 per cent of GDP in 2008 and 0.2 per cent of gross fixed capital formation in 2007, and it has been unable to serve as a catalyst for economic growth.[2]

FDI levels in Nepal are among the lowest in the region and among the lowest of all Landlocked Least Developed Countries (LLDCs). With an average of US$1.00 FDI per capita for the period 2000-08, Nepal's FDI flows are well below the average of US$28 for all LLDCs in the same period. Furthermore, Nepal's FDI position has deteriorated in both absolute and relative terms compared to the previous decade (1990-99) when the average per capita FDI inflow in Nepal stood at approximately US$3.0 per capita (compared to an average of US$8.00 per capita for all LLDCs). Whereas LLDCs as a group more than tripled their average per capita FDI inflow between 2000 and 2008, average FDI inflow in Nepal went down from of US$3.00 to US$1.00 per capita in the same period! In 2008, FDI inflow in Nepal stood at US$1.0 million and a net disinvestment in FDI was recorded in the years 2000, 2002, 2004, and 2006.

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[1] *Trade and Investment Linkages and Coordination in Nepal: Impact on Productivity and Exports and Business Perception;* Asia-Pacific Research and Training Network on Trade, Working Paper Series, No. 52, February 2008.

[2] *World Investment Report 2009: Transnational Corporations, Agricultural Production and Development,* UNCTAD 2009.

inflow between 2000 and 2008, average FDI inflow in Nepal went down from of US$3.00 to US$1.00 per capita in the same period! In 2008, FDI inflow in Nepal stood at US$1.0 million and a net disinvestment in FDI was recorded in the years 2000, 2002, 2004, and 2006.

Table 5.1

Change in FDI Stock in Nepal, 2003-08

	2003	2004	2005	2006	2007	2008	SUM
FDI approved - number of projects	78	63	116	188	212	150	807
FDI approved - value (NRs million)	2,765	1,636	2,606	3,226	9,811	5,356	25,400
FDI approved - approx. value (US$ million)	40	23	37	46	140	77	363
FDI approved - number of jobs	2144	5559	7358	7389	10677	8305	41,432
Actual FDI inflows (US$ million)	15	0	2	-7	6	1	17
FDI stock (US$ million)	125	125	127	120	126	127	127

Source: Industrial Statistics, Department of Industries 2009; UNCTAD World Investment Report.

On a more positive note, changes in the value of approved projects (compared to actual investment) suggest a significant interest of foreign investors for Nepal that could materialize if investors' concerns could be overcome. Based on the data presented in table 5.1, a total of US$363 million in FDI and possibly over 41,000 direct jobs have been approved, but may have been lost as a result of investment climate obstacles. Second, as proven by its landlocked counterparts, Nepal still has much scope to move closer towards the average of US$28 per capita FDI flow average for LLDCs before its landlocked status will become a genuine constraint on furthering FDI growth.

5.3 Key Investment Climate Constraints in Nepal

Creating an attractive investment climate is a prerequisite for stimulating trade and investment in Nepal. The constraints to economic growth in general and increased investments in particular are well documented in Critical Development Constraints in Nepal and other recent publications; so are the specific actions required to implement necessary reforms.[3] This section draws on those reports to summarize the key constraints and highlight the main reforms required to stimulate investment across all sectors of the economy.

Macro-level Constraints to Investments in Nepal

Infrastructure

Limited availability and low quality of existing infrastructure are constraining Nepal's investment climate. Declining rates of infrastructure spending by the Government and low levels of private investments in infrastructure are key factors. Infrastructure development is a key business enabler and even considered a prerequisite for economic development. Also, a lack of affordable and reliable electricity supply and insufficient

[3] *Country Diagnostic Studies, Critical Development Constraints in Nepal, ADB, DFID, ILO, 2009. See also Doing Business Nepal 2010, World Bank Group, 2009,and Nepal Mini-Diagnostic of the Investment Climate,* FIAS, World Bank Group, 2007.

transport network are considered serious infrastructure constraints by investors. Statistical evidence suggests that removing the electricity supply constraint would have the biggest positive impact on per capita income. This particular constraint can be overcome as opportunities for hydropower are enormous. Even though some capacity increases are planned, further action is required to accelerate construction and installation of additional hydropower capacity to make Nepal's power tariffs competitive in the region.

Inadequate, Unreliable, and Expensive Electricity Supply:

- Currently, the highest tariff rate in the region, due to inefficiencies in the power sector and vast but largely untapped hydropower potential estimated at 80,000 mega watts (MW);
- Shortfalls in electricity supply and frequent power outages (reportedly up to 20 hours a day during dry months, which is effectively half of a year) due to seasonal variation in power generation. Low water supply in winter and lack of water storage capacity reduce Nepal's power generation capacity in certain seasons.

As a consequence, industries, at times, are forced to downsize production and/or face substantial increase in energy-related and overall production costs.

Inadequate, Unreliable, and Expensive Transport Networks:

- Underdeveloped road network, characterized by a low density and poor quality of existing roads (only 38 per cent of roads blacktopped). The World Bank estimates that upgrading and expanding the existing road network requires an investment of at least 2.5 per cent of GDP to sustain a GDP growth rate of 6.0 per cent;
- Lack of alternative routes and frequent occurrence of strikes, landslides, and other possible disruptions make transport of goods and people unreliable and unpredictable, leading to loss in trade and sometimes shortfalls in essential commodities and inputs;
- In 2007/08, fuel shortages also greatly impacted the flow of goods and people in Nepal. Although less of an issue today, it has the potential to again become a major constraint to investment and trade, should the oil market and supply conditions become volatile again in the future.

Insufficient Irrigation infrastructure:

Various existing studies point to the need for expanding the irrigation infrastructure in order to maintain and grow agriculture production and output. Given the unpredictability of annual rainfall and the sizeable contribution of this sector to GDP growth (approximately 2.0 per cent contribution to GDP growth in 2007/08) this is a major constraint to increased trade and investment growth.

- Investments in irrigation infrastructure have been slow. Total cost to irrigate the remaining irrigable land is estimated at US$3.3 billion, or roughly one-third of Nepal's GDP in 2007/08;
- The existing irrigation infrastructure is poorly maintained and inefficient. Rehabilitation of farmer-managed irrigation schemes urgently requires another US$360 million in investment.

Industrial Parks and SEZ Infrastructure

The GoN is implementing an ambitious SEZ programme to boost trade and investments and has taken concrete steps towards that end. A draft SEZ Bill is before Parliament and is expected to be on the top of the agenda of Parliament for the next legislative session. Construction work has started already at Bhairahawa, where the first phase of the zone is almost complete. Preliminary groundwork has started in Birgunj and various other sites, all in expectation of the law being adopted. The impact of these SEZs should ultimately be measured by the amount of new investments brought to the country, the increase in exports from the country, new trade linkages between Nepalese and foreign firms, and the number of new jobs created as a result, both direct and indirect.

However, these desired impacts will largely depend on the political, legal, and regulatory frameworks that influence potential investors' decisions to locate in the zones. In the case of Nepal, the combination of political instability, a rigid labour regime, and a lack of industrial security is undermining the short-term potential of attracting significant flows of foreign investment to the planned SEZs. Development of zones cannot be done in isolation of these major issues.

Some countries have successfully used SEZs as a pilot and testing ground for broader economic reforms in the country. China, Jordan, and others have shown that SEZs can offer a short- to medium-term solution in addressing economy-wide infrastructure or regulatory constraints and can be catalytic in attracting investors, bringing new technologies, and linking the country to global markets.

The draft SEZ Bill in Nepal does not intend explicitly to pilot any reforms in relation to the most critical labour-related investment climate barriers. However, discussions are underway between the GoN and labour unions about increased labour flexibility in return for increased social protection. Pending the outcome of these discussions, the short-term attractiveness of the zones to foreign investors remains in doubt.

The current draft SEZ Bill has two main critical weaknesses in relation to export requirements for the firms operating in the zone and the sectors allowed to operate in the zone. Addressing these two shortcomings would render the law more attractive for potential developers, users of SEZs, and the GoN. Specifically, the draft bill should be modified as follows:

1. Replace the current rigid 75 per cent export requirement by 0 per cent entry export requirement and pro rata incentives (Article 11 (1) and (2), 12 (2) c) and Article 34). Nepal's SEZ programme is likely to best succeed if the SEZ infrastructure can be used by exporters and non-exporters alike. Incentives and tax holidays could be provided to only those companies that export, or solely on the basis of the quantity of exports. The current proposed 'Export Processing Zone model' is considered outdated, and most countries, including China, no longer use it. International SEZ developers also feel that the current 75 per cent export requirement is too stringent. It will result in situations where companies come to the zone and are able to export now, but may not be able to export in the future. We have recently seen the effects of the global economic crisis. Private developers felt that there should be no export requirement at all. 'Let the individual companies decide how much they can or want to export.' The law should state, however, that all duties, tariffs, and taxes must be paid on the value of imported inputs sold within the domestic territory of Nepal.

   Domestic companies (exporters and non-exporters) are also in urgent need of serviced industrial land throughout Nepal as most of the industrial districts have no space in them. Since infrastructure is a major investment climate constraint to all companies in Nepal, it would be good to offer such advanced

infrastructure to Nepalese businesses as well to facilitate their growth. Furthermore, proximity of foreign and domestic companies in the same zone has often proven beneficial in terms of stimulating local supply linkages. Technology transfer, in particular from foreign to domestic firms, will be key to acquiring new technologies and improving productivity of domestic firms. Sub-contracting and other forms of collaboration will help insert Nepalese firms in global value chains and international markets;

2. Replace the current positive list by a negative list (Sec. 5 (1) – (3)). The 'positive list' approach does not provide the transparency needed for a well-run SEZ programme. There are too many possible industries out there to be included in the list. It should not be the role of the SEZ Authority to determine which industries will fail and which ones will succeed in the zone. The draft law should be modified to include a 'negative list', rather than a 'positive list' that states which industries cannot locate in SEZs (such as manufacturing of weapons, ammunition, coins, etc.—things that are clearly not in public interest or would be unsafe). Negative lists are featured in almost all SEZ laws around the world.

These issues cannot be rectified simply by addressing them in separate regulations. The SEZ Bill needs to be amended.

Governance

The ADB-ILO-DFID report 'Critical Development Constraints in Nepal' concludes that the level of governance has deteriorated and is a critical constraint to investment and growth in the country.

The continued *lack of political stability* is a critical constraint to investment and trade. Apart from its negative impact on overall GDP growth and other economic indicators, political instability continues to be a major factor in deterring the much-needed foreign investment in virtually all sectors, including hydropower. As indicated earlier, based on actual FDI inflows in the past few years, the amount of approved but unrealized foreign investment proposals at DoI is estimated at around 95 per cent, which represents a huge and mostly foregone opportunity in capital and job creation.

Poor industrial relations and rigid labour regulations are among the most critical constraint to increasing investment and trade in Nepal. Together with overall political stability, this issue tops the rank of concern to both domestic and foreign investors alike. Without addressing this issue adequately to the benefit of both employers and employees, there is no chance of significant growth in production and trade in Nepal. Strikes, lockouts, and lack of motivation are simply strangling the Nepalese economy and significantly reducing the chances of attracting any serious foreign investor to Nepal.

Control of *corruption* seems to have weakened and is a constraint to investment and growth. The 2008 enterprise survey found that 44 per cent of the responding firms consider corruption a very serious or major constraint.[4] Interviews with companies in November 2009 confirmed the huge constraint this imposes on firms in Nepal, even to such a point that it jeopardizes commercial viability of investment projects and discourages further expansion of projects.

The *law and order situation* and in particular the lack of 'industrial security' was frequently cited as a major constraint and issue on the minds of investors. Violent crime, extortion, and kidnapping all contribute to a climate that discourages further investments or potential new foreign investors.

[4] ILO, ADB, and FNCCI 2008 Enterprise Survey.

Lack of up-to-date policies, institutional weaknesses, and many ineffective sector committees and boards have all contributed to Nepal's poor performance in investment and trade and should be addressed by the GoN going forward.

'Doing Business' in Nepal

The World Bank's Doing Business 2010 indicators for Nepal provide a quantitative measure to evaluate the regulations in Nepal for starting a business, dealing with construction permits, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business, as they apply to domestic enterprises and ranked against performance of 183 economies around the world. A fundamental premise of the *Doing Business* related research is that investment and trade require good rules and an attractive macro-level legal and regulatory framework. These include rules that establish and clarify property rights and reduce the costs of resolving disputes, rules that increase the predictability of economic interactions, and rules that provide contractual partners with core protections against abuse.

Table 5.2 shows Nepal's performance in the *Doing Business* surveys of 2009 and 2010. The objective is to highlight Nepal's position relative to other countries and, where necessary, encourage the government to design regulations that are efficient, accessible to all companies, and simple in their implementation.

Table 5.2

Ease of Doing Business in Nepal, 2009 and 2010

Ease of...	Doing Business 2010 rank	Doing Business 2009 rank	Change in rank
Doing Business	123	123	0
Starting a Business	87	75	-12
Dealing with Construction Permits	131	130	-1
Employing Workers	148	147	-1
Registering Property	26	29	+3
Getting Credit	113	109	-4
Protecting Investors	73	70	-3
Paying Taxes	124	111	-13
Trading Across Borders	161	159	-2
Enforcing Contracts	122	122	0
Closing a Business	105	105	0

Source: World Bank Doing Business Nepal 2010.

The following conclusions can be drawn from the data:

1. Overall Doing Business rank, which can be considered a proxy indicator of conditions for investors in Nepal, has remained practically unchanged (Nepal ranked 123rd worldwide in 2010 and 2009). Nepal needs to undertake reforms more actively or face further deterioration of its position;
2. Nepal ranks particularly weak in a number of areas directly relevant to investment and trade: trading across borders (rank 161); employing workers (rank 148); securing construction permits (rank 131); paying taxes (rank 124); and enforcing contracts (rank 122). In addition, performance in some of these indicators is slipping.

Although all of the indicators are important for creating a climate conducive to investment, the 'Employing Workers' and 'Trading across Borders' indicators seem those needing most urgent attention when considering Nepal's poor global ranking in these two areas and their role in promoting trade and investment.

Employing Workers

The difficulties that employers face in hiring and firing workers are shown in Table 5.3. The table highlights the results for Nepal in 2010 relative to its neighbours and OECD average. Each index assigns values between 0 and 100, with higher values representing more rigid regulations. The overall Rigidity of Employment Index is an average of these indices.

Table 5.3

Employing Workers Indicators: Nepal, South Asia, OECD Average, 2010

Indicator	Nepal	South Asia	OECD Average
Difficulty of hiring index (0-100)	67	27.8	26.5
Rigidity of hours index (0-100)	NA	10.0	30.1
Difficulty of redundancy index (0-100)	70	41.3	22.6
Rigidity of employment index (0-100)	46	26.3	26.4
Redundancy costs (weeks of salary)	90	75.8	26.6

Source: World Bank *Doing Business* Nepal 2010.

The table confirms the feedback received from investors who identified the existing labour regime as a major and critical constraint to investment. In particular, hiring and firing regulations and labour unrest are strangling private sector growth across all sectors and are key factors undermining Nepal's short-term prospects for economic growth.

Trading Across Borders

This other key area of reform that is key to promoting an investment-friendly climate is discussed in more detail in Chapter 6.

Institutional and Policy-level Constraints on Investments in Nepal

Government institutions can play an important role in promoting and facilitating investment and trade, including promoting and implementing business-friendly policies. A dedicated investment promotion intermediary (IPI) or Board of Investment (BoI) can play a critical role as a key interlocutor between the private and public sectors by providing one-stop service to investors, by signaling and advocating investment climate improvement based on investor feedback, and by addressing existing market failures, including marketing of investment opportunities and the provision of adequate information on the investment climate. Without active promotion, a small country like Nepal, located between two major investment destinations (India and China), is unlikely to attract the attention of as many potential investors as it would like. In fact, most foreign firms will not be aware of the investment opportunities in Nepal unless Nepal embarks on a serious effort to promote investment opportunities in the country underpinned by attractive policies and effective institutional arrangements.

Apart from the critical macro-level investment climate constraints mentioned earlier, there are three institutional barriers to effective promotion of investment and trade in Nepal that will need to be addressed in the short term. These are:

1. The absence of an institution with a mandate to promote Nepal for investment;
2. The lack of a national strategic plan for investment promotion; and
3. The very limited capacity in the Government to conduct investment promotion.

A Dedicated Institution for Investment Promotion

Currently, Nepal has neither a national IPI nor any department within the Government engaged in the active promotion of Nepal as a destination for investment. There is no institution undertaking investment promotion to complement some of the destination promotion or product promotion efforts undertaken respectively by the Nepal Tourism Board and the Trade and Export Promotion Centre.

The Department of Industries (DoI) is the current focal point for foreign investment and sole agency responsible for administration of the Foreign Investment and Technology Transfer Act. 'Promoting foreign investment in all categories of industries' is mentioned as a function of DoI, but, in reality, its activities are of an administrative nature. No pro-active image building or investor targeting is undertaken by the DoI. Apex private sector associations and Chambers of Commerce, including CNI and FNCCI, engage in some investment promotion activities with respect to their members seeking investment and trade opportunities, but this work has been hampered by the difficulties in Nepal's investment climate and their limited capacity. As it stands, there is little evidence of new foreign investments in the country and anecdotal information actually suggests disinvestment taking place among foreign companies.

Successful investment promotion programmes and institutions in other countries around the world often demonstrate capabilities and professional services in the following areas:

1. Image-building: creating the image of a country as an attractive site for international investment;
2. Investment Generation: targeting specific sectors and companies with a view to creating new investment leads and proposals;
3. Investor Facilitation and Servicing: assisting an investor in preparing an investment decision, starting up its new operations, and maintaining it in good standing;
4. Investor Aftercare: managing relationships with existing investors;
5. Policy Advocacy: improving the quality of the investment climate and identifying the views of the private sector on that matter.

Currently, a formal approach to most of the elements listed above is missing in Nepal, though some limited efforts exist in the area of investor facilitation and policy advocacy. In the area of advocacy, CNI and FNCCI are in regular contact with the government on policy issues. On the investment facilitation and servicing side, the Foreign Investment Section and the Industrial Facilitation Section of the DoI do fulfill some functions on an ad hoc basis, including providing assistance to investors in the processing of investment approval, registration and application for work permits, visas and the reimbursement of import/export duties. But this is essentially a facilitation and recommendatory role as the final approval authority for all of these lies with other ministries. There are also a few private sector firms that offer some elements of investor services.

The lack of a formal approach to investment promotion and absence of a single institution dedicated to this important activity is visible in Nepal's latest score on the bi-annual global investment promotion benchmarking survey conducted by the World Bank Group, the Global Investment Promotion Benchmarking *(GIPB) Survey 2009.*

The World Bank Group's GIPB Survey 2009 measures the performance of IPIs in 185 countries. The data presented in table 5.4 shows Nepal's performance, the South Asia regional average, as well as the performance of the best IPI in the world, using three investment promotion-related elements as benchmarks: the effectiveness of the IPI website in promoting investment opportunities; the effectiveness of the IPI in handling inquiries by a potential new foreign investor in manufacturing; the effectiveness of the IPI in handling inquiries by a potential new foreign investor in the software sector. The scores are presented in the form of a percentage index in order to facilitate relative comparison between countries. For every benchmark, at least one IPI gained a score of 100 per cent, the highest possible score. Nepal's overall score of 26 per cent represents a weak performance.

Table 5.4

Effectiveness of Investment Promotion Intermediaries: Nepal compared to South Asia average and best in the world

Component & Weightings	Department of Industries - Foreign Investment Division	Regional Average (SA)	Best in World
Website (50%)	37%	54%	93%
Manufacturing Inquiry (25%)	23%	26%	86%
Software Inquiry (25%)	7%	8%	83%
Overall	26%	36%	89%

Source: World Bank, *Global Investment Promotion Benchmarking, 2009.*

Some key characteristics of successful IPIs include:

- Well-defined mandate and clear objectives
- Strong support within government
- Sufficient and sustainable budget
- Qualified management and staff
- Strong links and credibility with the private sector
- Partnership with other public bodies

In view of the poor performance of the current investment promotion arrangements in Nepal, the Government should consider establishing a dedicated and comprehensive investment promotion body that is independent of any single ministry and reports directly to the Prime Minister's Office. Also, to attract and retain the private sector skills it will need (e.g. investor targeting, marketing, public relations, customer support, etc.), the organization should be freed of pay constraints and job security rules imposed in the civil service. To draw on the skills of the private sector and to encourage coordination across ministries, the entity should have a governing board comprising high-level representatives of relevant ministries and the private sector. The governing board should not be involved in day-to-day operations, but should require and approve budgets and working plans and provide strategic and operational advice. Because the investment climate in Nepal is a 'hard sell' at the moment, the performance of the investment promotion agency should be evaluated initially on its inputs rather than on the amount of investment coming to the country. In other words, its performance should be judged as adequate if it fulfills the commitments to action that it makes in its annual plan. Later, as political stability and labour relations improve, evaluation ought to shift to measurements of actual investment inflows.

The new national IPI need not be large initially, but it would need to be resourced adequately to do a professional job of marketing the new SEZs and to start building up a national promotional capability. Beyond marketing the zones in collaboration with the SEZ Authority, its initial mandate should be in the areas of investor servicing and dialogue with investors to support the reform agenda. Eventually, it could develop

capabilities in all five of the IPI functions listed earlier. An additional task could be the promotion of tourism for new investment in support of efforts to attract new tourists.

One option would be to establish the IPI as an independent body from the very beginning. For practical reasons, it might be more realistic to place it initially alongside the new SEZ Authority, perhaps as an Investment Promotion Department, to focus on marketing the zones. Once a wider national investment promotion strategy is developed, it could be moved to become a fully independent IPI within the government structure. Although in theory a separate body from the SEZ Authority, the IPI would work very closely with the zones. As of late 2009, the Government was considering setting up a Board of Investment to address the institutional gaps in Nepal. However, no details are available as of yet as to the mandate, organization, and governance structure of such institution.

A National Strategic Plan for Investment Promotion

Consistent with the lack of institutional arrangements, Nepal also has no overall private sector development strategy or plan for investment promotion at country level or at the level of SEZs. Without a coherent strategic plan, there is a danger that participating stakeholders and institutions will pull in different directions, thus dissipating the impact of their activities, and perhaps even contradicting and diluting each others' efforts. Upon the BoI's establishment, and assuming it will be mandated with an investment promotion task, the new BoI should oversee the formulation of a focused and realistic investment promotion plan for Nepal. Having a clear strategy for promoting and retaining investments is important for effective investment promotion and resource allocation. A large part of building an investment promotion strategy for Nepal means assigning weights to the five core investment promotion activities listed earlier, i.e. image building, investment generation, facilitation and servicing, aftercare, and policy advocacy.

Initially, the newly created BoI should focus on 'investor facilitation and servicing', – both prospective investors and those already in the country–'investor aftercare', and 'policy advocacy' and on learning from these activities. Given the political instability, industrial insecurity, and rigid labour market conditions, it is recommended that less resource be allocated to marketing and investment generation efforts initially and until these conditions change favourably or perhaps only when tied direct to the planned SEZs.

At the level of planned SEZs, there is a need to develop a clear promotion strategy as well, prioritizing key sectors and industries, and targeting foreign investors in key source markets for FDI that should be made aware of the benefits offered by the Nepal SEZ programme. Building SEZs will not necessarily guarantee foreign investment. In particular, for attracting new export-oriented industries to Nepal, a unique selling proposition in relation to the zones and a concrete marketing action plan should be developed as an integral part of the investment promotion strategy mentioned earlier. Obviously, duplication of efforts between the zones authority and the IPI (to be established) in relation to investment promotion activities and SEZ promotion should be avoided; rather, a joint strategy and joint approach for attracting overseas investors should be pursued.

As mentioned, successful investment generation requires a clear strategic sector focus and effective promotion of investment opportunities. Most professional IPIs have moved towards a sector-based investment generation strategy to direct the limited resources available where they are most useful and the chances of winning investments are the highest. A more general marketing and 'shotgun approach' tends to be less effective and more resource-intensive. As of late 2009, there appeared to be broad consensus about the target sectors for investment in Nepal, including most of those included in the export potential assessment presented in Chapter 2.

Still, experience elsewhere suggests it is not recommended to target investments in more than three to five sectors on a pro-active basis. Hence, choices will need to be made to allocate scarce resources towards those sectors that offer the highest opportunity and impact in the short term, based on robust research.

Capacity to Carry out Investment Promotion

There is very limited capacity and experience available in Nepal in the area of professional and pro-active investment promotion. A capacity development programme will be required to address this critical issue. It should focus on the following three areas:

- First, a capacity-building programme will be needed for the new IPI staff to develop the skills and competencies, systems, tools, and procedures necessary to support the IPI in developing and delivering a strategy. It should provide management and staff training, systems development, and hands-on coaching on investment generation initiatives;
- Second, capacity building among other relevant government staff will be needed. Given the important role to be played by certain government departments, such as the Foreign Investment Section and the Industry Facilitation Section and others, these departments should be included in the wider capacity-building programme involving both staff and managers. This would develop a broader understanding of foreign investment and investment promotion, including investor facilitation skills; and,
- Third, online promotion capabilities are to be developed and expanded involving a new Nepal Investment Promotion website. The website would present a wider range of investor-focused information, including sector-specific information for the adopted target sectors, as well as being an effective marketing window for the SEZs.

5.4 Policy Advocacy in Nepal

On the policy advocacy side, GoN and the private sector counterparts are keen to utilize public private dialogue (PPD) mechanism in the form of a Nepal Business Forum. The NBF is to address investment climate issues, including sector-specific issues, through structured and result-oriented roundtables and working groups. The NBF approach is a promising departure from past experience where cooperation between the private sector and the government lacked effectiveness due to weak sustainability, fragmentation, poor monitoring of tangible results, and insufficient institutionalization.

Effective institutionalization of PPD will maximize opportunities to directly impact the investment climate and thus investment and trade flows. One key characteristic of successful investment promotion programmes is the Government's commitment to investment climate improvement and the presence of effective PPD at macro or meso/sector level. PPD is the process through which investment climate obstacles and issues are systematically raised and addressed by public and private sector representatives. In post-conflict countries, the need for a vibrant PPD arises from the need to address the deterioration in the business environment and stimulate business and economic activity.

The Nepal Business Forum has now been proposed and endorsed by both the Government and the private sector. The NBF has the potential to offer existing investors a strong tool to provide feedback to the Government, and to help it unlock the country's full investment and trade potential.

5.5. Combining Investment and Export Promotion Functions?

An intriguing institutional question to be considered in the mid-long term in Nepal is the possibility of combining investment and trade promotion functions in a single organization.

The current Trade and Export Promotion Centre is not considered a strong and effective agency by the private sector and questions exist about its value added and alignment with the private sector needs. A recent World Bank publication[5] on the impact of today's export promotion agencies and their strategies highlights the importance of Export Promotion Agency (EPA) services for overcoming foreign trade barriers and solving asymmetric information problems associated with exports of heterogeneous goods. The study also finds strong diminishing returns, suggesting that as far as export promotion agencies are concerned, small is beautiful. A 2002 FIAS survey shows that around one-third of all IPAs worldwide carry both mandates. Combining investment promotion and export promotion in the same organization would have the benefit of conserving scarce public resources through overhead cost savings. Furthermore, both functions have in common that they require private sector skills to implement effectively. However, complementary studies by FIAS and USAID suggest that the experience of such combined agencies is mixed and can be negative when the implementation of one or both functions is weakened as a result of consolidation. Although the two functions are essentially based on promotion, they are also substantively different in nature.

In the case of Nepal, it is recommended that the two functions will only be considered for consolidation if an effective and semi-independent investment promotion institution is established, *with* the ability to attract private sector staff and *with* a strong management and governance arrangement in place. Without such strong institutional base, there would be little value in considering combining the two and risks would be too high. Also, if the two functions are placed within the same body, it will be critical to keep two distinct departments within the organization and to put in place suitably operating arrangements to reflect these differences. Finally, there is a question of timing and sequencing and combining the two functions should only be considered once the new agency for investment promotion is strongly established and is performing well.

5.6 Overall Recommendations

Actionable recommendations are listed in the report's Action Matrix. In thebroad, the analysis presented in this chapter points to the following areas for action:

1. Amend and enact the draft SEZ Bill. Some important amendments should be introduced in the draft SEZ Bill as per the key recommendations made in this chapter, including removal of the 75 per cent export requirement and shift from a 'positive' to a 'negative' list. Without significant amendments, the prospect for success of the Bill is likely to be considerably less than expected;
2. Longer term, consider supplier development schemes linked to foreign investors in the SEZ to promote local linkage development and technology transfer;
3. Formulate and adopt an Act establishing a Board of Investment;
4. Establish a Board of Investment with appropriate financial and staff resources;
5. Develop a thorough capacity development programme for the new BoI and its staff;
6. Establish a professional, one-stop investor facilitation service and website to assist new and existing investors;

[5] Export promotion agencies revisited; Policy Research working paper; No. WPS 5125; by Lederman, Daniel; Olarreaga, Marcelo; Payton, Lucy, November 2009 (based on new survey data covering 103 developing and developed countries).

7. Formulate a strategic investment promotion action plan for Nepal. The plan should be based on rigorous sector benchmarking studies comparing Nepal's competitive position with competing locations;
8. Implement a pro-active investment promotion campaign in key target sectors and linked to the SEZs;
9. Longer term, carefully review opportunity and merit of consolidating investment promotion and trade/ export promotion functions in a single agency;
10. Formally establish the Nepal Business Forum.

Chapter 6
Trade Facilitation

6.1 Introduction

The high costs associated with trade facilitation in Nepal are directly affecting the competitiveness of Nepalese exporters. Global estimates suggest that, on average, each additional day a product is delayed prior to being shipped reduces a country's trade by 1 per cent.[1] On this basis, if Nepal reduced the time it took its goods exports to reach a ship from 41 days to 33 days (the South Asia-SAFTA mean), i.e. a reduction of eight days, this would equate to increasing Nepal's exports by around 8 per cent.[2]

Addressing trade facilitation is a requisite for Nepal. As a landlocked country, it must compete with its coastal neighbours and attract new investment. Time delays and time variability in shipping goods particularly affect time-sensitive goods. This is reflected in the predominance of time-insensitive goods in Nepal's export basket. In order for Nepal to move into new product areas it will need to make progress on lowering trade facilitation costs.

Similar to tariff cuts, improvements in trade facilitation can help reduce the cost of traded goods and can help increase trade flows. But unlike tariffs, trade facilitation reforms do not require regional or multilateral agreements, and countries can derive large benefits by carrying out trade facilitation reform. For example, countries with lower trade costs are consistently associated with higher foreign investment. Furthermore, improved trade facilitation regimes can improve the efficiency of customs revenue collection and increase tax revenue.

Trade facilitation refers to the simplification and harmonization of international trade procedures and the information flows associated with them. Accordingly, the focus of trade facilitation reform is generally on the coordination and modernization of the processes of customs and other border agencies. This chapter focuses in part on customs reform. It also adopts a broader definition of trade facilitation to ensure it addresses other, and important, elements of the supply chain, particularly in relation to the transit of goods through India.

6.2 Benchmarking Nepal's Trade Facilitation Environment

Comparative indicators of the costs of trading across countries provide some guidance as to the severity of the issue in relation to other countries and guidance as to where priority should be given. Specific business surveys covering trade facilitation issues in Nepal also provide insights.

The World Bank's *2010 Doing Business Survey* breaks down the costs of importing and exporting an 8-foot container. As shown in Table 6.1, it costs US$1,764 and takes 41 days on average to export a container from Nepal. The substantive cost (50 per cent) is for inland transportation and handling, but charges for customs clearance and technical control are high for the South Asia region.

[1] Djankov, S., Freund, C. and Pham, Cong S., *"Trading on Time"*, World Bank 2008.

[2] Nicita and Hoekman in *"Assessing the Doha Round: Market Access, Transaction Costs and Aid for Trade Facilitation, 2009"* estimate the elasticity of trading to trading costs to be around 0.5. So if an 8 day reduction is approximated to be a 20% reduction in export costs, Nepal could expect exports to increase by around 10%.

Table 6.1
Trading Across Borders from Nepal, 2010

Trading Across Borders - Doing Business 2010

	Nepal		South Asia		India		Bangladesh	
Nature of Export Procedures	**Duration (days)**	**US$ Cost**	**Duration (days)**	**US$ Cost**	**Duration (days)**	**US$ Cost**	**Duration (days)**	**US$ Cost**
Documents preparation	14	289			8	350	14	290
Customs clearance and technical control	4	300			2	120	3	120
Ports and terminal handling	4	275			3	175	5	420
Inland transportation and handling	19	900			4	300	3	140
Totales	41	1764	32.4	1364	17	945	25	970
Nature of Import Procedures	**Duration (days)**	**US$ Cost**	**Duration (days)**	**US$ Cost**	**Duration (days)**	**US$ Cost**	**Duration (days)**	**US$ Cost**
Documents preparation	14	300			8	390	20	455
Customs clearance and technical control	5	300			4	120	3	135
Ports and terminal handling	4	275			6	200	4	585
Inland transportation and handling	12	950			3	250	2	200
Totales	35	1825	32.2	1509	21	960	29	1375

Source: *World Bank, Doing Business 2010*

The Enabling Trade Index developed by the World Economic Forum[3] for 2009 ranks Nepal 119th (out of 121) in terms of efficiency of customs administration. The index measures the burden of customs procedures, as well as the extent of services provided by the customs and border agencies. Nepal also ranks poorly in terms of availability and quality of transport services in the Enabling Trade Index. The country performs particularly badly on the ease and affordability of shipment and the competence of the logistics industry (ranked 112th and 105th out of 121 respectively), far behind India, which is a good performer in the region. The Logistic Performance Index 2007 provides additional indicators for the logistics sector. Nepal scores low in terms of logistics competence and the effectiveness and efficiency of the clearance process by the customs and border control agencies.

Table 6.2
Enabling Trade Facilitation Environment in Nepal, 2007

Availability and quality of transport services	Nepal	India	Bangladesh	Sri Lanka	Pakistan
Ease and affordability of shipment	112 [2.1]	39 [3.1]	89 [2.5]	101 [2.3]	66 [2.7]
Competence of the logistics industry	105 [2.1]	31 [3.3]	92 [2.3]	77 [2.5]	61 [2.7]
Ability and ease of tracking	92 [2.3]	42 [3.0]	81 [2.5]	71 [2.6]	72 [2.6]
Timeliness of shipments reaching destination	98 [2.8]	46 [3.5]	53 [3.3]	100 [2.7]	81 [2.9]

Source: World Economic Forum, The Global Enabling Trade Report 2009

Note: Rank out 121 countries scores in parentheses 1 low, 5 high

[3] World Economic Forum, *The Global Enabling Trade Report 2009.*

In the 2005 Trade Facilitation Survey,[4] the private sector ranked inspection and release of goods as the most problematic area in conducting trade. The private sector goes on to rank customs valuation of goods and tariff classification as the next two most important trade facilitation issues to address in Nepal. The need to improve technical and sanitary requirements is also cited by exporters. However, if we look specifically at the Doing Business survey we see that the time it takes to clear goods through customs (4 days) in Nepal is close to the regional average. A one off-time release study conducted for this strategy found the average clearance time for ICD Birgunj to be three hours and 41 minutes, with 18 per cent being cleared in less than two hours. So, there appears to be a potential contradiction here; while the private sector considers inspection and release of goods to be the weakest area, estimates suggest Nepal is not significantly worse than other countries in the region in this dimension of customs control. There is an obvious need to collect and report on the performance indicators of the customs stations as part of a management information system to have a clear picture on inspection and release times.

Taken together, these indicators suggest that priority should be given to addressing trade facilitation issues in Nepal. They also suggest that, whilst the efficiency and extent of customs services should continue to be addressed, the biggest gains could be in relation to the substantive time delays and costs associated with inland transportation and handling and document preparation.

6.3 Customs Modernization and Reform

Nepal has made good progress in modernizing its customs regime since the *2003 Trade and Competitiveness Study.*[5] The number of days required to export and import has fallen by 3 days since 2005 (Table 6.3. There are opportunities for Nepal to develop a more effective trade facilitation regime. The Department of Customs (DoC) has recently prepared a new modernization plan. The actions identified in the *Modernization Plan 2009-13* build on many of the reforms started under the previous 2006-09 plan. The 2009-13 plan is a good roadmap for making the transition to a more efficient trade facilitation regime. Importantly, the DoC has established a reform and modernization section within the department to oversee the reform efforts. What is important is that the modernization plan be implemented and efforts are sustained over a period of time so that Nepal takes full advantage of the significant time and cost savings that are offered by improved customs procedures.

Table 6.3
Decrease in the Number of Days Required for Exports and Imports, 2005, 2007, 2009

No. of Days Required					
Exports			Imports		
2005	2007	2009	2005	2007	2009
44	43	41	38	35	35

Source: World Bank, Doing Business, 2006, 2008 and 2010

[4] Author? *2005 Trade Facilitation Survey*
[5] Ministry of Industry, Commerce and Supplies, *2003 Trade and Competitiveness Study*

Technical assistance is currently being sought by the DoC for the development of a post-clearance audit (PCA) methodology, PCA manual, and training. Discussions have been taking place with USAID for support in this area starting 2010. The DoC has expressed its interest in identifying a lead donor to support and coordinate Nepal's trade facilitation efforts under its strategy. Discussions should commence with the other potential partners such as the World Bank, including on assistance that could be accessed from the World Bank Trade Facilitation Facility.

6.4 WTO Negotiations on Trade Facilitation

Members of the WTO continue to negotiate a trade facilitation agreement as part of the Doha Round. To date, members have submitted a number of proposals aimed at improving the existing GATT Article V (Freedom of Transit), Article VIII (Fees and Formalities Connected with Importation and Exportation), and Article X (Publication and Administration of Trade Regulations). The negotiation group also has the mandate to seek enhanced delivery of technical assistance to strengthen the capacity of developing country members to implement the trade facilitation proposals. The timing of the WTO trade facilitation agreement is tied to the progress of the Doha Round more generally. Thus, the date at which the provisions currently tabled will come in force remains uncertain. But the process offers Nepal an external impetus to trade facilitation reform and a mechanism to seek technical assistance for capacity-building. Many of the proposals under the draft agreement overlap with the 2009-13 modernization plan and Nepal should continue to increase its compliance during this period.

Nepal carried out a self-assessment against the current provisions of the agreement in April 2009. It was felt at the time that stakeholders should continue to meet at regular intervals. Nepal should use the WTO process as a means to continue to improve cooperation between customs and other agencies relevant to border controls. At national level, a National Trade Facilitation Committee exists, mirrored by trade facilitation subcommittees for each customs station. These mechanisms are focused on customs procedures and are not yet fulfilling their full potential to serve as focal points for agency coordination and as mechanisms to engage the private sector. Consideration could be given to re-establishing the National Transport and Trade Facilitation Committee, if this is considered appropriate, with a dedicated secretariat.

6.5 Automated Customs Management Systems

Automated systems for handling customs data can reduce clearance times, increase the transparency of customs functions, and increase the compliance with trade regulations. Automation is critical to making progress on reducing the time it takes to process documentation, and it also allows for the transition to modern risk management-based customs procedures. Automated collection of customs data will also allow for the compilation of performance indicators for monitoring customs offices clearance and release time, which needs to be established.

Nepal has made progress on implementing ASYCUDA (the automated system for customs data) in nine customs stations, which means that effectively nearly all formal trade (95 per cent) is covered by the system. To date, the impact on reducing documentation and clearance times has been minimal as only the basic accounting modules have been introduced. The perception of the private sector is that the automation of customs procedures has failed to reduce clearance times.[6]

[6] Author? *Trade Facilitation Survey 2005.*

The latest phase of implementation started in 2007 with the aim of consolidating the ASYCUDA system, adopting the broker and selectivity modules, and installing the Wide Area Network (WAN) in the major customs stations to allow for the exchange of customs data. The Tribhuvan Airport customs station has installed the broker module, which is scheduled to be rolled out to other customs offices. The selectivity module is being tested at the airport. WAN is scheduled to be installed in November 2009. This partial automation is hindering the modernization of process. The 2009-13 modernization plan contains six objectives under Strategy 7, which aims to maximize the computerization of customs processes. The DoC should commence discussions with UNCTAD about a further phase of ASYCUDA roll-out, in order to adopt new modules and to undertake the associated redesign of procedures and documentation. Funding for this technical assistance will have to be identified for this further phase of automation.

6.6 Valuation

The ability of customs to effectively value traded goods can reduce inspection and clearance delays as well as enhance revenue collection. The Customs Act 2007 adopts international valuation rules and makes provision for a Valuation Review Committee. These are important reforms, but difficulties remain in the determination of the transaction value based on the invoice provided. Once importers submit the valuation declaration form for imports, customs verifies the value against the valuation database. As the database is not yet sufficiently detailed or specific, there is often a dispute in respect of the determination of the value. Nepal needs to develop its valuation capacity. It needs to maintain a central valuation database and ensure access by local customs stations. The database must be developed to be more product-specific. As an interim measure the valuation database should be interfaced with ASYCUDA.

6.7 Post-Clearance Audit

Post-clearance audits are an important instrument to deal with revenue evasions. They are particularly important for countries wishing to make the transition to risk management approaches to customs control as they provide a mechanism to address potential tax violations, as 100 per cent verification is phased out. The DoC PCA office completed around 36 audits in 2009. The 2009-13 plan sets a target of 200 audits a year. At present the majority of audits are carried out by the district offices. There remains a need to develop a dedicated, centralized post-clearance audit capability with the DoC. Recruitment and training of auditors is required. A PCA methodology specific to Nepal should be established, together with a PCA manual.

6.8 Risk Management

Modern approaches to customs procedures imply that, in order to reduce clearance times, officials should conduct selective documentary and physical examinations based on a risk assessment. Under the Customs Act 2007 Nepal has the necessary provisions for adopting a selective method to clear goods without examination or through examination of only documents. However, the system is not yet operating and the current norm remains full physical inspection of imported goods.

A prerequisite for risk management approaches is the roll-out of the ASYCUDA selectivity module to allow for import selectivity and profiling, together with a risk-based sample of companies for post-clearance audit. There is also the need to develop a risk management plan, addressing many aspects of establishing risk management, including establishing risk management units; developing a risk management manual;

and training for customs officials to develop and maintain risk indicators. For this approach to be sustained, interaction with the DRI will be required in order that it is on-board with the new approach to clearance; otherwise customs officials will revert to full inspection.

6.9 Transit and Transportation

Around 70 per cent of third country trade is cleared through Birgunj ICD and transited through Kolkata. Considerable time and cost savings could be achieved in relation to this transit route through India. Closer harmonization of trade facilitation systems between Nepal and India could reduce transit times considerably. Nepal should establish a coordination committee with India to discuss harmonization of systems. It should seek a computerized transit system to replace the existing manual system. There should be a review on the procedures relating to the cross-border movement of rail wagons at Raxual.

At present, Birgunj is not operating as a dry port in any real sense. Nepalese traders are required to clear goods at Birgunj as well as at Kolkata. In addition, goods are also inspected during transit at the Raxaul rail port in India. Changes to the Rail Service Agreement are required to allow for the shipment of goods CIF Birgunj. The relocation of shipping agents at Birgunj would facilitate the booking and import on a CIF Birgunj basis.

At present, Nepal has access to Kolkata port as stipulated in the Nepal-India bilateral transit agreement and Rail Service Agreement. However, Kolkata is heavily congested and goods spend around six days waiting to be processed. Goods shipped via Kolkata require transhipment at either Colombo or Singapore, incurring extra cost. It may be more efficient to ship goods via Visakhapatnam, India. While the distance to the port is near to double to that of Kolkata, it avoids congestion and transhipment delays. Discussions with India on securing access to an alternative sea port should continue and revisions to the necessary legislation should be made accordingly.

There are two other ICDs, in Bhairahawa and Biratnagar, but their facilities are more limited and they are not linked by rail to India.

Another area that may require attention in view of the expanding opportunities for export of fresh fruits and produce is the development of cold storage facilities. At present, there is a cold storage facility only at the Mechi border crossing station. The current facility can handle five tons of goods and has been developed by Transport and Warehouse Management Co Ltd, a government-owned enterprise.

6.10 Customs Brokers

Customs brokers carry out the activities required to clear goods through customs on behalf of traders. They prepare documents and/or electronic submissions on behalf of the client and facilitate the communication between the importer or exporter and governmental authorities. Having agents that are familiar with the requirements for importing goods can avoid costly delays for importers, but it is important that the use of brokers is not mandatory.

There are between 500 and 600 agents in Nepal, each handling on average 350 clearances per year. This compares unfavourably with 1,000 clearances per agent per year in Bangladesh and suggests that the broker market is inefficient. The need to license customs brokers should be reviewed in the first instance. If brokers must be subject to licensing, then the application of licensing rules must become more transparent in order to

improve efficiency. Few new broker licences have been issued during the past ten years. The renewal process must become transparent. New entrants to the broker sector are inhibited. Importantly, freight forwarding companies are unable to obtain broker licensing and are prevented from carrying out broker activities on traders' behalf. Only 10 to15 per cent of forwarders have broker licences at present.

There is no mandatory use of customs brokers in the Customs Act 2007 (2064) under Clause 51 to the extent that trader can deal directly with customs through proprietor, partner, or chief executive officer (CEO) of the company. However, this could be revised so that a trader can appoint other company representatives to clear the goods other than those currently specified in the Act.

6.11 Recommendations

Actionable recommendations are listed in the action matrix. They are as follows:

- Customs automation and use of information technology: The DoC needs to introduce new ASYCUDA modules, including the selectivity module and make progress on redesigning procedures;
- Valuation: The DoC needs to improve the quality of the valuation database and determine how it can be interfaced with the ASYCUDA system;
- Post-clearance Audit: there is a need to develop a dedicated centralized Post-clearance Audit (PCA) capability within the DoC, including recruiting and training audit staff;
- Establish a PCA methodology specific to Nepal, together with a PCA manual;
- Risk management practices. The DoC needs to develop a risk management plan, addressing many aspects of establishing risk management, including establishing risk management units; developing a risk management manual; and training for customs officials to develop and maintain risk indicators;
- GoN should seek to establish a co-ordination committee with India to discuss harmonization and computerization of customs systems;
- Review with India the procedures relating to the cross-border movement of rail wagons at Raxaul and access to Indian ports other than Kolkata in the context of the Rail Service Agreement;
- Review the licensing arrangements for customs brokers to increase transparency and allow for new entrants.

Chapter 7
Technical Standards

NTIS 2010

7.1 Introduction

Quality measured through standards, technical regulations, and conformity assessment has become a prerequisite of international trade. While technical regulations and standards might be burdensome to the entrepreneurs of LDCs such as Nepal in terms of cost and capacity, they are unavoidable. The challenge for Nepalese exporters, government officials, and institutions geared at assisting firms in meeting standards is to keep pace with the requirements of importing markets because of the lack of infrastructure to fulfill such requirements of international trade, slow legal reforms, or lack of awareness among entrepreneurs.

In view of the ever-increasing globalization of trade and investment and the widespread adoption of the WTO and other regional trade agreements (RTAs) such as the European Union (EU), North American Free Trade Agreement (NAFTA), etc., meeting the requirements of technical regulations, standards and conformity assessment practices has become one of the major tasks for Nepal and many other LDCs. In fact, it is seen as one of the major challenges.

Nepal acceded to the WTO in 2004. During the accession negotiations, the GoN committed itself to complying with the Technical Barriers to Trade (TBT) Agreement and the Agreement on Sanitary–Phytosanitary Measures (SPS). Compliance with these two agreements is mandatory.[1]

The TBT-related commitments include:

- Making necessary amendments to Nepal's standards regime, including the Nepal Standards (Certification Mark) Act 1980 and the Nepal Standards (Certification Mark) Regulations 1982 (Amendment), to bring those into full compliance with the WTO Agreement on Technical Barriers to Trade;
- Implementing fully the provisions of the Agreement on Technical Barriers to Trade, including compliance with the Code of Good Practice for the Preparation, Adoption and Application of Standard (Annex 3 of the TBT Agreement) by December 31, 2006.

Under the 'Code of Good Practice', the standards body of Nepal needs to notify the WTO of its technical regulations and legal provisions. In addition, as per the mandatory requirement under the TBT Agreement, the GoN has committed itself to ensuring that technical regulations and conformity assessment procedures are not prepared, adopted or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade.

As noted above, Nepal was granted a transitional period from the date of its accession until January 1, 2007 for full implementation of the WTO TBT Agreement and to allow it to secure technical assistance in order to fully implement the obligations of the Agreement. The promised deadline passed three years ago and some commitments still remain outstanding. The delay can be attributed to the prolonged political conflict, the subsequent peace process, and frequent changes in the government of Nepal.

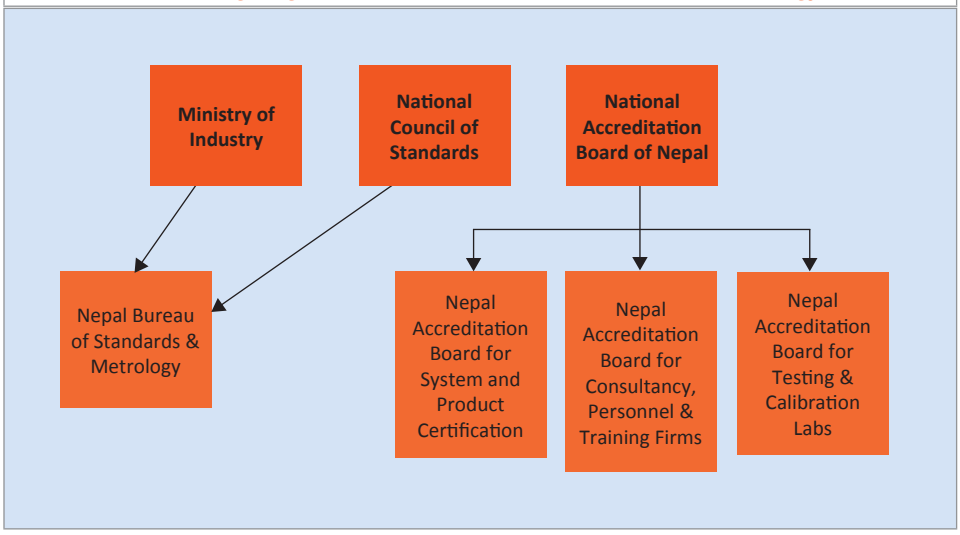
7.2 Status of Legal Reform

Before the former Ministry of Industry, Commerce and Supplies (MoICS) was divided into two Ministries , it finalized a draft Amendment to the Nepal Standards (Certification Mark) Act and a new draft bill on 'National Accreditation Board'. Both the draft Amendment and the draft bill were forwarded to the Ministry of Law and Justice for formal processing before taking them to the Constituent Assembly for promulgation as Acts. The revision of the Nepal Standards (Certification Mark) Act is particularly important as it would separate the activities of the new 'Accreditation Board' from those of the current one to make the new Board fully independent, as required by the international practice. The drafting was done by the MoICS and Nepal Bureau of Standards & Metrology (NBSM), internally with inputs from international experts. The structural provisions in the proposed revised Nepal Standards (Certification Mark) Act and new Accreditation Board Act are as outlined in Figure 1.

[1] WTO, 2003: Report of the Working Party on the Accession of the Kingdom of Nepal to the WTO, WT/ACC/NPL/16, 28 August 2003.

Figure 7.1

Future Organogram for Accreditation and Standards and Metrology



However, the process of promulgating the Act Amendment and the new Act remains incomplete. The draft revision of the Nepal Standards (Certification Mark) Act has been approved in principle by the 'Bill Committee' for forwarding to the Constituent Assembly. However, the new bill for the 'National Accreditation Board' has yet to be approved by the Committee. In addition, there is a need for wider consultation to examine the compatibility with the requirements of the WTO/TBT and the draft bills should be notified to the WTO for member countries to comment before enactment.

NBSM officials consider that it will take more time for the bills to be passed. They will start taking necessary steps to revise or formulate regulations only after promulgation of new Acts. Thus, more delay is expected, even though the deadline for full implementation of the TBT regulation was January 1, 2007.

In addition, the NBSM, as the national standards body, has yet to notify its official acceptance of the WTO/TBT Code of Good Practice for the Preparation, Adoption and Application of Standards and provide periodically its work programme to the ISO/IEC Information Center.[2]

7.3 National Organizations Directly Concerned with the TBT and SPS Agreements

The NBSM,[3] currently under the Ministry of Industry (MoI), is the national standards body in Nepal. It is also the national WTO/TBT enquiry point and has a facilitation role in TBT notifications by Nepal's notification authority. The current functions of the NBSM are guided by two Acts, namely the Nepal Standards Act 2037 BS (1980) and the Standard Weights and Measures Act 2025 BS (1968). Under those Acts, the NBSM has key functions such as introduction of Nepal standards on products and processes, Nepal standards certification

[2] WTO, 2000: WT/ACC/NPL/5 Working Party on the Accession of Nepal, Accession of the Kingdom of Nepal, Checklist of Illustrative Technical Barriers to Trade (TBT) Issues for Consideration in Accessions12 April 2000

[3] NBSM, 2010: home page http://www.nbsm.gov.np and personnel interviews and information collection

mark licence, metrology (legal metrological/calibration services), laboratory testing services, laboratory accreditation, facilitation work on product and system certification, etc.

The Department of Food Technology and Quality Control (DFTQC) is the government agency responsible for implementing the Food Act 2023 (1966), the Feed Act 2033 (1976) as well as the regulations related to these two Acts.[4] The DFTQC sets and implements the mandatory standards (both horizontal and vertical standards) related to food/feed products and issues directives/guidelines. One of its objectives is to facilitate national and international trade in food and agriculture. The GoN has designated the DFTQC as the WTO/SPS enquiry point, effective January 1, 2004. The DFTQC also acts as the focal point for the Codex Alimentarius Committee. A National Codex Committee has been formed, a separate National Codex building has been constructed and the activities of the committee are being pursued from there. The process of harmonization of standards of different food products with Codex standards is also ongoing.

In addition to the NBSM and DFTQC, the following government institutions are involved in the TBT-related measures (setting standards, issuing guidelines and directives) for related products, as per their mandates:

- Department of Drug Administration (DDA) for pharmaceutical products
- MoFSC/Department of Botany (DB) for plant health
- Department of Livestock Services for animal health
- Ministry of Science and Technology for environmental issues

Under the Drugs Act 1978, the following rules and regulations and codes have been implemented by the DDA[5]*:*

- Regulation on the Constitution of the Drug Consultative Council and the Drug Advisory Committee 2037
- Drug Registration Regulation 2038 and 2040
- Interrogation and Inspection Regulation 2040
- Codes on Drug Manufacturing
- Drugs Standards Regulation 2043

The DDA is also facilitating the WHO-GMP certification of pharmaceutical products manufactured in Nepal. It has a separate national medicine laboratory for testing pharmaceutical products.

With the given mandate of the Ministry of Forests and Soil Conservation (MoFSC), the DPR is also preparing some standards for non-timber forest products (NTFPs) and essential oils. It is also assisting the MoFSC in issuing CITESrelated certificates for plant products.

Additional information on the regulatory structure for SPS is presented in the next chapter.

7.4 National Standards and Technical Regulations

Standards

As of December 2009, 858 national standards have been developed and approved by the National Council of Standards.[6] Given the importance of standards in the global economy and in international trade, the NBSM gives emphasis to harmonizing national standards with international standards published by ISO/IEC, Codex, WHO and other standards-setting organizations. Since the major trading partners of Nepal are India and

[4] DFTQC, 2009: Annual bulletins of Department of Food Technology and Quality Control (DFTQC) in website: http://www.dftqc.gov.np and personal interviews and information collection.
[5] DDA, 2009: Home page http://www.dda.gov.np
[6] NBSM, 2010: home page http://www.nbsm.gov.np and personnel interviews and information collection

EU countries, special priority is given to harmonizing national standards with ISO and the standards used by these major trading partners. The NBSM typically follows the ISO/IEC procedures when developing national standards and classifies them according to the International Classification of Standards (ICS). The number of product standards and process/system standards set and adopted by the Nepal Standard Council (NSC) is shown in Table 7.1.

Table 7.1

Nepal Standards Adopted by the Nepal Standard Council (NSC)

Area	Product Standards	Process Standards	Vocabulary terminology	Total Standards
Food primary	24			24
Processed Food	106			106
Agri-inputs	7			7
other agricultural products	15			15
Non-agricultural products	90			90
Packaging	21			21
Construction	49			49
Electrical	18			18
Others	90			90
Process Standards		408		408
Vocabulary			30	30
All total standards				**858**

Source: NBSM (as of Dec. 2009)

Of the 420 product standards adopted by the NSC, only 24 apply to the export potentials identified in Chapter 2.

Technical Regulations

Of all standards set by the NSC so far, only six are related to safety for export trade and have been made mandatory.[7] In common parlance, mandatory standards are called technical regulations. Out of the six, five are technical regulations relating to products and one to a code of practice. They are:

- Ordinary Portland Cement (NS:49)
- Galvanised Corrugated Sheet (NS:141)
- Galvanised Coated Mild Steel Wire (NS:163)
- Deformed Steel Bar and Wires for Concrete Reinforcement (NS:191)
- Dry Cell and Battery (NS:280)
- Code of Practice for LPG cylinder (NS:376)

Under the mandatory food law and regulation, 101 technical regulations have been prepared (Table 7.2) and nine additional technical regulations are in the pipeline. These cover major food items, including export trade food and agricultural products such as large cardamom, ginger, honey, tea, coffee, pasta/instant noodles, lentil, etc.

[7] NBSM, 2010: home page http://www.nbsm.gov.np and personnel interviews and information collection

Table 7.2
*Technical Regulations for Food Products in Nepal**

Category	Number of Technical Regulations
Fats and Oils	16
Fruits and Vegetable Prodiucts	17
Spices and Condiments	20
Tea, Coffee and their products	3
Salt	2
Cereals, Pulses and their Items	19
Processes Drinking Water	1
Sweetening Agent	3
Sweets and Confectioneries	3

* DFTQC, 2009: Annual bulletins of Department of Food Technology and Quality Control (DFTQC) in website: http://www.dftqc.gov.np and personal interviews and information collection.

Process Standards

Altogether 408 process standards (guidelines, methods of analysis/tests/sampling/measurements, etc.) have been introduced by the NSC (Table 7.1). These include some of the most important management system standards of the ISO adopted as national standards such as:

- QMS (ISO 9001:2000)
- EMS (ISO 14001:2004)
- ISO/IEC 17025:2005
- ISO 22000:2005

WTO Notifications by SPS National Authority

Between July 2005 and December 2009, the national notification authority for SPS, under the Ministry of Agriculture and Cooperatives (MoAC), notified 18 technical regulations and directives/guidelines to the WTO. Only three notifications were directly related to product regulations and the rest were related to guidelines/ directives.

Notifications on product regulations include the technical regulations set before joining the WTO, a few proposed mandatory product standards (maize, *paneer* [cottage cheese], clove powder, cornflakes, preservatives, heavy metals, fennels, green tea, luncheon meat, and rice) and a voluntary standard (wheat flour).

Food Related Technical Regulations and Codes of Practice

Although the general labelling requirements are specified in the Food Regulation 2027 (1970), the requirements of labelling and specific types of packaging containers are spelt out explicitly in some of the technical regulations such as for infant milk foods, infant foods, skim milk powder, chewing gums or instant noodles. Codes of practice for biscuits, instant noodles, pasteurized milk, edible vegetable oils, and processed drinking water have also been prepared by the DFTQC.

7.5 Product Certification

The NBSM is implementing a product certification scheme. This is a voluntary scheme that assures quality of goods from Nepalese industries. Manufacturers whose products are certified are awarded licences to use the Nepal Standards (NS) certification mark under the provision made by the Nepal Standards (Certification Mark)

Act 1980. So far, 130 firms have been awarded licences for a total of 55 product categories.[9] Out of these, 35 firms have received the NS marks for ten food products.

The NBSM has been successful in issuing licences to only a few products of export interest, including instant noodles, vegetable *ghee,* biscuit, beer, iron products (rods/GI sheets, etc.), paints, cement, GI/HDPE pipes, steel bars, insulated cables/wires, and others.

7.6 Strengths and Weaknesses of Regulatory Agencies

Strengths

- Agencies like the NBSM, DFTQC, and DDA are mandated by Acts and regulations to prepare product and process/system standards (both voluntary standards and technical regulations) and issue directives and guidelines, to serve as a regulatory authority to introduce product or system certification schemes, to monitor and enforce implementation of technical regulations, and to perform conformity assessments;
- The NBSM and DFTQC both have sizable number of well-trained personnel and fairly well-equipped testing laboratories for setting standards, for performing conformity assessments, and for monitoring compliance with technical regulations;
- In recent years, the NBSM and DFTQC have benefited from a number of bilateral and multilateral technical assistance to enhance their capacities for standard development and harmonization, international accreditation of laboratories, product and system certification, and operation of TBT/SPS enquiry points. Significant efforts are underway to upgrade facilities and build human resource capacity at both NBSM and DFTQC.

Weaknesses

- There are two critical dimensions in introducing a culture of standards and quality: infrastructure development and awareness creation. On both fronts, most of the Nepalese regulatory agencies are at a very early stage. A fully developed quality infrastructure (QI) in the areas of technical regulations, conformity assessment, quality, and metrology has yet to be developed;
- None of the government laboratories have been internationally accredited. Hence, their conformity assessment reports or product certification have yet to gain recognition in international markets;
- The role of government agencies like NBSM and DFTQC in facilitating trade has yet to be clarified. DFTQC and NBSM have been set up primarily as regulatory agencies; so, their facilitative role tends to be ambiguous and conflicts of interest prevail. Accordingly, the business community tends to avoid their services. The NBSM is not proactive in standards-related services in terms of neither standards formulation nor service delivery that can facilitate exports. This may be due to the lack of clear policy directives or the lack of staff motivation;
- Several projects (SMTQ I and SMTQ II and EU-WTO Project, JICA) have been implemented between 2005 and 2009 for enhancing the capacity of the NBSM and DFTQC in trade facilitation. However, the capacity to tap those projects appears to be very low because of the slow decision-making processes and apparent low priority of these agencies in implementing these projects;
- Frequent changes in the parent Ministry's structure and leadership and difficulties in retaining well trained, professional staff in the related jobs are issues that have a negative impact on required capacity building;
- The NBSM operates a product certification mark scheme. The Nepalese product certification is not accepted by other countries, including India, with which Nepal has a sizable trade. A similar situation prevails with the DFTQC where their conformity assessment reports are yet to be recognized in India and many other countries.

[9] NBSM, 2010: home page http://www.nbsm.gov.np and personnel interviews and information collection

7.7 WTO/TBT Enquiry Points

As a complement to the notification obligation, each WTO Member must set up a national enquiry point. This acts as a focal point where other WTO Members can request for and obtain information and documentation on a Member's technical regulations, standards and test procedures, whether impending or adopted, as well as on participation in bilateral or multilateral standards-related agreements, regional standardizing bodies, and conformity assessment systems. Such enquiry point is also important in acquiring information from other Members' enquiry points on regulations and standards affecting products that are export potentials for Nepal.

Even before getting accession to the WTO, the then MoICS established in June 2003 an enquiry point under the Technical Service/TBT section of the NBSM responsible for the following functions:

- Answer enquiries about specific Nepalese products or groups of products;
- Answer enquiries concerning membership and participation in regional and international meetings;
- Provide information on standards and technical regulation in Nepal, conformity assessment procedure relating to product certification, management system certification, laboratory testing, standards developed by the NBSM and other agencies.

The TBT enquiry point is expected to provide information to exporters and manufacturers on the subjects related to foreign technical regulations and standards of the products of their trade interest. However, the current capacity of the enquiry point falls far short of fulfilling these functions. Although the TBT has taken the lead to prepare WTO notifications in the past, apparently the national notification authority has taken no action on any of them. So far, there are no Nepalese notifications.

The linkages between the TBT enquiry point and industry are not well established. However, there is growing recognition of the importance of this information channel. In the National Commerce Policy, introduced in 2009, the GoN has committed itself to strengthening the TBT enquiry point.[10] At present, the MoCS is responsible for the TBT enquiry point.

7.8 Current Technical Assistance Projects

Various bilateral and multilateral donor agencies (from India, Norway, Japan, EU, and FAO) have provided technical and financial support in the past to key institutions like the NBSM and the DFTQC.[11, 12, 13, 14] Currently, several projects are underway focusing on legal reforms and capacity enhancement to comply with the TBT/SPS Agreement requirements.

[10] MOCS, 2009: Commerce Policy 2065 Published by Government of Nepal, Ministry of Commerce and Supplies, Singha Durbar, Kathmandu, 2009

[11] EC-Nepal WTO Project, 2009a: EC-Nepal WTO Assistance Program: Revisit of Indicative Timeline by NBSM/DFTQC as per decision of Technical Committee Meeting – Submitted to Programme Steering Committee Meeting, 30 July 2009 (Amended based on stakeholder comments and discussion, 20 August 2009) Annex II. - Indicative Timeline (20 August 2009)

[12] EC-Nepal WTO Project, 2009b: EC-Nepal WTO Assistance Program Technical Committee Meeting Minute, June 18, 2009

[13] Goonatilake, L., 2007: Session 3: "SMEs Overcoming Supply Side Constraints" Workshop on Private Sector and Aid for Trade ,18 September, 2007, MANILA

[14] Padickakudi, O., 2008 :UNIDO activities in support of conformity assessment, ISO Regional Workshop on Conformity Assessment, Conformity Assessment Supporting Development and Trade ,12–13 June 2008, Kiev, Ukraine

The current projects include:

- SARRC Regional SMTQ Project Phase II (Norway-funded; implemented by UNIDO and GoN) -- 2007-10
- EC-Nepal WTO Assistance Programme (EU-funded; implemented by GoN, UNIDO, ESCAP, and Physikalisch-Technische Bundesanstalt [PTB] Germany) -- 2008-11
- Project for Agriculture Commercialization and Trade, PACT (World Bank-funded) -- 2009-15

The key activities under those projects are highlighted in Table 7.3.

Table 7.3

Activities of Current Donor-funded Projects

Donor	Activities
SAARC Regional SMTQ Project Phase II Norway: 2007-10 (Implementing partners: UNIDO and GoN)	**Phase II 26/1/2010UNIDO TCB Programmes (TA combining Supply-side and Conformity) Regional Programme: Bangladesh, Bhutan, Maldives, Nepal**
	Market Access and Trade Facilitation Support for South Asian LDCs through Strengthening Institutional and National Capacities Related to Standards, Metrology, Testing and Quality (SMTQ) Phase II
	Ø Product certification system of NBSM complies with ISO Guide 65 and is accredited
	Ø Textile Laboratory of NBSM accredited
	Ø Food laboratory of the DFTQC strengthened and accredited
	Ø Auditors trained in ISO 22000 Food Safety Management System
	Ø Management System Certification Body accredited
EC-Nepal-WTO Assistance programme (Implementing partners: PTB Germany/NBSM) 2008-11 (Part A)	1. The metrological basic structure of the NBSM shall be strengthened, with the aim of improving its technical competence and national and international recognition
	2. A national system for inter-comparison measurements shall be set up within the scope of the project
EC-Nepal-WTO Assistance programme (Implementing partners: UNIDO, ESCAP, NBSM and DFTQC) 2008-10 (PART B)	1. Identification of products facing TBT/SPS conformity problems, awareness creation about TBT/SPS, and strategy formulation
	2. Strengthening NBSM to become effective standards body and strengthen DTFQC for mandatory food standards development and harmonization
	3. NBSM metrology capacity and traceability improved and accredited
	4. Accredited laboratories for textile/apparel, leather, and agro/food exports
	5. Establishing accreditation capacity
	6. NBSM/DFTQC/FNCCI developed as ISO 9000, 14000, HACCP and SA8000 certifier
	7. Operational TBT Enquiry Point
World Bank Project for Agriculture Commercialisation and Trade (PACT); 2009-15 (Implementing partner: MOAC)	Component 2; Implementing agency: DFTQC
	Support for SPS Facilities and Food Quality Standards
	1.Food quality and safety enhancing activities, including SPS, through improving laboratory facilities and certification capabilities
	2.Technical assistance and capacity-building measures to meet food safety and quality standards

The first two projects are already in the final stage of implementation. These projects are complementary. However, the progress made under those has been very slow and many of the programme activities are yet to be pursued and are unlikely to be completed within the year 2010.

7.9 Infrastructure of Government and Private Sector Laboratories in the Areas of TBT

The following government organizations have laboratory facilities available for testing of products under respective jurisdictions. The general status of the laboratories and their upgrading is summarized in Table 7.4.

Table 7.4

General Status of Government Laboratories and Upgrading Process

Organisation	Laboratories
Nepal Bureau of Standards and Metrology (NBSM), Ministry of Industry	Ten major laboratories for different product testing and legal metrology. Four laboratories are being upgraded (metrology, chemical, microbiological, and textile laboratories)
Department of Food Technology and Quality Control (DFTQC), Ministry of Agriculture and Cooperatives	New laboratory complex built. Chemical and microbiological laboratories are being upgraded
Department of Drug Administration (DDA)/ Ministry of Health and Population	National Medicine Laboratory (upgrading status unknown)
Department of Botany , Ministry of Forests and Soil Conservation	Essential oils, some natural ingredient identification and determination in herbs and herbal products (some upgrading is taking place with its own internal resources)

There are around nine specialized private sector laboratories established for different purposes from water analysis to soil analysis and from food testing to pharmaceutical product testing. Exceptfor a few, most of the private laboratories remain low profile facilities, as the cost of establishing laboratories are very high and the expected returns from the current level of services are very low.

7.10 Laboratory Accreditation

'Accreditation' is an internationally accepted system that recognizes that an organization is able to provide its services in a professional, reliable, and efficient manner. Accreditation bodies use criteria given in the ISO Guidelines. In case of laboratories, the ISO/IEC: 17025-2005(E) guideline is used. This guideline specifies a total of 24 requirements (14 management requirements and ten technical requirements). Apart from compliance with the management requirements, accreditation assesses the technical competence of the infrastructure and human resources and the reliability of the test and calibration results.

The NBSM as a secretariat of the Nepal Council for Standards under the existing Act has been given responsibilities to develop a Nepal Laboratory Accreditation Scheme (NEPLAS) for accrediting laboratories operating in Nepal. NEPLAS is based on SINGLAS (Singapore/ISO Guide 25). In this connection, the NBSM has developed laboratory accreditation directives and criteria against which laboratories are accredited in line with the international standards and guidelines, including ISO/IEC 17025 and ISO/IEC Guideline 43. This programme has been launched and the NBSM is aiming at greater participation of private laboratories. The NBSM laboratory is serving as a control and verification centre. So far, seven laboratories have been accredited under this scheme (NEPLAS) and a few more are in the pipeline. None of the government laboratories have been accredited even under the scheme of NEPLAS. The NBSM is collaborating with various international laboratory accreditation schemes such as NATA, TELRAC, HOKLAS, and APLAC, in proficiency testing programmes.

As a part of complying with the WTO/TBT agreement, Nepal needs to form a separate national accreditation body with international recognition. All government and private sector laboratories need to go for accreditation if their conformity assessment report and test results are to be recognized internationally. Unless a new accreditation board is formed and unless the capacity of the new board is internationally recognized, Nepalese laboratories will have to be accredited by some international accreditation bodies based in other countries if they want their conformity certification to be recognized outside Nepal. The current laboratory accreditation process adopted by the NBSM remains meaningless as its own laboratories are yet to be accredited from any internationally recognized accreditation body.

The current projects like the SAARC regional SMTQ Phase II project and the EU-Nepal WTO Assistance Programme are assisting both the NBSM and the DFTQC in refurbishing and upgrading their laboratories and starting the process of accreditation for certain testing and analyses by internationally recognized accrediting bodies.

JICA has been supporting the construction of a new laboratory complex for the DFTQC and new equipment and instruments like HPLC, GC/MS, and AAS have been secured. Furthermore, gap analysis has been done by experts under the EU/Nepal WTO Assistance project to meet the accreditation requirements of the DFTQC's chemical and microbiological laboratories. The procurement of additional equipment/instruments and glassware has been initiated. It is expected that, by the end of 2010, all the requirements of equipment, documentation and staff will have been met and the accreditation process will begin.

For establishing a credible calibration system with international traceability, the NBSM is strengthening its legal metrology laboratory with support from the SMTQ Phase II project and the EU-WTO project, implemented by PTB Germany. Laboratory upgrading and staff training are nearly completed. The expectation is that the process of accreditation of the laboratory for calibration parameters, particularly mass and temperature, by a reputed international accreditation board will also be completed within 2010.

Currently, the NBSM is upgrading and refurbishing its chemical and microbiological laboratories for accreditation by some internationally reputed accreditation body, as in the case of the DFTQC.

The current status of accreditation of major government and private laboratories of Nepal is shown in Table 7.5.

Table 7.5

Current Status of Accreditation of Major Government and Private Laboratories

Organisation	Laboratories
Government laboratories	Ten major laboratories for different product testing and legal metrology. Four laboratories are being upgraded (metrology, chemical, microbiological, and textile laboratories)
NBSM	1. Preparation for accreditation of legal metrology laboratory is in final stage, particularly for mass and temperature (under EC-Nepal WTO assistance implemented by PTB, Germany and will be applying for accreditation by an internationally reputed laboratory accreditation body.
	2. Preparatory work for accreditation of chemical and microbiological laboratories by some internationally reputed accreditation is initiated (gap filling activities as per ISO 17025 are underway).
	3. Participating in inter-laboratory proficiency testing within Nepal.
	4. Making necessary arrangements for strengthening textile testing laboratory under the SMTQ Phase II programme and will also be considering later for accreditation by international body.
DFTQC	1. Chemical and microbiological laboratories are in the process of accreditation by internationally reputed accreditation bodies, particularly for some test parameters related to fats and oil and microbiological safety (gap filling activities as per ISO 17025 are ongoing).
	2. Participating in inter-laboratory and intra-laboratory proficiency testing within Nepal.
Private laboratories	Seven laboratories have been accredited under the NEPLAS scheme and a few more are in the pipeline. But these laboratories need further efforts to get accredited by internationally recognized accreditation bodies.

In addition to the planned accreditation programmes of some laboratories for selected test parameters related to products such as fats, oils, and processed food, it is essential to take steps for accreditation of selected laboratories for test parameters of export significance (like pesticide/veterinary drug residues, mycotoxins in food products, and cadmium/nickel contents in silver jewelry).

The private sector has aired the view that a few private laboratories could be ready for international accreditation in specialized products and parameters provided they also receive technical support and financial incentives for laboratory upgrading.

7.11 Assistance to Nepalese Producers to Implement 'Process Standards' and Conformity Assessment

Management systems like QMS (ISO 9001:2000), EMS (ISO 14001:2004), and Hazard Analysis and Critical Control Points (HACCP) are popular in Nepal. Certification status for the defined scope is represented by the use of logo of certification body and accreditation body on advertisements but never on products.

A status of system certified organizations reported in 2006[15] showed that there were about 194 management system certified organizations in Nepal (Table 7.6).

Table 7.6

System Certified Nepalese Organizations in 2006 (16)

Management System	No. of Industries
ISO 9001:2000 certified	181
ISO 14000 certified	2
ISO 9001 and ISO 14000 certified	8
HACCP certified	2
ISO 9001 and HACCP certified	1

[15] Sapkota, K.P., 2006: 'Certification Status in Nepal "a paper in Fourth Regional Quality Convention 2006" Improving Competitiveness through Quality in the Globalised Regime" Convention Resource Materials Published by Nepal AOTS Alumni Society, Kathmandu Nepal, July 2006 p166-182.

Many more organizations are believed to have applied and received management system certification in one form or other. Some industries have also received ISO 22000 Food Safety Management System certificates, particularly for orthodox tea.

As of 2006, there were approximately 17 different certification bodies (CBs) issuing system certificates.[16] This number might have increased by now as there is no internationally recognized Nepalese CBs operating. Prominent CBs were ICL, ICS, URS, DNV, TUV, BSI, SGS LRQA, RINA, and KVQA. Most of these CBs are operating from India and, apparently, only three of these CBs have contact offices in Nepal.

Since there is no central system to register the system certification and certifiers, it is difficult to have exact number of the organizations receiving the certificates of different systems, new or renewals. Some experts indicate that many of the certificate recipients have not renewed and have abandoned the management system they had adopted earlier.

7.12 Performances of the Packaging Sector

The Nepalese packaging sector is growing slowly along with the consumer market, super markets and department stores, and product exports. But it is still as traditional today as it was a decade ago.[17] Flexible and rigid plastic, paper, cardboard, corrugated board, textile, jute, metal containers, and glass containers are the main types of packaging materials and containers. Not much innovation can be seen in the sector. The emphasis remains on simple, cheap, and low-quality materials.

Nevertheless, production volume has definitely increased. In addition, upgrading of some companies with new machineries and new technologies has increased the quality of packaging materials and allowed production of a few new forms of packaging. Since the demand for quality packaging materials both for domestic use and for export can rarely be met by the local industry, most quality packaging material have to be imported. This is true particularly for food industries, such as instant noodles, tea, coffee, honey, biscuits, and confectionery. These industries have little but to import certain food-grade packaging material like BOPP, PP, PETs, and others. Packaging materials like metal cans, multilayer paper sacks, tea chests, metal barrels, aluminium canisters, aseptic packaging drums, tetra pack/comb bloc cartons, laminated plastic film and paper rolls, pressure sensitive taps, reinforcement straps, pilfer-proof or leak-proof bottle caps also are mostly imported from India and ASEAN countries.

The growth of packaging enterprises is limited by low demand in the domestic market, hence low economies of scale in production. The lack of awareness among both the public and decision-makers as to the importance and benefits of packaging is partly responsible for the slow growth of the industry.

The number of packaging firms has grown, nevertheless, to produce simple cardboard/corrugated cardboard boxes and polyethylene bags. The cutthroat competition that has resulted has led to a tendency to compromise on quality in order to supply at low prices. The absence of standards is also affecting the growth of a domestic packaging industry.

Some of the packaging materials typically used for different export products are listed in Table 7.7 and the existing Nepal standards are listed in Table 7.8. None of the packaging firms so far have applied for the Nepal Standards Certification Mark.

[16] Sapkota, K.P., 2006: 'Certification Status in Nepal "a paper in Fourth Regional Quality Convention 2006" Improving Competitiveness through Quality in the Globalised Regime" Convention Resource Materials Published by Nepal AOTS Alumni Society, Kathmandu Nepal, July 2006 p166-182.

[17] ITC: 1999: The Packaging Industry in Nepal, Export Packaging Note No. 45, March 1999

Table 7.7
Packaging Materials Used for Export Products from Nepal

Product	Packaging Materials
Tea Orthodox (Leaf Tea)/Green Tea	wrapped in wax paper and aluminium foil and packed in tea chest
Top Grade Leaf Tea	multi-wall inner aluminium foil lined, 4 or 5 ply Kraft paper sacks mainly of the valve-mouthed type and pallet able (average weight of 20 to 25 kg)
Medium and Small Leaf Tea	paper sacks of valve mouthed type
CTC Tea	polyethylene/polypropylene (PE/PP) bags. The tea-bagging industry is still in its nascent stage with hardly any packers having modern machinery
Lentil	jute bags of 80 to 100 kg, palletable multilayer Kraft paper sacks
Honey	unit package of honey is done either in glass bottles or edible grade PET bottles of different sizes
	export bulk pack in food grade plastic barrels (capacity 300 kg) kept inside metal drums
Essential Oil	filled in aluminium containers (25 kg capacity), tightly sealed and wrapped in polyethylene bags to avoid leakages and then put in galvanized iron drums, as shipping container
Fresh Ginger	gunny bags
Instant Noodles/Pasta	flexible packaging materials of BOPP
Silver Jewelry	wrapped in handmade papers/polyethylene bags and then put in wooden or tin boxes. Cotton/foams are used as filling/cushion materials in some cases and tin tapes are used for sealing the wooden or tin boxes
Pashmina and Woollen Products	materials required are mostly corrugated paper boxes and plastic wrappers for unit items

Issues and Problems in the Packaging Sector

- Lack of standards to guide manufacturers affects the quality of domestic products
- Lack of national and/or company standards on relevant packaging products and sizes
- Inconsistent supply of quality materials for conversion into packaging
- No access to advanced technology
- Most of the packaging materials used for export of food items and essential oils imported from India, Sri Lanka, and ASEAN countries
- Lack of facilities for testing packaging material quality and strength
- Lack of standards to enforce transport packaging
- Limited range of options for packaging among small users
- Disposal of used packaging materials a problem
- Increasing use of laminated flexible pouches/plastic pun nets, multiplayer paper sacks, styrofoam boxes, aluminium-coated plastic films, transport packs for fruits and vegetables, pressure-sensitive tapes/reinforcement traps, aseptic packaging materials. However, no standards for such packaging types.

Table 7.8

Existing Nepal Standards for Packaging

Current Nepalese Standards	Need for New Standards*
Packaging material/containers • HDPE • LDPE • Paper boards	**Packaging materials** • Flexible packaging film-laminated • Pressure sensitive taps: PP • Reinforcement straps: BOPP/PVC
Packaging containers • PE Containers • Tea Chests • Plastic containers up to 5 litre capacity • PE bags • HDPE woven bags • Aluminium caps • Jute bags • Corrugated fibre board boxes • Tin-coated containers of different capacity	**Packaging containers** • Corrugated fibre board boxes: telescopic • Plastic bottles • Pillow pouches-PP/LDPE • Plastic pun nets-PET • Woven net bags: HDPE/PA • EPS trays • Woven plastic bags • Multilayer Kraft paper sacks

Note: * Wherever relevant and covering important parameters such as Thickness, Dimensions, Bond Strength, Seal Width, Heat Sealing Strength, Grammage, Bursting Strength, Compression Strength, Ventilation Holes, Number of Plies, Design of Boxes.

7.13 Pertinent Issues and Concerns for Export Potential Products

Chapter 2 has identified 19 export potential sectors for priority attention. These include:

- Agriculture products: Cardamom, ginger, honey, lentils, tea (green and black), uncooked pasta/ noodles,
- NTFPs: Herbs and aromatic plants and their essential oils, handmade paper and paper products
- Handicrafts and Small and Medium-sized Enterprises (SME) products: Pashmina, woollen products, silver jewelry, fabricated metal

The export trend of SPS-sensitive agricultural products is examined more carefully in Chapter 8. Issues raised by producers and exporters in the course of the fieldwork associated with the preparation of this chapter are summarized in Table 7.9.

The key issues with respect to the TBT requirements are as follows:

1. Insufficient support from the NBSM due to delays in the amendment of the Nepal Standards (Certification Mark) Act, the promulgation of a new Act on National Accreditation Board and the issuance of new regulations associated with these Acts;
2. Wide consultation process seems missing, particularly in the case of the draft Act for the new National Accreditation Board;
3. Only a few products of export interest have national standards. When they do, the relevance of the standards to exports is minimal. There is a need to focus on standards formulation for significant export products or export potentials. For instance, LCEAN, the association for the large cardamom sector, has been asking for national grade standards for large cardamom;
4. None of the Nepal standards have been notified to the WTO, as required under the TBT regime. Many technical regulations of TBT concern have been introduced by government agencies other than the NBSM/DFTQC. They do not appear in the draft WTO notifications. The MoCS needs to take measures to ensure TBT commitments are met;

5. There is a lack of interest of the private sector in the certification programme for management system implemented under the current projects. Revisiting the current project approaches may be essential for gaining greater private sector involvement;
6. The capacity of the TBT enquiry point is weak even though its role is important;
7. There is an urgent need to improve Nepal's product certification scheme to comply with ISO Guideline 65 so that it can gain acceptance from other countries;
8. The private sector complains about the slow response time and the reliability of test results from government agencies;
9. Many raw materials are imported into Nepal. There is a growing concern about the conformity of quality specifications of imported raw materials as well. Businessmen point to a strong need for quality verification of imported materials through testing/visual inspections;
10. The provision of some of MAS-Q services by the NBSM, DFTQC, and other government institutions may be in conflict with international principles of conformity assessment principles and have a negative impact on development of private sector or NGO services in those areas;
11. There is a need for establishing a non-destructive testing laboratory for testing precious metal jewelry at the FHAN on a public-private partnership (PPP) basis;
12. In recent years a large number of certifying bodies from outside Nepal have been active in issuing management system certificates to various enterprises in Nepal. There is a need for developing internationally recognized national certification bodies at government or private sector level, as well as a need for an agency to register and monitor certification bodies;
13. The Nepalese government has found it difficult to retain staff in the past, especially those that are recipients of in-service capacity-building training programmes. There is a need for introducing mechanisms to retain well-trained, dedicated professional staff in specialized government agencies.

Table 7.9

Standards Issues for Ten Export Potentials

Commodity Area	Existence of National Standards		Technical Regulations Faced in Importing Markets	Testing Facilities for Parameters	Process Certification Optional	Expected Role of Govt. Agency
	Mandatory	Voluntary				
Cardamom	Yes	Yes	No	-	-	1. National grading standards to facilitate standardized trade 2.Currently, LCEAN has adopted three grade standards
Ginger	Yes	Yes	No	-	-	So far export is confined to India, some SPS-related issues prevalent
Honey	Yes	Yes	Pesticide residue monitoring plan approval required by EU	1. Pesticide residues/ antibiotics 2. Importing party is taking care of testing requirements	1. HACCP certificate 2. Organic certificate facilitated trade	1. Facilitate establishment of independent test laboratory for pesticide residue testing 2. National standards have no relevance in their trade
Tea	Yes	Yes	No	Importing party is taking care of testing and the purchase decision is made depending on the batch sample tests, mostly 'cup tests'	1. HACCP 2. Code of Conduct (CoC) 3. Organic certificate 4. ISO 20000	1. Facilitate establishment of independent test laboratory for pesticide residue testing 2. National standards have no relevance in their trade
Herbs/ aromatic plants	No	No	1. Ban and restriction on produce under CITES 2.Restriction on trade in NTFPs without value addition		8. Community forests and wintergreen oil from Dolakha have received FSC	4 Standards have been prepared for adoption by MoFSC (for Chiraita, Asparagus, Jatamansi and Timur) for two more herbs standards are under preparation Certification of non-CITES products

Commodity Area	Existence of National Standards		Technical Regulations Faced in Importing Markets	Testing Facilities for Parameters	Process Certification Optional	Expected Role of Govt. Agency
	Mandatory	Voluntary				
Essential Oils	No	No	No for non-CITES items only	1.Importing party is taking care of testing 2. Purchase decision is made depending on the batch sample tests, 3. Essential oil content determination	1. Forest stewardship certification (FSC) facilitated export 2.Organic certification	1. Range setting for residual essential oil content in some of the herbs and aromatic plants after essential oil extraction 2. DPR/ MoFSC specifications on residual oil content
Silver jewelry	No	No	Cadmium-free silver jewelry required by EU	Content of cadmium, nickel, etc		Government's support to establish a testing facility at FHAN for qualitative and quantitative testing of cadmium in the finished products in a non-destructive way is sought on PPP basis
Pashmina	No	No	No	Test for fur diameter below 16.5 micron Conformity test of the quality of raw material wool required for self-confidence		1.Government's support to establish a testing facility at FHAN or independently for qualitative testing of wool fibre (raw or finished products) sought by the associations concerned as they are planning for collective trademark promotion of Nepal Pashmina, with its own brand identity 2. Raw material standard requested and test facilities under PPP sought
Woollen products other than carpet	No	No	Azo dye-free	Wool diameter of around 26 micron Conformity test of the quality of raw material wool required for self-confidence		To introduce quality certificate requirement while importing raw material wool, if Nepal wants to promote Nepalese product or establish one testing facility to examine the fibre diameter and softness of wool for stated purposes
Handmade paper	Yes	Yes			Handmade paper received FSC	

7.14 Priority Actions and Conclusions

Priority Actions proposed under the NITS 2009 are summarized in the Action Matrix.

Nepal has yet to fulfil its WTO commitments in the area of TBTs. The country is lagging behind in updating and drafting laws, in creating institutions, and in making laws and institutions operational.

Some gaps in current technical assistance programmes/projects have been identified. The need for national standards for the products of export interest has been stressed. Further efforts are also to be made to accelerate accreditation of a few major laboratories for test parameters so that they can provide conformity assessment services in Nepalese products of export interest.

Establishment of a packaging material testing laboratory should also be considered.

The stakeholders involved in the international trade need a more effective, transparent, useful, and specialized national enquiry point for the TBT. The GoN needs to commit greater resources, including trained and dedicated staff, to this new facility.

There is a need to look into the establishment of sector-specific PPP test laboratories to serve the sectors involved in international trade, as well as extending some technical support to private sector laboratories for their accreditation process.

The current efforts to create the NBSM and DFTQC as national certification bodies have been encouraging. In the meantime, the private sector should also be given some opportunities to establish a few internationally recognized certifying bodies to cater to the needs of the trading communities. There is also a need to review carefully possible conflicts of interest between the regulatory functions of the NBSM, DFTQC, and other government agencies and their aim to become certification bodies.

There is a need to develop coordination mechanisms among various government agencies involved in standard setting and in the implementation of technical regulations. A separate TBT coordination committee is desirable.

Nepalese industry does not fully understand the role of product standards, technical regulations and conformity assessment in global trade. Exports from Nepal face strict import requirements in export markets and many a times face border rejections. The current efforts to create national certification body have to be stepped up and the private sector should also be given some opportunities to establish a few internationally recognized certifying bodies to cater to the needs of the trading communities.

Chapter 8
Sanitary and Phytosanitary Standards

8.1 Introduction

This chapter reviews Nepal's progress towards establishing an infrastructure of Sanitary and Phytosanitary (SPS) compliance services for exporters. The chapter is organized in four sections:

(1) a brief review of Nepalese SPS-sensitive exports and SPS issues that may have led to market entry difficulties for such goods in potential markets;
(2) a review of the supporting structures and legislative framework in Nepal intended to assist and certify SPS-sensitive exports,
(3) an analysis of commodity-specific issues for the priority sectors identified in Chapter 2; and,
(4) conclusions and recommended future actions.

8.2 SPS-sensitive Exports

Nepal's Sanitary and Phytosanitary (SPS)sensitive Exports

Chapter 2 has identified a number of priority export sectors for support. Among those, cardamom, ginger, honey, lentils, tea (green and black), and, to a limited extent, uncooked pasta are subject to the SPS compliance of importing countries.

Table 8.1 shows exports for those sectors for the last two years. The data in the table is highly aggregated by country, but it is clear that, for SPS-sensitive exports, India is Nepal's primary export market by value. Despite dramatic growth in exports to other markets, India will continue to dominate as a destination market for these agro-food products. The volatile nature of some of the data suggests that the quality of Nepalese trade data is imperfect at best. The porous nature of the border with India allows a significant amount of informal trade between the two countries, which simply is not captured.

Table 8.1
Exports of Sanitary and Phytosanitary (SPS)-sensitive Foods from Nepal, 2007/08 and 2008/09 (in US$1,000)

Number	Groups	Harmonized System (HS) code	F.Y 2007/08				F. Y. 2008/9			
			World (excluding India)	India	total	% India	World (excluding India)	India	total	% India
1	Cardamom	090830	866	15,532	16,398	95	458	18,230	18,689	98
2	Ginger	091010	5	810	815	99	1.3	5,610	5,612	100
3	Honey	040900	2.5	0	2.5	0	20	13	33	41
4	Lentils	071340	4,725	19,663	24,389	81	77,189	1,551	78,741	2
5	Green Tea	090210	222	0	222	0	284	68	353	19
6	Black Tea	090230	648	0	648	0	685	16,221	16,907	96
7	Uncooked pasta	190219	7,998	4,663	12,662	37	2,005	9,613	11,619	83
8	Medicinal Plants / Essential oils	121190	2,230	2,479	4,709	53	8,070	2,477	10,548	23
		TOTALS	16,699	43,149	59,849	72	142,504	142,504	142,504	100

Exchange rates 2007/08 Nepali Rupee - US$ 0.01501
Exchange rates 2008/09 Nepali Rupee - US$ 0.01391

It is not clear what amount of re-exports of Nepalese exports by Indian importers may be taking place. This may well be the case with tea, for example. That being said, all sectors, excepting green tea, show increased value of exports during the 2007/09 period. An analysis is necessary to determine how much Nepal's export trade patterns are affected by SPS compliance before looking at how these constraints may be addressed. Looking at all export sectors that are SPS-sensitive to varying degrees and aggregating the data by trading bloc, the following results are returned for the year 2007/08 (Table 8.2):

Table 8.2

*Pattern of Trade of Nepalese Exports to Main Regions of the World in 2007/08**

SPS-sensitivity	European Union/ Europe	North and South America	Asia
Highly sensitive	1.0	1.1	97.8
Fairly sensitive	1.1	0.5	98.4
Relatively insensitive	1.8	2.1	96.0
Average	1.3	1.2	97.4

* An Index of SPS-sensitivity based on the various SPS subcategories (IPPC, OIE, CODEX, and TPC) as well as the difficulty of compliance has been compiled by the author and is used as a preliminary tool to determine the economic case for SPS interventions.

As seen in Table 8.2, despite the fact that the EU/European and American markets are each larger than the Asian markets in terms of GDP, they are currently insignificant in terms of Nepalese exports. The situation for the group of potential agro-food exports identified in Chapter 2 is similar, and if so, indicates that Nepal would appear to have largely exited from trade with America and Europe. Even within the Asian trading bloc India is the dominant trading partner and there is comparatively little in the way of exports to China, the Republic of Korea, and Japan. The reasons for this could be partially SPS related, but it is important to note that Nepal has other structural impediments to trade—such as trade facilitation, cost of transport, and others--that are not specific to SPS-sensitivity.

Economic Impact of SPS and Food Quality Standards on Nepal's Exports[1]

Table 8.3 shows that, in recent years, there have been several SPS-related trade incidents for Nepalese exports that have had a sizeable impact on formal trade (the approximate value of lost exports described in Table 8.3 exceeds US$24 million). The calculated negative effects from all the bans have been assumed by the World Bank to equate to an economic loss equivalent to a third of the approximate value of exports lost described in Table 8.1, or around US$I0 million over the five-year period used.

These incidents are sufficiently frequent to point to a lack of capacity within the Nepalese SPS support structure. Nepalese officials tend to blame abrupt changes in the policies, regulations, and enforcement level of major trading partners, such as India. While those are factors, they cannot account for all difficulties encountered by Nepalese exporters. Those may also explain Nepal's inability to participate in the lucrative European and American markets (Table 8.2).

[1] This section is derived in part from Annex 11: Safeguard Policy Issues of World Bank Source Report 48346. However, many of the assertions in the World Bank report were independently verified and/or updated.

Table 8.3

*Selected Recent SPS-related Bans on Agricultural Exports from Nepal**

Product	Type of ban	Period	Approximate value of exports lost
Ginger	India banned imports from Nepal due to plant quarantine issues and later due to trade policy	Disruption occurred in 2004	NRs 1.6 billion
Honey	EU and Norway banned imports from Nepal due to lack of monitoring programmes for pesticides and other residues	Banned since 2002/03, though partially circumvented by one producer/exporter	NRs 76 million (approximately NRs 9.4 million for eight years)
Lentils	India banned imports from Nepal due to quality tests and fumigation requirements	For approximately one year in 2003/04	NRs 100 million

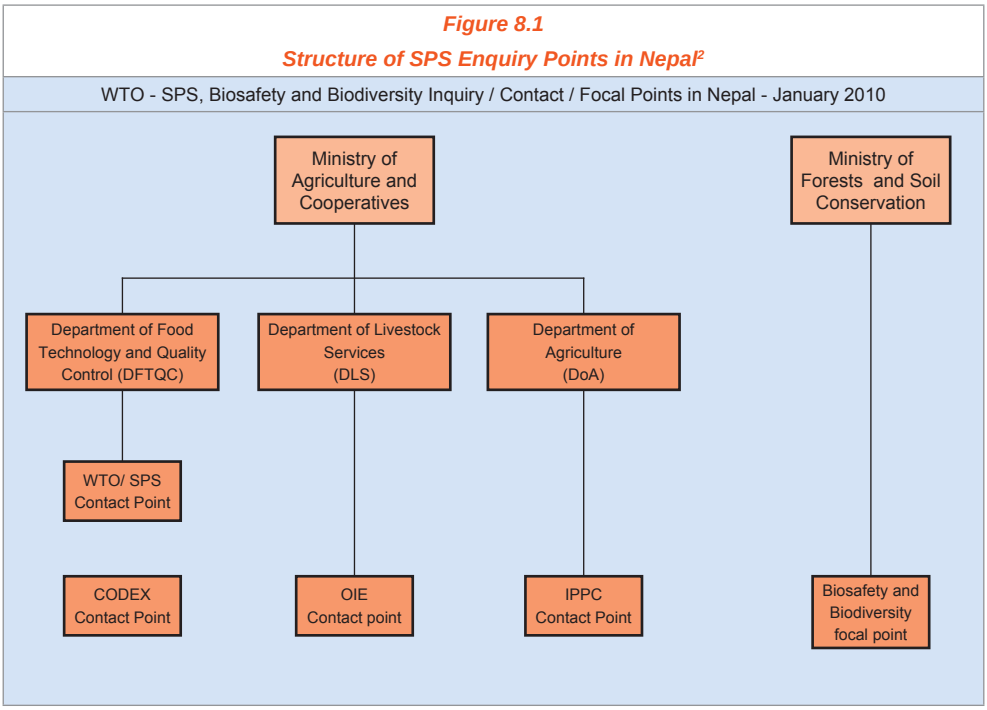
* Source; Report No: 48346-NP Project appraisal document on a proposed credit in the amount of SDR 7.2 million (US$10.71 million equivalent) and a proposed grant in the amount of SDR 6.3 million (US$9.29 million equivalent) to Nepal for a Project for Agriculture Commercialization and Trade (PACT) May 05,2009.

8.3 WTO SPS Enquiry Points in Nepal

Nepal has largely complied with the WTO requirements in setting up its SPS enquiry points and in notifying the relevant WTO structures of relevant legislation, regulations, border crossings, and so on. Websites have been set up for all the SPS enquiry points, and addresses/contact details for these were more or less up to date, with the exception of the details for the Nepalese plant protection contact point on the International Plant Protection Convention (IPPC) website. The main SPS website for Nepal is slightly out of date and needs revisiting.

Figure 8.1

Structure of SPS Enquiry Points in Nepal[2]



[2] Acronyms refer to the following: CODEX is the commonly used acronym for the CODEX Alimentarius Commission hosted by FAO and jointly run by the FAO and WHO. CODEX sets minimum standards for foods and food safety. The OIE is the commonly used acronym for the World Organization for Animal Health, a Paris-based body under the WTO SPS Agreement that is responsible for setting trade standards in animals and to some extent in animal products. Post-mortem animal products are a grey area and there is some collaboration between the OIE and CODEX on standards in fresh meat products, in particular to residues in meat and some meat-borne zoonoses. The IPPC refers to the International Plant Protection Convention, which is hosted by FAO at its Rome headquarters and is responsible for international standards in trade that affects plant health.

General

Nepal's general and specialist SPS enquiry points are maintained within the MoAC. The Ministry has four departments respectively dealing with food technology (DFTQC), animal health (DoLS), crop production (MoAC), and cooperatives (Department of Cooperatives, DoC). The general SPS and CODEX Alimentarius enquiry points are maintained by the DFTQC. CODEX is the international food standards-setting body run jointly by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO). The Organisation International pour les Epizooties (OIE) animal health contact point is maintained by the DoLS. The plant health (IPPC) contact point is maintained by the DoA. This is shown in Figure 8.1. A brief explanation of the acronyms and functions of the corresponding WTO organizations is given in the endnote to Figure 8.1.

WTO SPS Enquiry Point: DFTQC, Legal Status and Organization

The DFTQC is the designated WTO SPS enquiry point for Nepal. An SPS central coordination committee has been formed headed by the Secretary, MoAC, with representation from MoCS, MoFSC, MoHP, as well as the Animal and Plant Quarantine offices within the MoAC. The private sector members of the Federation of Nepalese Chambers of Commerce and Industry (FNCCI) also work with government and also function as the main lobbying organization on behalf of business. A website has been launched by the DFTQC to disseminate information about SPS matters in general. This has links to the other specialized SPS enquiry points.[3]

The SPS enquiry point at the DFTQC is part of a complex that includes food testing laboratories as well as the headquarters building. New laboratory and head office buildings are under construction with assistance from the Japan International Cooperation Agency (JICA). The upgrade of laboratory equipment, training, and a wide range of supporting activities are underway at the DFTQC and the NBSM with funding by the EU and implementation by the United Nations Industrial Development Organization (UNIDO), UNESCAP and *Physikalisch-Technische Bundesanstalt* (PTB, the national metrology institute of Germany).[4] The current headquarters building is inadequate for the purpose and the new one will have facilities for holding workshops, training sessions, and other larger meetings, as well as better library facilities for CODEX and other related literature. There are interactions with WHO Food Safety (FOS) programme that supported the drafting of a national food safety policy, which became available at the end of 2006 and probably needs further public discussion and consultation. The WHO FOS programme covers the food safety dimension of public health, but funding under this programme is limited.

In addition, the department has been given considerable assistance to attend regional and international SPS meetings. As part of general awareness-raising within Nepal, the DFTQC has been circulating the schedule of these meetings to interested parties so that they can attend them, if they so desire. The DFTQC also has established the National SPS Committee with representation from a range of members, including the MoHP, MoCS, and the FNCCI. There are plans to set up 17 subcommittees for different commodities, but, as yet, these are not functional.

[3] http://www.spsenquiry.gov.np/. This site has links to both the plant (http://www.ppdnepal.gov.np/) and animal health (http://www.dls.gov.np/) websites dealing with SPS issues.

[4] Anonymous (2009), Revisit of Indicative Timeline by NBSM/DFTQC as per decision of the Technical Committee Meeting – Submitted to Programme Steering Committee Meeting, 30 July 2009 (Amended based on stakeholder comments and discussion, 20 August 2009) Annex II. - Indicative Timeline (20 August 2009).

CODEX Contact Point: DFTQC, Legal Status and Organization

To some extent the CODEX contact point's functions and legal status overlap with the SPS enquiry point described above, including personnel, offices, and facilities. This has blurred the distinction between CODEX and general SPS functions in some areas within the DFTQC. However, given the limited resources, it is not necessarily an issue. The fact that other specialist SPS functions reside within other departments of the MoAC may rebalance any distortions. The DFTQC is the governmental agency charged with implementing the Food Act 2023 (1966) and the Food Regulation 2027 (1970). This Act has been rewritten with technical assistance from FAO in 2004, but the new act is still under review and has yet to be submitted for the legislative process.

Nevertheless, the DFTQC has been participating in regional and international CODEX activities with support from various UN agencies and has initiated a series of initiatives related to food safety. These include:

1. Initiation of a registration scheme for exporters and importers of food products. The scheme is voluntary for exporters but compulsory for importers. So far, no locally-based exporters have registered under the scheme. The registration process involves an application followed by factory/premises inspection by the DFTQC to ensure that basic food handling rules are used and applied. The current intention is to phase in this process as a legal (i.e. compulsory) requirement. Under this scheme, imported food products undergo compulsory testing to ensure compliance with existing Nepalese standards. The intention is to require full traceability by all enterprises at some point. It may be that market-driven certification (see the following point) may be extended to all food manufacturers in Nepal as one way of implementing the scheme. WTO accession has enabled the DFTQC to access better information from CODEX free of charge.

2. In terms of future compliance with the food safety standards, the DFTQC intends to set up guidelines/ standards for the necessary Pre Requisite Programmes (PRPs)[5] as well as internationally acceptable food safety certifications, including those for Hazard Analysis and Critical Control Points (HACCP).[6] The intent is that certification will be carried out by the GoN-approved commercial entities that are also recognized internationally. A specific issue is that regionally-based certifying entities do exist, for example in India, that are internationally accredited and cost-effective. The intent is that certification will be compulsory for all food exporters at some point in the future. However, it is recognized by the DFTQC that the main driver for certification will not be the domestic regulatory environment in Nepal but the end user and/or importing country. National standards for iodized salt and bottled water have already been drafted and gazetted.

Capacity for food testing is being developed to meet international standards in the foreseeable future. In addition to the institutional strengthening inputs described above, the World Bank PACT project has an SPS component focusing on food quality and safety enhancing activities through improving of laboratory facilities and certification capabilities as well as technical assistance and capacity-building measures to meet food safety and quality standards. An additional dimension is that PACT will also provide technical assistance to industries to help them meet hygiene requirements so as to more easily comply with importing country authorities and private sector importers.

The general environment under which Nepalese food manufacturers operate is a matter of concern. More specifically, the level of public health in Nepal related to water and food-borne illnesses is poor. Given that

[5] The Prerequisite Programmes include good agricultural practices, good manufacturing practices, good hygiene practices, proper document management, traceability systems, and any necessary supporting infrastructure.

[6] HACCP: Hazard Analysis and Critical Control Points. HACCP certification is the apex of a process that involves setting in place the necessary PRPs (see previous endnote) as well as a culture of continuous improvement.

a crucial part of the PRP necessary to gain HACCP accreditation relates to worker health and their home environment in addition to the general environment of a food handling entity and its raw material suppliers (notably access to clean water and proper waste disposal), the poor public health environment will act as a clear hindrance to exporters. A basic requirement in this area would be the implementation by municipalities and other directly concerned entities of existing clean water standards through proper provision of clean water, proper treatment of waste water and proper monitoring of progress through the national recording of food and water-borne diseases (this may be the case, but the data is not to hand).

IPPC Contact Point: Department of Agriculture, Plant Protection Directorate (DoA/PPD), Legal Status, and Organization

Nepal became a member of the IPPC on September 13, 2007. However, before this date Nepal was a member of the Asia Pacific Plant Protection Commission. While not a member of the IPPC at the time, Nepal enacted a Plant Protection Act in 1972. The original act has been revised with technical assistance from FAO in the form of a new Plant Protection Act, which was enacted in 2007. The new act has corrected several deficiencies in its predecessor by aligning Nepal's legislative framework more correctly with the IPPC and the WTO SPS Agreement. However, the necessary regulations under the new act have yet to be approved by the Council of Ministers; so at present plant protection in Nepal is enforced under the previous Plant Protection Regulations approved in 1974 under the Plant Protection Act of 1972.

Responsibility for applying the Act lies with the Plant Protection Directorate (PPD) at the DoA. This responsibility includes most functions required of an IPPC member, but, crucially, due to a technical issue relating to the fact that the PPD is still operating under the 1974 Plant Protection Regulations, it still does not fully control import conditions for imported plants.

The PPD operates at 15 border posts, including three crossings into China, eleven crossings into India and one at Tribhuvan International Airport. It maintains the pest list/phytosanitary database for Nepal and has completed 28 pest lists for specific commodities, including seven in respect of imported commodities. There are basic pest identification facilities at the border crossings, but taxonomic backstopping is primarily carried out by the Agricultural Research Services Directorate within the DoA. There is no provision for international taxonomic backstopping.

Support for specific commodities includes:

1. Fresh ginger: Trying to get market access into China through the compilation of a pest list. Currently, there are no phytosanitary problems for fresh ginger exports to India or for dried products to either country;
2. Pulses: Running fumigation facilities using methyl bromide[7]
3. Cardamom/medicinal herbs/tea: Currently, no phytosanitary issues
4. Wood products, including packaging and curios: Heat treatment or fumigation
5. Bananas and citrus: Currently, these fruit cannot be exported to India and attempts are in progress by the PPD to ascertain what the issues are and see if these can be mitigated

A specific and emerging issue is that of fruit flies for which the PPD is trying to develop capacity for determining pest status, distribution, surveillance, and taxonomic services.

[7] In this respect, India, the main customer, has no problem with the use of methyl bromide despite the Montreal Protocol in respect of ozone depleting chemicals. Some markets that are more sensitive in this regard require the use of fumigation by aluminum phosphide instead.

A benchmarking Phytosanitary Capacity Evaluation (PCE) was carried out by FAO in 2003-04 soon after Nepal's accession to the WTO. Since then there have been a significant number of changes in the PPD and the threats it faces such that it would be appropriate to repeat this exercise so as to determine the medium-term priorities for action.

Management of Agrochemicals in Nepal: Legal Status and Organization[8]

Pesticides, including their registration, use, and potential residues are a significant SPS issue for Nepal's food exports. Due to the lack of third party certification (TPC), Nepal's trading partners require batch/consignment testing of agricultural/food exports for pesticide residues – often at the port of entry/country of destination. Therefore, it is important to review the regulatory environment for agrochemicals and their use in Nepal.

Nepal passed its first Pesticide Act in 1991. The Pesticide Rules under this Act were approved in January 1993 and the Act and the Rules became operational in mid-1994. The Act regulates the import, manufacture, sales, distribution, and use of pesticides within the country. It established a Pesticide Registration and Management Division in the DoA. A Pesticide Committee composed of members from various interest groups has also been established. A system for regulation, control and management was established that requires import certificates and reseller licences issued by the registration agency. Registration is required for each formulation and brand of pesticide. The Act also manages the Pesticide Inspectors (PIs), who represent the enforcement arm of the government in 75 districts to monitor pesticide sales, storage, quality, use and disposal as well as advising the farmers on safe use practices of pesticides.

The PPD is responsible for general pest management as well as new programmes such as the introduction of integrated pest management (IPM). Nepal's Tenth Five-year Plan officially recognized the need for IPM, which is now the national pest control strategy. The Agriculture Perspective Plan (1997-2017) also emphasizes the need for IPM. Once registered for sale, the product is subject to monitoring for quality. PIs are empowered by the Act to monitor pesticides throughout Nepal. In theory, random samples of agrochemicals are collected from dealers' shops and any necessary action can be taken to prevent distribution of improper pesticides. Most pesticides used in Nepal are imported from India. Use of chemical pesticides in Nepal is one of the lowest in the region. However, use of pesticides is much more intensive in commercial crops such as vegetables, fruits, tea, rice, and cotton. There are many reports indicating that incorrect pesticide application in these crops is widespread. Persistent and hazardous chemical pesticides have been banned or phased out for use in agriculture and public health from mid-2001. Quinalphos, ethion, monocrotophos, and phorate have been phased out from application on tea from mid-2005.

Nepal is executing a project to implement the Stockholm Convention on Persistent Organic Pollutants (POPs). More emphasis is now being given to organic pesticides, such as microbial and botanical, as an alternative to chemical pesticides to control crop pests, making IPM a widely accepted alternative. Phasing out of environmentally-unfriendly pesticides requires rigorous approval of the newer, safer, and biologically-specific molecules. The Government has already conducted and is regularly launching training programmes to educate the personnel concerned.

Where CODEX or national standards of an importing country do not list a permitted residue limit, then the default limit is set at the Limit of Detection (LoD) irrespective of the permitted level or registration status of the agrochemical in the exporting country. It cannot be too strongly emphasized that CODEX maximum

[8] Based in part on; Bhakta R. Palikhe, Pesticide Management in Nepal, Regional Workshop on International Code of Conduct on the Distribution and Use of Pesticides: Implementation, Monitoring and Observance, Bangkok, Thailand, 26-28 July 2005.

residue limits (MRLs) are often only the base standard and that individual countries and trading blocs (the EU for instance) set their MRLs much lower--generally at the LoD. Therefore, Nepal must move proactively to address this issue.

World Organization for Animal Health (OIE) Contact Point: DoLS, Legal Status and Organization

Nepal joined the OIE in 1996 and has been an active member since then. Immediately following OIE accession Act No. 7 of the year 2055 (1998) An Act Made to Provide Necessary Arrangement[s] Relating to Animal Health and Livestock Services (shortened to the Animal Health and Livestock Act 1998) was passed, followed by the Nepal Veterinary Council Rules, 2057 (2000). Subsequently, the Slaughterhouse and Meat Inspection Act 2057 (2001) was passed the following year. There was also a pre-existing act, the Animal Feed Act of 1976, which sets guidelines and provisions for standards and enforces standards for locally produced and traded animal feedstuffs. Although not specified in any of the legislation, these are all de *facto* administered by the DoLS, which is also the OIE contact point for Nepal.

In 2005, the OIE carried out a Performance of Veterinary Services (PVS) evaluation in Nepal. The results of this mission are still confidential, but it is understood that its findings were that almost all the functions of the DoLS lagged behind the world standards. Partially as a result of this mission, the DoLS is reviewing the Animal Health and Livestock Act 1998 and the Nepal Veterinary Council Rules (Regulations) 2000 , using its internal resources. There has been no request from the GoN for assistance from the OIE to upgrade veterinary legislation, though the OIE does provide this service. However, many of the deficiencies identified in the PVS evaluation are the subject of requests to various donors. Upgrading includes the provision of a PCR[9] machine, together with training in its use and laboratory certification to the International Standards Organization (ISO) 17025 standard as well as test method certification. This is being provided by the OIE with financial assistance from Japan.

Reporting by Nepal to the World Animal Health Information Database (WAHID) has been diligent in respect of most diseases such as H5N1 Highly Pathogenic Avian Influenza (there was an outbreak in Nagaar Nagarpalika Jhapa, in Mechi district on the southern border with India in early 2009), which was resolved by culling approximately 26,000 backyard fowl. However, non-OIE-listed diseases of zoonotic potential are not reported. An area of concern is that the OIE-listed diseases of honeybee are not included in the DoLS surveillance or reporting.

Biosafety National Focal Point: Ministry of Forests and Soil Conservation, Environment Division (MoFSC/ED), Legal Status and Organization

Nepal signed the Cartagena Protocol on Biosafety and the Convention on Biological Diversity in early 2001. Under this protocol the focal point for Biosafety in Nepal has been run by the MoFSC, Environment Division (MoFSC/ED). Within Nepal, eleven policies and 16 Acts are deemed to be specifically affected by Nepal's accession to the Cartagena Protocol. This includes all the Acts administered by the SPS focal points as described above.[10] The MoFSC/ED is also involved in other issues such as sustainable forestry certification, as well as aspects of implementation of the International Convention on Trade in Endangered Species (CITES) in animals (musk deer parts, tiger bones and skins, rhino horn, and red sandalwood).

[9] Polymerase Chain Reaction (PCR) equipment is used for identification of diseases at molecular level.

[10] National Biosafety Framework Nepal, 2007, Government Approved: March 2007. Prepared by the MoFSC with the help of the United Nations Environment Programme and the Global Environment Facility.

The main proposal of the National Biosafety Framework policy document is the creation of a National Biosafety Coordination Committee with membership of all current members of the SPS Committee (Figure 8.1) as well as the DPR and Department of Drug Administration. This proposal is under discussion and has yet to be taken further.

8.4 Commodity-Specific Issues for SPS-Sensitive Export Potentials

Cardamom

Introduction

Large cardamom is an important cash crop of eastern Nepal, and there are opportunities to both intensify and expand production areas. The price for cardamom has been good in recent years due to inadequate supplies of large cardamom internationally. Both Sikkim and Bhutan have disease problems, which have reduced production. In addition, in Bhutan, farmers lost their right to cultivate crops in forest lands in 1992. There is no reason to believe that production in India will increase soon.

Traditionally, large cardamom is cured in a *'bhatti'* where the capsules are dried by direct heating. Under this system, cardamom comes in direct contact with smoke, which turns the capsules to a darker browner black colour with a smoky smell. Improved curing techniques are available by which cardamom is processed to give better quality and appearance. One such method is the improved *bhatti* system of curing in which cardamom is dried by indirect heating. Improved smokefree *bhatti,* which retains the original pink colour, is becoming more known, though it needs to be further improved. While smoke-free *bhatti* has been heavily promoted, it is important to note that it is still not a distinct item in the market. Often, it is simply mixed into conventionally dried *bhatti* and thus loses its potential premium price.

Production and trading is still the domain of small family-owned small businesses with limited forward or backward linkages in the supply chain. India has been the primary export market for Nepalese large cardamom until recently, but other export opportunities are opening up. Exporters, by and large, need to improve their performance in the areas of grading, quality assurance, further quality improvement, and market diversification. There is very limited support in the form of assistance in rejuvenation of existing plantations, scientific research, development of improved planting materials, extension training in pest and disease control, and in improved *Bhatti* curing to make better quality produce.

SPS Issues

Large cardamom is used in food preparations mainly in north India, Pakistan, and Bangladesh and in a small way in the UAE, UK, USA, Canada, Singapore, and Hong Kong. The enforcement of food safety laws in Asian countries is not strict and the hygienic quality of large cardamom has never been an issue in those countries. This may be partly due to the reason that many countries in Asia have not examined large cardamom for contaminants that could be introduced during cultivation, processing, and handling. The USA and EU, as well as other developed nations, are yet to prescribe specifications for large cardamom. No specific standard prescribed for large cardamom has been set by CODEX, though the ISO has drawn up standards for the product.[11]

[11] ISO 10622 1997 (E), which prescribes moisture at 12% maximum 12%, volatile oil minimum 1%, total ash maximum 8% and acid insoluble ash maximum 2% for capsules and seeds.

The viral diseases *chirke* and *furkey* pose a threat to large cardamom production and are seen throughout the large cardamom growing tracts of Sikkim and Darjeeling in India where they have caused considerable crop loss to Nepal's short-term advantage. These diseases have spread due to changes in the ecosystem, inadequate rain in dry months, and absence of good agricultural practices (GAPs) by farmers. Many cardamom farmers in those regions failed to plant varieties suitable to their altitude. The threat posed by these diseases requires vigorous action on the part of the Government, requiring a combination of the control on imports of plant material, particularly from affected countries, the introduction of virus-free planting material of suitable cultivars, introduction of GAPs, including the use of indexed plant material, destruction of infected plants, and use of management techniques to reduce disease transmission. A crucial part of this management strategy is the control of plant movement across international borders.

The development of GAPs and pest management guidelines based on a full pest risk assessment (PRA) for cardamom is urgently required. While India and other importing countries have no plant health issues with cardamom *bhatti* (smokefree or otherwise), Nepal should be deeply concerned about the virus and virus vector problems which have caused great concern in the nearby production areas in Sikkim and Bhutan. The DoA should have full authority and control over import of plant material--currently not the case as regulations based on the new Plant Protection Act have not been approved—and any attempt to manage cardamom diseases within Nepal needs to be backed up by controls on international movement of cardamom germplasm.

Quality management through GAPs and improved post-harvest techniques (good manufacturing practices [GMPs]), and traceability are essentially the domain of the marketing organizations and should remain market-driven. That being said, there is a role for the government in, for example, providing virus indexed plant material. The introduction of grading standards should be encouraged, but again these are essentially market-driven. Encouragement through non-government organizations (NGOs) to develop a Nepali brand for cardamom, via a growers/exporters export council, is recommended as buyers in Siliguri, the world's largest trading centre for large cardamom located in eastern India, fully recognize Nepal's current reputation for high quality. Developing new products, market testing, and implementing quality testing are also necessary activities.

Government plant protection specialists can help devise and implement a certified nursery and replanting scheme. The private sector (marketers and growers), with help from NGOs, can help with quality upgrading and traceability through capacity building in the industry, i.e. developing a proactive attitude and culture among participants to continuous improvement, including developing GAPs, traceability and, if justified, organic certification.

Ginger

Introduction

As noted in Chapter 2, ginger is a crop with reasonable potential for Nepal. Export values doubled from 1994 to 2003, almost all of it exported to India. About 75 per cent of production is traded fresh with the remainder dried. Consumers of fresh ginger regard Nepalese ginger as inferior to Indian and Jamaican ginger and to the elite varieties of other countries because of its high fibre content and dirty appearance. Production and trading are handled by small family-owned businesses with limited to non-existent forward or backward linkages in the supply chain. Nevertheless, there are areas of land that could be brought into ginger cultivation, which, together with improved production techniques, could increase prospect for this crop. There is a further potential to diversify Nepal's ginger production into processed products. Probably, the most attractive markets for Nepalese ginger are Pakistan, Netherlands, Malaysia, the USA, and Singapore, but it should be noted that China, which attained three quarters of the total world market in 2005, is likely to be a serious competitor in these markets. More distant markets such as the USA may not be realistic options for exporters because of high transport costs.

Despite these constraints, ginger is Nepal's most important spice export and production of this crop is the main cash crop for the small farmers of mid-hills. Environmentally, ginger cultivation contributes towards reducing soil erosion . There are two potential new opportunities: processing ginger extracts (oleoresin) and the introduction of higher yielding and better quality cultivars.

SPS Support and Third Party Certification [TPC) Required for Ginger Exports

The main destination market, India, has the following import requirements for ginger. Rhizome ginger from Nepal for domestic consumption must be accompanied by a phytosanitary certificate and must be free from quarantine weed seeds and soil. Rhizomes for propagation from Nepal must be free from soil and are subject to a post-entry quarantine of two or three months. On paper these requirements are fairly straightforward, though there is anecdotal evidence that inspections will generally find 'evidence' of soil even in well washed consignments. In terms of existing capacity within the DoA for phytosanitary export certification of ginger there are no significant issues. However, all ginger entering India from Nepal has to undergo a further pesticide residue test at border points. The samples require about three days for the results to return, during which time the consignment has to wait at the Nepal-India border crossing. The residue testing and soil issues have affected trade in Nepalese ginger in past years (Table 8.3).

Suggestions for developing organic ginger and oleoresin production do present some problems. Access to the necessary certification requires a strongly structured sector with larger commercial processing and marketing companies working with well organized smallholder associations. The lack of farmer and marketer knowledge and techniques in production, grading, packaging, and post-harvest handling, as well as in ginger processing technology, is a severe and ongoing constraint.

There are some potentially significant government interventions in this sector, including a Government Ginger Research Farm that has released a new and improved variety suitable for the Nepalese soil and climate that could maintain the low fibre content of the Bose variety in all environments. Furthermore, the GoN has supportive policies in place for the crop as it is deemed a high value crop. Within the MoAC, the DFTQC has the technical capacity to provide technical support on ginger processing and the DoA has set up a Ginger and Spice Development Programme for technical support and also (through another programme) provides marketing information services to producers and traders. A number of NGOs provide farmer support.

Honey

Introduction

Honeybees are present both in the temperate mountain region and in the hot, humid, subtropical Terai region of Nepal. There are four indigenous honeybee species, including the Asian honeybee, *Apis cerana.* Beekeeping with the Asian honeybee using a variety of fixed comb hives is common and well established in Nepal. It must be noted that the use of fixed comb hives is illegal in many countries for SPS reasons. Several types of movable frame hives have been introduced, supplemented by training and extension services, in attempts to improve beekeeping management techniques with the Asian honeybee. The European honeybee, *Apis mellifera,* was recently introduced mainly in Kathmandu Valley in 1998. Colonies of European bees were imported into Nepal in expectation of greater productivity--possibly four times as productive--and to overcome supposed problems with Thai sacbrood disease in the Asian honeybee. No government regulations exist concerning the importation of exotic species.

Though a number of bee diseases are OIE notifiable, none have been posted by the DoLS in the WAHID database. Previous surveys indicate that, at the least, Thai sacbrood virus, European Foul Brood, *Varroa jacobsoni,* and *Tropilaelaps clareae* are present in Nepal.

SPS issues Affecting Trade in Honey

Nepalese honey has been found to have excess levels of hydroxy methyl furfural (HMF), most probably due to poor post-harvest management. The EU used to be the largest buyer of Nepalese honey until 2001/02. In the latter part of 2002, Norway[12] banned Nepalese honey from entering its territory because no national residue surveillance plan was in place (to export honey to any EU member country it is necessary to be listed under EU Directive 92/118/EEC of December 17, 1992 [Third Country List]). To be on the list Nepal is required to show that administrative and working procedures are in place for the analysis of honey for various residues and contaminants. The laboratory (not necessarily a national one) used in determining these residues has to satisfy the EU accreditation requirements. Failure to comply with these stipulations has already created problems for honey exports from Nepal, affecting a significant number of farmers. The plan for surveillance submitted by the DFTQC was not accepted, but some exports do continue to Holland on the basis of the full testing of all consignments. A further issue is the potential for Nepalese honey to contain grayanotoxins (arbutin glucoside), which comes from rhododendron nectar–concern to markets such as Korea. Private sector standards in the form of TPC are an increasing requirement for market access and value addition. Currently, it appears that the primary interest in the market is for organic certification, apparently of more interest to markets than HACCP.

Currently, the primary responsibility for honey lies with the DFTQC. However, the issues go beyond technical standards for honey and the formulation of an EU acceptable surveillance and monitoring plan. Honeybee health is an OIE function under the Terrestrial Animal Health Code (TAHC) and, therefore, technically the responsibility of the DoLS in terms of the SPS agreement. However, few veterinarians and even entomologists are knowledgeable enough about apiculture to fulfill this function. Therefore, some thought needs to be given how to progress all bee and honey issues within Nepal. Development of a policy framework and appropriate legislation in close consultation with the private sector could be the best route. The government must put in force adequate and updated laws and regulations and strictly implement these in maintaining quality and standard. Basic research on the honeybees and honey of Nepal is sparse. This type of research is particularly important, given the wide range of Apis species present in Nepal, the recent uncontrolled introduction of the European honeybee into the country and the potential for species crossing diseases (e.g. *Nosema cerana,* which, in recent years, has crossed the species constraint from *Apis cerana* to *Apis mellifera*).

Nepal must prepare *and implement* a credible residue control plan for resubmission to the EU. This residue plan should be via a PPP. For example, in both Zambia and Ethiopia, honey monitoring and surveillance is effectively led by the private sector, though in both countries the relevant government departments remain the EU-recognized competent authority.[13] Monitoring and surveillance, as well as TPC, requires a good traceability system. This is also necessary for the control of bee pests and diseases and is a cornerstone of the OIE TAHC.

There must be an agreement on national standards on honey and honey management. These must be set with a view to market access and not just the minimal standard set by CODEX. A fully accredited 'Testing and Certification Laboratory' in Nepal or full access to one in another country is essential (note that a *national* laboratory accredited to satisfy the EU requirements is *not* a prerequisite for EU access). Zambia is a listed third country without having any EU approved honey-testing facilities at all and Ethiopia used a laboratory in Uganda when devising its initial surveillance and monitoring programme.

Apart from the EU requirement for a national surveillance and monitoring programme from a private sector perspective, market access is primarily determined by the TPC. This issue is crosscutting and not specific to honey and so is covered in a separate section altogether. At this point, it is sufficient to note that traceability

[12] Norway is not a member of the EU, but it generally applies EU food standards.
[13] Greiling, J., (2008), Facilitating EU Third Country listing for Ethiopian Honey.

and technical compliance will need to be demonstrated by the producers through HACCP certification. Value adding such as organic certification has been identified as being in demand by markets. To date the industry has been largely unregulated, and actions, such as the introduction of *Apis mellifera,* have unknown consequences for the ecology of Nepal.

Lentils

Introduction

Lentils represent 60 per cent of the national pulse production and 90 per cent of pulse exports. The crop originated in West Asia and lentils have become important in Nepal's diet in the past two decades with continuous growth in the area planted to the crop occurring since the 1960s. A major reason for this has been the steady increase in lentil prices. Expansion of lentil production has also been encouraged by a number of other factors, including reduction in grass pea cultivation and as a rotation crop for rice in the Terai.

Lentil production occurs in all but two trans-Himalayan districts in Nepal,, but the most significant commercial production is concentrated in the Terai where climate and soil conditions are most favourable. The 'top ten' lentil producing districts account for 79 per cent of national production.[14] Average yield in these districts is close to 1 tonne/ha (948 kg/ha). These districts alone have about 670,000 farmers cultivating the crop. The sale of lentils relies on the collection of small commercial surpluses in each household. Commercial production accounts for only a marginal share of national production.

SPS Constraints and Quality Standards in Lentils

In the past, Nepal has exported lentils to a number of OECD countries such as the USA, Korea, Bulgaria, and the UK. Nepal has lost its market share in these markets for SPS reasons and the lack of product TPC certification. Similarly, other important markets such as Spain and France are, at present, not accessible due to the prevailing food safety standards and certification requirements.

For developing countries such as India, the South Asian Free Trade Area (SAFTA), Bangladesh-India-Myanmar-Sri Lanka-Thailand Economic Co-operation (BIMSTEC), the South Asian Association for Regional Cooperation (SAARC), SPS requirements are less stringent and currently there seem to be no major obstacles for exports. However, India has begun to apply strict SPS requirement for other commodities and is likely to require some form of compliance for Nepalese lentils in the future. Independently from regional trade agreements, countries in South Asia at large may begin to impose unilateral measures of restrictions on imports based on SPS criteria (which would be most likely those of CODEX, i.e. limits on heavy metals and pesticide MRLs). Three key products at stake in MRLs are an insecticide (Deltamethrin), a herbicide (Diquat), and a foliar fungicide (Pyraclostrobin). In fact, it appears that the use of agrochemicals in lentil crops is almost negligible in Nepal. Nevertheless, demonstration of compliance through TPC is likely to be an issue in the future.

Nepalese lentil exporters must expect the potential for the South Asian markets to increase their own compliance with CODEX standards, as well as potentially regain lost markets in Europe and elsewhere by overcoming these SPS constraints. Realistically, exporters will have to obtain TPC and testing for presence of agrochemicals and heavy metals via certified Indian institutions or with certification from the recipient countries. The NBSM has fixed standards for split lentils in Nepal. Based on the latter, the DFTQC provides quality and/or grade certification to whoever wishes to submit samples.

[14] Sarlahi (Central), Bara (Central), Dang, (Mid-western), Rautahat (Central), Kailali (Far West), Bardiya, Parsa (Central), Sunsari (Eastern) Banque (Mid-Western), Banque (Mid-Western), Saptari (Eastern).

Indian phytosanitary standards require that Nepal can only export lentils that are free from soil and have been fumigated with methyl bromide or equivalent or any other treatment approved by the Plant Protection Adviser to the Government of India and that the fumigation treatment is endorsed on the phytosanitary certificate accompanying the shipment. Currently, the DoA provides for the fumigation and certification of lentil exports to India. There is no other SPS support for lentil export from Nepal, though agrochemical registration is based largely on Indian standards, which presumably are themselves based on CODEX standards.

Future government/private sector interactions rest on the continuing market access with the likelihood of increasingly stringent CODEX-based requirements being required by the Indian government and private sector. Forward planning should include a review of fumigation and agrochemical registration based on at least the possibility of Montreal Protocol (which may stop the use of methyl bromide for fumigation[15]) and CODEX standards for agrochemical MRLs. Government support to a producer/marketer-led lentil exporters association will be necessary. This association and/or its constituent members can 'work towards' TCP certification, which must, in the final analysis, be market-driven.

Tea

Introduction

Although tea growing has been established for about 150 years in Nepal, it was not until 1982 that its significance as an export earner was identified by the government, together with the designation of the eastern districts of Jhapa, Ilam, Panchthar, Terhathum, and Dhankuta as tea zones. From then on, there has been formal assistance to the sector from government. The Nepal Tea and Coffee Development Board Act passed in 1993, together with the formation of the Tea Board. A National Tea Policy was introduced in year 2000 to support the growth of the sector. The Government also privatized their holdings at that time. Significant increases of exports in quantity and value of tea have occurred, though the crop constituted only 0.25 per cent to the total export earnings of Nepalese export earnings in 2007/08. Due to a significant number of individual or separate interests and a lack of readiness to work together, the sector remains weaker than it could be. Despite this, a large number of people, including small holders, are engaged in growing tea with over 30,000 people directly involved in the industry, including a large percentage of rural women. The potential for employment of rural women and poverty alleviation has ensured that tea has been the focus of attention of international organizations and NGOs in Nepal. The tea produced in the Terai region originates predominantly from clone bushes, which are very similar to those of the Indian Siliguri region, and producing similar crush-tear-curl (CTC) type of tea. Orthodox tea grown in the hill regions mainly from seedling varieties is very similar to the Indian Darjeeling tea.

SPS Issues in the Tea Sector

Tea in Nepal is attacked by a range of arthropod pests and diseases. These pests in many cases require the use of agrochemicals, which, in turn, requires exporters to demonstrate to buyers that these chemicals have been correctly applied. It is frequently asserted that incorrect and high application of agrochemicals has led to high

[15] The fact that the hole in the ozone layer (caused by chloro-fluoro carbons and more controversially by bromine compounds used in fumigation) has largely recovered but has not led to any easing of the provisions of the Montreal Protocol, especially in terms of TPC. Therefore, it is prudent to assume that alternative fumigation chemicals will be required at some point in the future.

MRLs as well as environmental side effects. While this may be true for other commodities it may not be so for tea.[16] There are no CODEX standards set for tea as yet, although some preliminary work has been conducted. It is the intention of the DFTQC to prioritize the setting of standards in the preparation of manuals based on CODEX/ISO in making original listings. A Nepal tea standard has been set. The overall limiting factors are stricter than the Indian standard. The Nepal Government tea standard complies with ISO 3720 internationally accepted parameters for made tea.

Buyers expect exporters to meet internationally accepted and importing country standards that have been set for MRLs and heavy metals. The usual way in which compliance is enforced by the buyer is through insistence on TPC for growing, handling, and traceability practices put in place by the seller. Such certification would include an in-house programme of testing for MRLs. Due to the lack of acceptable TPC in Nepal, buyers are increasingly asking for a pesticide MRL certificate on a consignment/batch basis. This exercise takes about three weeks, and is expensive. Since there are no suitable laboratories in Nepal equipped to carry out all the required tests nor is there a suitably accredited TCP certification company in the country, samples are sent to Indian or other foreign laboratories, a costly and timeconsuming exercise. Within this context, adherence to PRPs, including GAPs and GMPs, which together with the Code of Conduct (CoC) drawn up by the Tea Alliance are steps in the right direction to achieve the goal of full TPC.

The tea grower CoC was developed by the Global Development Alliance for Tea Crops with the participation of GTZ, USAID, Winrock, FNCCI, AEC, NTCDB, SNV, HOTPA and HIMCOOP to improve tea production standards in Nepal. The CoC is based on standards outlined by IFOAM/CODEX/The International Social and Environmental Accreditation and Labeling (ISEAL) and Alliance and Social Accountability International. Once the CoC is implemented, the next step would be the creation of an agency to assess and issue certificates independently on the product conforming to GAP and GMP practices as a necessary first step to obtaining HACCP certification. Some factories in the hill areas have already been successful or are in the process of obtaining these certifications. Financial assistance for certification costs of up to 20% is being considered as a package by some donor agencies. UNIDO assistance with technical guidance from FAO on the necessary equipment and testing of tea is underway. This will enable the DFTQC to test tea for various properties, MRLs and, if required, microbiology. The NTCDB has conducted a study that identifies new tea production areas of virgin land for growing of organic tea.

At the outset, it is crucial to understand that the TPC such as HACCP actually *reduces* the frequency of food testing of the end product, particularly in terms of pesticide MRLs. Thus, while pesticide testing is a crucial service for exporters, the total need for it by any individual enterprise is lessened when the TPC substitutes in part for the existing necessity for testing of each and every shipment of tea shipped to Europe. Strengthening of the National Tea Development Alliance and its components such as HIMCOOP, the Nepal Tea Planters Association, so that members can certify that facilities are available for the blend mix to be achieved under hygienically accepted conditions in premises that have acceptable HACCP systems (including PRPs) in place. These PRPs include GAPS with proper environmental safeguards and correct use of agricultural inputs, notably agrochemicals. To ensure that factories and packaging plants are fit for the purpose, the PRPs should be extended there as well, as part of the overall HACCP programme.

The basic premise that needs to be understood at the outset is that the certification of tea exports primarily rests on market demands. The requirements in Europe are determined by the EU standards for permitted/tolerated residues and microbiology. Importers usually require proof of compliance by their trading partners by the production of TPC, which, in turn, is based on a systems approach taken by the supplier to ensure compliance. The interventions proposed for government in this arena, therefore, need to be carefully thought out.

[16] See, for example Pramod Koirala, Nawa Raj Dahal, Jiwan Prava Lama, Uttam Kumar Bhattarai Assessment of Certain Pesticide Residues in Nepalese Tea, **Journal of Food Science and Technology** Nepal Vol. 4, September, 2008, pp 31-33

8.5 Conclusions and Recommendations

The recommendations in this chapter are both a synthesis of a wide range of literature that has been generated on the potential of these exports for Nepal, combined with the specific issues that relate to TPC.[17] Such certification is a complex process which is attained at enterprise level and which allows trading entities to demonstrate legal compliance, i.e. 'due diligence' in the traded good. As such the role of government is limited to ensuring that the enabling environment for TPC exists. Since individual small-scale farmers, for instance, have little control over their environment and have poor or uncertain access to clean water, good technical advice, appropriate inputs, fair and transparent marketing channels, effective marketing, and so on, this is an area where government can intervene to help.

The actions outlined in this report, therefore, focus not on TCP *per se* but on the policy and enabling environment. Service provisions, such as accredited food testing laboratories, are only useful in the context of market-led, dynamic, pro-active entities such as cooperatives, growers associations, and commercial processors which can use these services effectively. These are explained in more detail below and summarized in Table 8.4.

Status of Legal Reform

The status of SPS-related legislation in Nepal is summarized in **Appendix 3: Revised Legislative Action Plan, January 2010.** For the most part, the necessary reviews and updated legislative programme for SPS-related trade are complete. However, the following legislative issues are still outstanding and need to be addressed as a matter of priority:

1. Regulations under the new Plant Protection Act of 13 September 2007 have just been adopted. This is a positive development;
2. In 2004, FAO assisted in the preparation of Draft Law/Amendment to the current Food Act 1966. However, this law is still being reviewed by the DFTQC in light of certain issues relating to technical aspects of implementation. The draft needs urgent attention as the current Food Act has been amended four times since 1966 and there are 105 regulations attached to it, which leads to difficulties with interpretation and enforcement. A second mission from FAO to review issues that have arisen since the 2004 Technical Assistance mission may need to be considered;
3. Both the Animal Health and Livestock Act 1998 and Nepal Veterinary Council Act 2055 (2000) need urgent review. This is currently being done internally at DoLS. It is strongly suggested that the OIE be approached directly for assistance as they have the capacity and programme for just this sort of input to members who request it.

Less urgent requirements that are indirectly SPS related are the necessary development of a National Honey Bee Policy and the drafting of a National Honey Bee Act.

Strengths/Weaknesses of Regulatory Agencies

In respect of the product groups exported by Nepal (Table 8.4) to current and potential destination markets, the following basic strengths and weaknesses apply:

Strengths:

1. The DoA has the personnel and facilities to comply with fumigation requirements for lentils and to issue credible phytosanitary certificates;

[17] There is no opportunity in the context of this report to review the issues in terms of TPC. Suffice it to say that this is a common theme in all the export sectors reviewed in this report. The existing literature is reviewed in *The relationship of third party certification (TPC) to sanitary and phytosanitary standards (SPS) and the international agri-food trade: final report. RAISE SPS GLOBAL ANALYTICAL REPORT #9.* It is crucial to understand that TCP is in many respects a market-led tool, which, in its safety aspects, is a private sector response to legislated food safety requirements of governments as well as international trade agreements.

2. The DoA has the personnel and expertise to carry out PRAs for traded plants and plant products;
3. While there is no certified laboratory operational in Nepal, significant efforts are underway to upgrade facilities and build human resource capacity at the NBSM and the DFTQC to test for agrochemical residues and food-borne human pathogens. A similar, though more modest, programme is underway at the DoLS laboratories. This type of testing is requested and carried out by the Indian Government in the absence of credible certification being available to Nepalese exporters to produce with their export documentation.

Weaknesses:

1. The Nepalese government has found it difficult to retain staff in the past, most especially those who are the recipients of in-service capacity-building training programmes. There is a danger that the current beneficiaries of the EU-funded UNIDO capacity-building programme may well be similarly lured away by better opportunities once the programme comes to a conclusion;
2. The primary need for SPS support for exports is in the field of TCP. The type of training/expertise required in this field is gained primarily via implementation, i.e. putting these systems in place in a working (private sector) situation. Therefore, the necessary expertise generally does not reside in the public sector;
3. The private sector is reluctant to use public services (such as laboratories) because of a perception that these are weak and below standard.

WTO Sanitary and Phytosanitary (SPS) Enquiry Points

Nepal's WTO SPS enquiry points were reviewed in detail earlier in this chapter. These have been set up and are functional. However, a higher degree of professionalism is necessary, including updating websites/contact details and dealing promptly with queries. Currently, the SPS/CODEX enquiry points are the beneficiaries of an extensive EU-financed/UNIDO-led infrastructural and capacity-building exercise and it is important that its momentum be maintained during and after this programme.

Infrastructure of Government and Private Sector Laboratories

Currently, there are no laboratories in Nepal that carry out internationally recognized testing in food composition and food safety. The need for accredited laboratories for animal and plant health testing is not so pressing (animals and animal products are not really traded and plant pest/disease taxonomy can be verified using alternatives to accredited laboratories). Outside of the laboratories at the DFTQC and the NBSM there are a handful of private sector laboratories that only have Nepal Laboratory Accreditation Scheme (NEPLAS) accreditation, which is not internationally recognized and, therefore, currently of no value for trade purposes.

Capacity of Existing Infrastructure in Plant Health, Animal Health, Food Safety

The most significant weakness in Nepalese export certification infrastructure at present is the lack of acceptable pesticide residue testing (and therefore certification) for the range of plant exports, including those listed in Table 8.4. In effect, this lack of capacity has a number of implications which 'cascade' down to the harsh regime being imposed by Indian officials at the border posts of compulsory consignment testing for pesticides. Since India has ratcheted up its compliance with CODEX (or even EU) agrochemical MRLs, by extension this *must apply* to importers of foods into India, including Nepal.

As discussed in more detail earlier, as a first step the pesticide approvals, active ingredients, formulations, application rates, and withholding periods need to be reviewed in light of the changing MRLs, which have in many cases moved to the LoD in the EU. Following this is the need for the long-term goal of developing a 'due diligence' approach by Nepalese exporters which would reduce the required intensity of testing (discussed below). This absence affects all exports of plant based food exports from Nepal.

Simpler requirements such as the necessity for fumigation of lentil exports are currently well addressed, though it would be prudent to ensure that any necessary research and protocols on alternatives to methyl bromide fumigation be put in place as a contingency (Indian import protocols allow for substitutes).

Accreditation of Nepal-based Laboratory Facilities

This topic is effectively covered in Chapter 7.

Traceability Capability

In SPS terms, Nepal has carried out only one exercise in producing an internationally acceptable traceability system--with negative results. This was the DFTQC plan for honey monitoring and surveillance to EU Directive 92/118/EEC standard. While the production of such a plan is an expensive and difficult exercise, it can and has been done successfully by countries with limited resources (see footnote 15, Greiling, J., 2008 in relation to the examples of Ethiopia and Zambia). The case studies indicate the necessity of:

1. Starting the process as a full partnership of both public and private sectors;
2. Bringing in appropriate expertise early on;
3. Realizing at the outset that an accredited national testing laboratory is *not a prerequisite* to running a national monitoring and surveillance plan (Ethiopia used an EU-accredited laboratory in Uganda for their initial testing) and that implementation of the plan does not need to follow the building of laboratory capacity.

In terms of tea exports, the current lack of demonstrable traceability in terms of GAP certification requires exporters to have every consignment tested for pesticide residues. For ginger, lentils, and cardamom where exports are even weaker, traceability systems would appear to remain an aspiration for the foreseeable future, which, as discussed, had led to compulsory consignment testing for pesticide residues by India.

The impediments to developing traceability in Nepalese exports are largely a function of the structure of the national agriculture and landholding system and are beyond the remit of this report. However, there are examples of how traceability, generally via TPC, can be achieved in other countries through the development of strong cooperatives and marketing associations. Therefore, the SPS export certification needs to work through with the public, private and NGO sectors that are involved in institution-building among smallholder farmers.

Assistance to Nepalese Producers to Implement 'Process' Standards

Currently, this remains a future activity in the EU-funded UNIDO programme for upgrading and capacity building at the DFTQC and NBSM. The plan is to bring in suitable TPC agencies to give hands-on training to DFTQC personnel via the HACCP auditing/certification of participating private sector companies. This aspiration is quite vague and largely ignores the necessity for appropriate PRPs, including traceability (see the preceding section). The certification of a business is an interactive process involving two types of input: putting in place PRPs, including a complementary infrastructure and a *separate* certification audit. Since the necessary PRPs include supplier traceability with accompanying GAPs, the possibility of full HACCP auditor training for the DFTQC with successful certification of the participating companies seems, from this perspective, to be an unrealistic aspiration. At best, the exercise will build awareness and some capacity within the DFTQC. The discussions at the DFTQC seem to indicate that this issue is understood to some extent in that their ultimate intention is to set Nepalese standards for the TCP.

Actions for Addressing SPS Issues in Nepalese Exports

There is ample evidence that the SPS-related trade measures imposed by Nepal's trading partners are hampering exports of SPS-sensitive exports. In terms of the available evidence, these measures are fair and, therefore, the correct response is to address them, if possible, in a pro-active manner. Many of these issues arise out of the nature of agricultural production and marketing in Nepal and, therefore, it is in the interests of all to support efforts to achieve consolidation in this area. The development of cooperatives and marketing associations take in hand a large number of other development goals into which addressing the identified SPS constraints fit neatly. Indeed, some SPS goals such as the introduction of GAPs are truly crosscutting.

Issue 1: Consolidating SPS support activities within Government.

Together with the consolidation of the production and marketing of export commodities it is important to seriously consider consolidating GoN efforts to address SPS issues. There are overlapping interests between all the SPS contact points for all the commodities examined with the potential for dispersed and uncoordinated efforts on the part of the GoN. There is, thus, a strong case to be made for revisiting the FAO proposal made to Nepal for consolidating the relevant portions of the DFTQC, PPD, DoLA, and the Biosafety Contact Point at the MoFSC into a Biosecurity Agency. Therefore, a revisiting of progress at the DoLS (a second PVS audit to measure progress since the earlier benchmarking exercise) and PPD (a second PCE) followed by a biosecurity review is strongly recommended.

Issue 2: Finalize Legislative Reviews.

There is an urgent need to revisit the Pesticides Act of 1991, together with the Pesticides Rules 2050 (1994) to ensure that all the crop protection remedies already in place under this Act comply with the most stringent MRLs of Nepal's trading partners. The DoLS needs to engage with the OIE to help review animal health legislation. Although not urgent from a trade perspective, thought must be given to policy and possible legislation on bees as this will have to be addressed at some point in the future.

Issue 3: Develop a clear policy on TPC.

In a sense the technical issues in this instance are clear. The requirements for TCP are market-driven and Nepal's exporters must, in essence, fall in line with the requirements of their customers. By extension the GoN must, in turn, support needs of exporters. Support for TCP must be sustainable, i.e. there must be a market-led demand for it, and supporting services (notably food testing laboratories) must be based on a clear business plan and needs; otherwise, they risk becoming white elephants. The issue is crucial in terms of long-term support for SPS-sensitive exports (Table 8.4). A possible approach to TCP is discussed in greater detail in **Appendix 4: Good Agricultural Practices, Food Safety and Quality Management Systems in the Context of Third Party Certification of Nepalese Food Exports.**

Issue 4: Develop an enabling environment for food production and processing.

The current public health environment in Nepal needs attention. Problems include access to clean air and potable water and treatment/disposal of water and solid waste. While not directly an SPS concern, it must be noted that one of the aims of the SPS Agreement is the worldwide dissemination of common standards of public health. Furthermore, and more pertinent, is the significant handicap imposed on businesses and smallholders that have to develop in-house systems and infrastructure to provide what in many other countries is a public good.

Table 8.4

Summary of Export Environment for Selected SPS Sensitive Export Potentials from Nepal

Number	Groups	HS code	Technical standards in Nepal or elsewhere	Technical regulations in place	Parameters of current importance	Where done	Who done by	Primary SPS requirements for future development	Other SPS requirements
1	Cardamom	090830	No Nepalese standard. An ISO standard exists but has no importance for trade purposes	None	Agrochemical MRLs	India	Indian authorities	TPC	MRLs
2	Ginger	091010	No Nepalese standard.	None	Government of India Phytosanitary Regulations and standards for agrochemical MRLs	India	Indian authorities	TPC	MRLs
3	Honey	040900	None	None	EU Directive 92/118/EEC of 17 December 1992 (Third Country List).	Europe (Holland)	European-based laboratories	EU accepted monitoring and surveillance plan drawn up and implemented by DFTQC	TPC, OIE WAHID reporting
4	Lentils	071340	Yes - set by Nepal Bureau of Standard and Metrology with testing by DFTQC	None	Government of India Phytosanitary Requlations which require pre-shipment fumigation and agrochemical MRLs	Nepal	DoA	Phytosanitary	MRLs
5	Green Tea	090210	GoN tea standard complies with ISO 3720		Agrochemical MRLs	Recipient country	Recipient country	TPC	MRLs
6	Black Tea	090230	GoN tea standard complies with ISO 3720	No information	Agrochemical MRLs	Recipient country	Recipient country	TPC	MRLs
7	Uncooked pasta	190219	No information	No information	HACCP, Agrochemical MRLs	Recipient country	Recipient country	TPC	MRLs
8	Medicinal Plants / Essential oils	121190	No information	No information	Not known	Not known	Not known	?	?

Chapter 9
Intellectual Property Protection

NTIS 2010

9.1 Introduction

Intellectual property is a form of property created through the application of a person's knowledge and skills. The World Intellectual Property Organization (WIPO) defines the following matters within the scope of intellectual property: literary, artistic, and scientific works, scientific discoveries, trademarks, service marks, symbols and commercial names, and industrial design inventions.

Intellectual property rights refer to the exclusive rights provided by the State to a person in lieu of his/her intellectual creation. A person vested with an intellectual property right can enjoy it without any encumbrance, and can sell, distribute and publish the same. Conversely, any third party cannot use, sell or store the creation made by the person who holds the rights without the latter's approval. Because of modern, legal protections for intellectual property, new inventions that contribute to the economic, technological, and cultural progress and prosperity of society and countries are introduced every day. The challenge for Nepalese entrepreneurs, producers, and exporters today is to learn how to capitalize on intellectual property, including their own, to create business competitive advantages.

Intellectual property typically is divided into *industrial property and copyright.* Trademark, design, patent, geographical indication, trade secret, traditional knowledge, and integrated circuits fall under industrial property. Literary works, stories, poems, drama, novel, music, musical works, artistic works, sculpting, painting, photography, computer software, designs, and presentations made by artists fall under *copyright.*

9.2 Nepal's Current Legal Framework

At present, two laws protect and promote intellectual property in Nepal. The 1965 Patent Design and Trademark Act 2022 (with amendment) prescribes legal provisions for patent, design and trademark. The 2002 Copyright Act 2059 provides protection of copyright. We shall discuss the two Acts here.
Internationally, intellectual property rights are also prescribed in Article 27 of the 1948 Universal Declaration of Human Rights. Key international conventions are the Paris Convention of 1883, which focuses on protection of industrial property, and the Bonn Convention of 1886, which focuses on protecting copyright. WIPO is responsible for the management and regulation of these two conventions. In addition, a Trade-Related Intellectual Property Rights (TRIPS) Agreement is part of the Uruguay Round Agreements that created the WTO. Nepal is a member of the WTO.

Industrial Property in Nepal

The 1965 Patent, Design and Trademark Act (with amendment) follows an earlier 1936 Act. The 1936 Act provided protection to Nepalese nationals only, whereas the 1965 Act introduced legal rights to foreigners, allowing them to register their industrial property in Nepal and to enjoy the rights prescribed by the law. This Act, first enacted on April 26, 1965, has been amended three times. The Act prescribes separate provisions for patent, design, and trademark.

Patent

The Act prescribes registration to acquire right to a patent, requirements and procedures for registration, and conditions under which a patent cannot be registered. It also prescribes publication of registered patents in the National Gazette.

To register a patent, a person must submit an application along with a full description of his/her invention and claim before the Department of Industries (DoI). Upon submission of the application, the DoI constitutes a committee of experts knowledgeable about the invention and, on the recommendation of the committee, registers the patent. When a foreign patent needs to be registered, the Act requires the applicant to submit a home registration certificate. In the event a home registration certificate is furnished, the DoI, pursuant to Section 21 (c) of the 1965 Patent, Design and Trademark Act, may register the patent without carrying any further investigation. The typical period of validity of a patent in the world is 10 years and it may be renewed only once. In Nepal, the period of validity is seven years and the patent may be renewed twice for a period of seven years each time.

The practice of registering patent in Nepal is very low. Records of the DoI indicate that only 59 patents are registered today in Nepal, and that there is a lack of skilled manpower to examine and investigate patents submitted for registration.

Section 2 of the 1965 Patent, Design and Trademark Act (with amendment) defines the term 'patent' as follows: 'Patent means any useful inventions made from any material or group of materials, or new measures or procedures for operation or dissemination or any other useful inventions made from any new principle or formula.'

A person wishing to register his/her patent needs to furnish evidence pursuant to Section 4 of the Act and submit the following information along with an application in the prescribed format before the DoI:

1. Name, address, and profession of the inventor.
2. If the applicant is not the inventor of the patent, a letter certifying how he/she has acquired the right from the inventor.
3. Procedures of designing, operating, or enjoying the patent.
4. If the patent is based on any particular principle or formula, then the principle or formula shall be stated in the application.

Section 6 of the said Act lays downs the grounds for rejecting a request to register apatent as follows:

1. The patent is already registered in another person's name.
2. The applicant has not invented the patent and the applicant has not received the right over the patent from the inventor.
3. The patent is adverse to the health of the public, etiquette, or morality or adverse to national interest.
4. The patent is contrary to any prevalent laws of Nepal.

Design

To acquire right over a design, it is mandatory to register it. Section 2 (b) of Patent Design and Trademark Act defines the term 'design' as: 'design means the feature or shape of a matter prepared.' Pursuant to Section 13 of the Act, to register a design, a person must furnish an application along with a description of the design, including the map and four copies of the design. Pursuant to Section 14 (a), designs that are registered are valid for a period of five years. After five years the right to the design may be renewed twice for another period of five years.

Applications for legal protection of one's right to a new design are very few in Nepal. There is very little awareness among Nepalese industrialists that design can play an important role in enhancing the prestige and name of the owner and contribute to creating a competitive advantage.

The DoI, on the recommendation of a committee of experts, decides whether or not a design should be registered.

Trademark

Like patent and design, a trademark must be registered to confer someone a right. Section 2 (c) of the said Act defines the term trademark. The aforementioned Section defines trademark as: 'word, mark, picture, or a mixture of these three that is applied by a firm, corporation, or person to differentiate their goods or services from those provided by others.'

To register a trademark, an application must be submitted. Subsequently, the DoI, pursuant to Section 18 of the Act, conducts the necessary examination and inquiry. The DoI under the Act investigates possible claim or objection over the trademark through publication of trademarks submitted for registration. Objections are investigated by the Department. If the submission is deemed appropriate, the Department registers the trademark.

Pursuant to the law, the Department publishes trademarks submitted for registration every month in the Industrial Property Bulletin with 90 days for submission of claims or objections. If a trademark is not used within one year of its registration, the Department, pursuant to Section 18 (c) of the Act, may cancel the registration of the trademark. A trademark cannot be used as a registered trademark unless it is registered with the Department. Registered trademark can be renewed repeatedly for a period of every seven years. Unlike with patent and design, the Act does not provide term limitation to trademark. Industrial property registration system in Nepal follows the Nice Classification system, also known as International Classification. Marks are registered in Nepal as Trademarks and Service Marks under International Classification. To register a trademark or a service mark, an applicant must submit a sample of the mark along with the matters or service to which the mark is applied and shall specify the international classification. Any trademark or service mark that is similar to an earlier registered mark, is similar to a mark publicly known, is adverse to public health, public etiquette, morals and contrary to national interest, or hampers the reputation of other trademarks, cannot qualify for registration. If such a trademark is already registered, registration is cancelled pursuant to Section 18 (c).

A trademark extends to consumers a guarantee of quality and trust in goods or services. Therefore, trademark is always different from one another and has a separate identity. Marks or trademarks are used to protect original goods from fake ones. The 1883 Paris Convention, the 1891 Madrid Agreement, and 1979 Madrid Protocol are deemed to be the international laws regulating the trademark. Nepal ratified the Paris Convention on July 24, 2000, which is applied as Nepal law.

Marks used in services are known as service marks. Service marks are used by service providing companies and are used in matters to which service is provided. For example, hotels, banks, airlines, and insurance companies use service marks. The current Act of Nepal does not distinguish between trademarks and service marks. Service marks, therefore, simply fall under trademarks.

The current Industrial Property has no provision to register Collective Marks, Trade Secrets, and Geographical Indications. These are missing protections that need to be introduced in Nepalese law.

Department of Industries

The DoI is responsible for registering patents, designs, and trademarks. The Department entertains preliminary petitions regarding disputes relating to patents, designs, and trademarks, and is responsible for sanctioning

breaches of law. The Nepalese business community lacks knowledge and awareness of intellectual property issues as a whole and industrial property in particular. In addition, there is a lack of skilled and competent manpower to conduct inquiries regarding application for patent registration. As a result, registration of new inventions and patents is very low. Registration of design is also very low. Most registration for industrial property in Nepal is for trademarks. Indeed, the demand for registering trademarks is increasing.

Currently, the work of Industrial Property registration and enforcement is done by one section under the DoI. The work is specialized and technical in nature, including learning how to assemble a panel of experts, conduct preliminary hearings to review proposed patents, designs and trademarks, etc. Unfortunately, owing to Government personnel policies, the staff of the section is transferred every two or three years, just when they start understanding industrial property issues. This is a key problem holding back proper development and enforcement of Industrial Property Rights in Nepal.

Copyright in Nepal

Copyright Act

The other dimension of intellectual property rights is copyright and rights relating to copyright known as neighbouring rights. Where creation is original and done intellectually in areas such as literature, arts, science, and other areas as well and where sound is recorded, presented, and transmitted, an exclusive right is provided to the creators under the copyright law. Protection of the rights of composers and creators helps stimulate new creations in the areas of arts, culture, and science.

Provisions relating to literature and artistic property commenced with the enactment of the 2002 Copyright Act 2059. The 2002 Copyright Act 2059 follows the international standards with respect to the protection of literary, artistic and research compositions, drama and celluloid pictures, and other audio visual compositions. The Act also protects pictures and sculptures, maps, pictorial compositions, and activities relating to computer programming. Under the new Act, it is not necessary to register any composition or sound recorded presentation or transmission to obtain copyright. Prior to the enactment of the present Act, registration was mandatory. The Act provides financial and moral rights to the composer of any composition.

Under the economic rights, the Act prescribes exclusive rights to the author or owner of copyright to reproduce the work, revise or amend the work, make arrangements and other transformation in the work, hold public exhibition and communicate the work to the general public. Likewise, under moral rights, the author is vested with the right of having his name mentioned in the copies of his/her work or in his/her work where it is used publicly, to prevent such acts as undermining his/her reputation or goodwill earned by him/her by mutilating his/her work or presenting it in a distorting manner and to make necessary amendment or revision in his/her work.

The following rights are protected by the Copyright Act:

(a) Protection of economic and moral rights of a composer through life and 50 years following his/her death;
(b) In the case of joint composers, 50 years from the date of death of the last composer;
(c) If published by an organization, 50 years from the date of such publication;
(d) Twenty-five years from the date of production of practical art and picture;
(e) Twenty-five years from the year of sound recording and publication;
(f) Fifty years from the year of presentation or incorporation with the sound;
(g) Fifty years from the commencement of related rights of the transmission institution or from the commencement of transmission;

The Act also prescribes sanctions against breach of copyright. Pursuant to the gravity of the offence, Section 29 of the Act prescribes a penalty of NRs 5,000 to 50,000 against someone who infringes the right of another author or copyright owner. Section 37 of the Act prescribes a police officer of at least the rank of police inspector to investigate such cases and to register such cases before the district court.

Copyright Registrar's Office

Copyright is managed and enforced by Nepal Copyright Registrar's Office set up by the GoN under the Ministry of Culture, Tourism and Civil Aviation. The Registrar monitors all acts relating to protection of copyright and works on increasing public awareness of copyright. Section 5 of the 2002 Copyright Act requires that only a limited number of works need not be registered. However, owing to incidents of copyright infringement, many authors have been registering their works. Registration is simple and requires an application along with two copies of the work. The Registrar's Office checks on the validity of the submission, which usually takes seven or eight days. The registration fee is NRs 100.

The Registrar's Office suffers from the same problem as the section responsible for Industrial Property in the DoI relating to staff turnover. The Office also lacks office space.

9.3 Recommendations: Nepal's Needs in Intellectual Property Protection

Legislation

The current Patent, Design and Trademark Act needs to be amended. Nepal needs to enact intellectual property rights covering Traditional Knowledge, such as that embedded in goods produced through various herbs. Likewise, there is no provision for geographical indications or collective marks, which nowadays are key elements of industrial property.

The Industrial Property Act and the Copyright Act need to be aligned with international principles and standards in the area of intellectual property enshrined in international treaties and agreements under the oversight of the WTO and WIPO. Since Nepal is a member of the WTO, it is necessary for Nepalese Acts and Regulations to be compatible with the Agreement on TRIPS, including securing tenures of protection consistent with international standards.

To introduce Nepalese patents, Nepal should become a member of the international Patent Cooperation Treaty and, to introduce trademark at international level, Nepal should become a member of the Madrid Protocol. Until and unless Nepal becomes a member of these two international treaties, Nepalese patents and trademarks will lack international recognition. For instance, a Nepalese businessman cannot single-handedly register his/her brand in a foreign country. This is possible only once Nepal becomes a member of the Madrid Protocol.

Public Awareness and Education

Very few people are knowledgeable about industrial property rights and most stakeholders are uninformed about how to register and protect such rights and the benefits of doing so. As noted earlier, patent and design registration is scarce. There is some public awareness of trademark, but this is still insufficient. There is a need for a large-scale public awareness campaign to explain the nature of intellectual property and the benefits of protection not only among business people, entrepreneurs and creators but also among consumers.

Intellectual Property is technical in nature and skilled professionals are needed. Intellectual Property education should be included in the curriculum of schools and colleges and should be developed as a separate faculty.

Use of Intellectual Property tools should also be encouraged within the business community. Table 9.1 lists the many opportunities for increased use of IPR protections among the 19 export potentials identified in the NTIS.

Table 9.1

Possible IP Vehicles for 19 Export Potentials

S.N.	Agro-Food	Possible IP Vehicle	Comments	Action required by Government
1	Cardamom	Trademark or Geographical Indication (GI)	GI if it has special/ specific quality	Geographical Indication law needs to be legislated
2	Ginger	Trademark or Geographical Indication (GI)	GI if it has special/ specific quality	Geographical Indication law needs to be legislated
3	Honey	Trademark or Geographical Indication (GI)	GI if it has special/ specific quality	Geographical Indication law needs to be legislated
4	Lentil	Trademark		
5	Tea	Geographical Indication		Geographical Indication law needs to be legislated
6	Uncooked Pasta	Trademark		
7	Medicinal Plants and Essential oils	Patent or Traditional Knowledge (TK)	If invention, patent; otherwise TK	Traditional Knowledge law needs to be legislated
	Craft and Industrial Goods			
8	Handmade Paper	Collective mark		Amend Industrial Property law to include provision for Collective mark
9	Gems & Jewelry	Traditional knowledge or design		Traditional Knowledge law needs to be legislated
10	Iron and Steel			
11	Wool Products	Collective mark, certification mark or trademark	Certification mark may be necessary to certify pure or no child labor	Amend Industrial Property law to include provision for Certification mark
12	Pashmina	Collective mark and certification mark	Certification mark to certify	Amend Industrial Property law to include provision for Collective mark
	Services			
13	Tourism	Service mark and trademark		
14	Labour Services	Service mark		
15	IT & BPO Services	Trademark or service mark; Patent		
16	Healthcare	Service mark and trademark		
17	Education	Service mark and trademark		
18	Engineering	Service mark or trademark		
19	Hydro-electricity			

In addition to awareness campaigns, the Government could formulate policies encouraging protection of industrial property, including export of branded goods and services. For instance, tax credits could be provided to businesses exporting branded goods or services or to support the costs of registering trademarks in export markets. Tax holidays for R&D expenses could also be provided to Nepalese businesses to encourage such investment.

An information desk on industrial property could be established in Nepalese embassies to assist businesses in gathering information relating to industrial property in the countries in which they intend to exports. The Government should look into the ways it could assist Nepalese businesses in registering trademarks in foreign countries.

Physical, Human and Institutional Infrastructure

Physical infrastructure plays an important role in the protection of industrial property. Data system should be properly maintained and, for this, good computers and computer programs are required. Public data base of patent, technology and other Intellectual Property needs to be accessible easily to business people, entrepreneurs, legal professionals, specialized civil servants, and university students. Such infrastructure is lacking at the moment.

Together with weak physical infrastructure, there is a weak skilled technical human infrastructure. This is the case because neither the Industrial Property Section in the DoI nor the Copyright Registrar's Office is an semi-autonomous body, and both fall under the general Government rule about frequent transfer of public servants. The current practice results in a lack of a well-trained and experienced group of civil servants who are deeply knowledgeable about the Intellectual Property issues. Unless and until this issue is addressed, it will be difficult to deepen the use of industrial property protection in Nepal.

The enforcement capacity is weak. Some of this needs to be addressed in the legislation, some of this in the implementing regulations, and some through training of staff.

Industrial property being technical in nature, information and new knowledge about new developments should be provided from time to time. There is a need for a separate training centre to provide regular training to researchers, legal professionals, business people, public servants, and others, as needed.

A Single IPR Agency

To address the limitations in the current civil servant personnel policies, the Government should create an autonomous agency combining all responsibilities for implementing and enforcing protections for industrial property and copyright.

Skilled employees should be allowed to develop their career path within the agency. An appropriate legal infrastructure could be developed to procure opinions from independent Intellectual Property experts as and when necessary.

Chapter 10
Barriers to Service Trade

10.1 Introduction

Unlike products, which are tangible, services are more difficult to define. Similarly, unlike trade in goods, there is no internationally recognized code to track and measure services as they are exported.

In general, the measurement of both output and trade in services is inherently more difficult than that of goods. They assume reaching common definitions of service output with data providers and depend on information that may be obtained from business accounting and record-keeping systems, from individuals and from a variety of data sources, including administrative sources, surveys, and estimation techniques.

Nepal's national accounting system is based on the System of National Accounting (SNA) 1993.[1] Under this system, the service sector contributed over 51 per cent of GDP in 2007/08. The share of service sector in total employment was 21.4 per cent in 2007. And, of all sectors open to foreign investment (1,743) by DoI as of March 2009, services, including tourism, attracted 54 per cent. In international trade, the exports of services were higher than imports until FY 2003/04, though the situation deteriorated afterwards. The current definition of services by the GoN, however, includes only the tertiary sector and so does not include trade in Modes 3 and 4 under the GATS classification.

10.2 Trade in Services

Notwithstanding the measurement issues, and as discussed in Chapter 1, the contribution of trade in services to Nepal's BoP can be seen either as contributing to the trade deficit or to a trade surplus, depending on whether one excludes or includes the contribution of Mode 4 services. If one uses the conventional, but narrow, BoP definition of service credits and debits (excludes Mode 4), Nepal experienced a service trade surplus in the first half of the 2000s, followed by a service trade deficit in the second half of the decade. However, using an expanded definition of trade in services and including remittances, then trade in services showed a growing surplus throughout the years 2000s, as shown in Table 10.1.

Table 10.1
Nepal's Trade in Services Balance, 2000/01-2007/08 (in Rs. Million)

	Fiscal Year							
	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Service Credits	29,821.7	23,508.2	26,518.9	34,315.9	26,001.9	26,469.7	32,078.9	42,236.1
Service Debits	-20,519.4	-19,569.8	-19,469.2	-25,241.0	-28,036.1	-33,288.0	-40,456.2	-53,629.5
Net Remittances	47,216.1	47,536.3	54,203.3	58,587.6	65,541.2	97,688.5	100,144.8	142,682.7
Net Service Trade Balance, excluding Remittances	9,302.3	3,938.4	7,049.7	9,074.9	-2,034.2	-6,818.3	-8,377.3	-11,393.4
Net Service Trade Balance including Remittances	56,518.4	51,474.7	61,253.0	67,662.5	63,507.0	90,870.2	91,767.5	131,289.3
Credits								
Travel	11,717.0	8654.3	11,747.7	18,147.4	10,463.8	9,555.8	10,125.3	18,653.1
Government Services	7,614.2	8,894.5	6,624.0	7,143.9	6,804.9	7,441.5	12,336.4	13,301.8
Other Services	10,490.5	5,959.4	8,147.2	9,024.6	8,733.2	9,472.4	9,617.2	10,281.2
Debits								
Transportation	-9,308.7	-8,854.4	-8,618.4	-9,382.1	-10,602.2	-12,592.3	-14,557.4	-22,969.2
Travel	-5,520.4	-5,731.1	-6,171.5	-10,021.5	-9,691.9	-11,960.8	-15,785.0	-20,862.0
Other Services	-5,690.3	-4,984.3	-4,679.3	-5,837.4	-7,742.0	-8,734.9	-10,113.8	-9,798.3

Source: Nepal Rastra Bank, *Annual Report*, Various Years

[1] Under SNA 1993, economic activities are classified under 15 sectors. In turn, the 15 sectors are organized into three broad groupings: primary, secondary, and tertiary. The primary sector includes agriculture and forestry, fisheries, and mining and quarrying; the secondary sector includes manufacturing, electricity, gas, and water, and construction; and the tertiary sector includes the nine services sectors , namely wholesale and retail trade; hotels and restaurants, transport, storage and communications, financial intermediation, real estate, renting and business activities, public administration and social security, education, health and social work; and other community, social and personal activities.

10.3 Export Potential of Nepalese Service Sectors

There are opportunities for Nepal to increase and/or develop exports of selected services. But there are obstacles to realizing such opportunities, many of which are domestic in nature. This chapter examines and analyses barriers to export of six services, be they domestic or foreign:

- Tourism and Travel-related Services
- Web-based Services (IT and BPO Services)
- Health Services
- Education Services
- Labour Exports
- Engineering Services

Tourism and Travel Related Services

Nepal is endowed with rich and diverse natural resources and cultural attractions. The country has an incomparable cultural heritage as well as a rich environment ranging from the highest mountains to the Terai plains. In FY 2006/07, 516,000 tourists visited Nepal, with foreign exchange earning of US$205 million, an average stay of 13 days, and an average spending of about US$60 a day. The sector provides direct employment to 237,000 and indirect employment to 548,000 persons (WTTC 2008). Furthermore, according to the WTTC (2008), travel and tourism was expected to generate NRs 16.6 billion, or US$257.3 million, in 2008, increasing to NRs 52.1 billion, or US$552.1 million in 2018.[2] The GoN's economic survey covers only the contribution of hotels and restaurants, which was 2.6 per cent of GDP in 2008/09.

Regulatory Framework

Tourism and travel-related services in Nepal are regulated by various acts: the Industrial Enterprise Act, the Tourism Act 2035 (1978) (amended in 2053 [1997]), the Hotel, Lodges, Restaurants, Bar and Tourist Guide Rules 2038 (1981), the Travel and Trekking Agency Rules 2037 (1980), the Trekking and Rafting Rules 2044 (1985), and the Mountaineering Rules 2036 (1979).

The Foreign Investment and Technology Transfer Act (FITTA) 1992 does not allow foreign investment in travel agencies, trekking agencies, water rafting, pony trekking, horse riding, and tourist lodging. Nepal opened up foreign investment in travel agency and tour operator services following the WTO membership, but limited it to 51 per cent. FDI is permitted in hotel industry with GoN's approval. As per the WTO commitments, up to 80 per cent foreign equity is allowed in hotel, lodging services, and graded restaurants. FITTA, however, allows 100 per cent investment, indicating that it is ahead of the WTO commitment.

The Tourism Industry Division (TID) of Ministry of Tourism and Civil Aviation (MoTCA) is the tourism regulator in Nepal and deals with registration, licensing, star ranking of hotels, industry incentives, and monitoring and evaluation.

The Civil Aviation Authority of Nepal (CAAN), which came into existence in December 1998, acts as the regulator for aviation. CAAN also performs three functions: regulation, growth, and monitoring. It provides Air Operator Certificates (AOC) and enters into air service agreements with different countries. At present, the GoN has entered into agreements with 35 countries, but only 18 airlines have scheduled flights thus far. Prior to the 1993 liberalization in the sector, the Department of Civil Aviation used to perform these functions.

[2] WTTC (2008) *Travel & Tourism Satellite Accounting Research, Travel & Tourism: The Winds of Change.*

Constraints in the tourism sector exist in the form of immigration laws, documentation requirements, restriction on currency movement, lack of transparency, and policies that work as a disincentive for specific destinations. The section below describes the barriers to export of tourism services.

Barriers to Tourism Services

Regulatory Barriers:

- Nepal opened travel agency and tour operator services for foreign investment up to 51 per cent foreign equity under its WTO Schedule of Commitments. This has yet to be put in practice owing to the lack of a domestic regulation to abide by the WTO commitments;
- The lack of capital account convertibility is a constraint. Tourism promotion abroad requires large expenditures and people with international linkages, which are made difficult possibly due to the lack of capital account convertibility. Also, Nepalese traveling abroad are allowed to exit the country with only US$2000;
- The Hotels and Restaurants Act 2038 (1981), formulated 30 years ago, remains in place and needs revisions. For instance, the Act does not include provisions for opening hours of bars, dance clubs, and restaurants;
- TIA, Nepal's only international airport, closes at 12.30pm, putting pressure on daytime air traffic;

International Market Access Barriers:

- Though China approved Nepal as a tourist destination in 2001, only three agencies in China provide travel services to Chinese wishing to visit Nepal, hindering the free flow of Chinese tourists;

Domestic Barriers to Market Development

- Pokhara, the second city for foreign visitors, is to be strengthened as a tourism destination. However, the development of a regional international airport cannot materialize without support from donor agencies;
- The high ground handling charges and high fuel cost at TIA force large airlines to refuel outside Nepal;
- The lack of sufficient airport infrastructure and associated facilities at TIA needs to be addressed by involving the private sector;
- Though Nepal has 54 local airports, which is a good number for such a small country, quality of many of the facilities is a problem;
- The very high mountaineering royalty charged by the GoN for climbing Mt Everest, (US$50,000) is pushing parties to climb Mt Everest from the Chinese side. Also, if one goal is to diversify and lower the pressure on Mt Everest, the Government needs to lower the royalties for climbing other Nepalese peaks;
- Nepal has failed, thus far, to mobilize and involve foreign missions, Nepaliesenon-residents and diaspora for more aggressive marketing of Nepalese tourism.

Institutional Barrier:

- The Service Enquiry Point established under the WTO Division of the MoCS is acting as the coordinating body of the services sector in Nepal, which is being represented by 17 ministries or agencies at present. However, the enquiry point is not functioning effectively for lack of necessary human resources, equipment, and proper mandate and work plan;

Human Resource Barriers:

- Though there are various institutions and training centres producing tourism manpower in Nepal, the sector still shows a shortage of qualified professionals. Part of the problem has to do with the brain drain of qualified manpower. However, more training institutions are needed to meet this gap;
- Labour relations in the sector are an issue from time to time

IT and BPO Services

The importance and potential of IT and BPO services is understood in Nepal by now, especially in a country that shares borders with two ICT giants. Technology transfer, innovation/incubation, offshore destination for BPO are among the few avenues where Nepal can prove its competence.

Regulatory Framework

The Telecommunication Act 1997, which led to the creation of the Nepal Telecommunication Authority, the IT Policy of 2000 (revised 2004), the Electronic Transaction Act 2006, the establishment of the High Level Commission of Information Technology (HLCIT), and the liberalization of the telecommunication sector have created the foundations for the growth of this sector.

The liberalization measures taken by the Nepal Telecom Authority in 1998 and the enactment of the Telecom Policy of 1999 have facilitated entry of new businesses into the telecom sector, increasing the number of mobile service providers, internet service providers, and email service providers for instance.

Developments in this sector include the optical fibre backbone that has been laid across the East-West highways of Nepal, licence fee-free Wi-Fi connectivity, and the ability to leverage its optical fiber connectivity to establish a transit communication route between China and India. And yet, despite these developments, Nepal ranks 132nd out of 133 nations surveyed by the World Economic Forum in 2009 for its technological readiness index. This shows the progress Nepal has yet to make if it is to achieve its goal of becoming a world class IT services provider.

The GoN has shown its commitment for the growth of this sector also by taking on liberal commitments under GATS, as shown in Table 10.2.

Table 10.2
Nepal GATS Commitments in Computer and Related Services

Modes of supply: (1) Cross-border supply (2) Consumption abroad (3) Commercial presence (4) Presence of natural persons		
Sector and subsector	Limitation on market access	Limitation on national treatment
Computer and related services		
(a) Consultation services related to the installation of computer hardware (CPC 841) (b) Software implementation services (CPC 842) (c) Data processing services (CPC 843) (d) Database services (CPC 844) (e) Maintenance and repair service of office machinery and equipment, including computers (CPC 845) (f) Other computer services - Data preparation services (8491) - Other computer services (CPC 8499)	(1) None (2) None (3) None, except only through incorporation in Nepal and with maximum foreign equity capital of 80 per cent. (4) Unbound, except as indicated in the horizontal section	(1) None (2) None (3) None (4) Unbound, except as provided under horizontal section
Source: WTO Report of the Working Party on the Accession of Nepal		

Barriers to Trade in IT and BPO Services

Regulatory Barriers

- Nepal's GATS commitments in the ICT sectors are largely concentrated on Modes 1 and 3. Mode 4 is one of the most restricted categories within the service sector, including restrictions on visas and work permits for people coming to stay and work as employees. In addition, Nepal restricts foreign equity capital up to 80 per cent for companies incorporated in Nepal, to provide these services as per its commitments in the WTO;
- Although the monopolistic market of Nepal Telecom was terminated by providing additional licences to private sectors, the telecom sector still lacks a true competitive market. This is due to legal ambiguities, court cases, frequent changes of government, and a lack of expertise in regulatory mechanism;
- In many cases, there are no clear boundaries in the respective jurisdiction of the Ministry of Information and Communication and HLCIT/Ministry of Science and Technology. This discourages investment;
- Though the office of controller of certification was established in 2007, the implementation of PKI infrastructure has yet to take place. Nepal has not been able to attract the market of data conversion and medical transcription, particularly from European countries, due to weak data protection laws;
- IT and BPO service exports are considered as just another form of export with a 20 per cent export tax imposed. So far, no tax measure has been reported on import of software. In case of warranty-related transactions, theoretically, one-time import tax is applied, but in practice there is no clearly defined process and businesses are forced to pay import taxes numerous times for the same item;
- Although the short-term movement of natural persons as business representatives/promoters to another nation is usually not restricted (except by a few countries), the dollar exchange policy applied by the Central Bank remains a constraint. The exchange limit is set at US$2,000, but this is too low for business promotion purpose. In principle, a Nepalese company can open a subsidiary in foreign soil, but again there is no provision for foreign currency exchange to establish such outfit. This is a major barrier for IT companies that may need to gain confidence of onshore clients by opening a foreign subsidiary.

Economic and Infrastructural Barriers

- The only IT park in Nepal is located outside the Kathmandu valley with a capacity of 300 persons. This is insufficient for a decent IT and BPO service provider;
- At times, the sector has experienced 16 hours of load-shedding every day. This is a problem even for ICT providers equipped with generators due to regular scarcity of fuel for generators and the high cost of such electricity;
- The cost of bandwidth is five times higher than that of India;
- The Capability Maturity Model Integration (CMMI) appraisal is the international benchmark standard of quality and delivery capacity. Only one company in Nepal meets the CMMI standard so far;
- The sector lacks senior personnel with experience in space allocation, productivity-based perks, defined process (standard operating procedures), project management tools/techniques, security measures, etc.;
- Nepalese companies have not been able to effectively market their software products and capability in the international arena.

Education Services

Background on Education Services in Nepal

- As of 2005, there were 35,540 public schools and 4,480 private schools in Nepal, six universities, two university-level medical institutions, and 621 affiliated campuses under these universities;
- Schools are scattered across country, but the higher educational institutions are mostly located in the Kathmandu valley;
- Providers of education services can be broadly categorized as private and public. During 2005–07, public institutions accounted for more than 90 per cent of the supply of education services in Nepal;
- The GoN permitted private universities to come into operation starting in 1991;
- In 2001, government institutionalized the increase in private investments in schools and other educational institutions, by allowing them to be established under Nepal Company Act;
- The private educational institutions are supervised by the GoN in terms of academic content, but they have financial and administrative independence;
- The GoN allocates an average of 16 per cent of the annual budget to the education sector, which stands at about 4 per cent of GDP. This is the highest allocation in South Asia;[3]
- In a study of education trade during 2001–03, 683 foreign students came to Nepal in pursuit of higher education as against an outflow of 2,087 students to countries other than India. A total of 801 Nepalese students went to India for higher studies, creating a net outflow 2,205 students during the period;[4]
- India is Nepal's major education trading partner, followed by the USA, the UK, China, and Australia.[5]

Potential for Educational Export

The 2008 SAATEE study 'Nepal's Export Potential in Services' suggests that there are many factors that make Nepal ideal for exporting educational services. Among these factors natural environment and religion are a major part of the equation. Nepal is a geographically diverse country endowed with natural beauty and quiet

[3] SAWTEE (2008) **Nepal's Export Potential in Services** *(Health, Education and High-End Retail Services), report* submitted to Enhancing Nepal's Trade Related Capacity, Ministry of Industry, Commerce and Supplies/UNDP.

[4] Raychaudhuri and De (2006) Assessing Barriers to Trade in Education Services inDeveloping ESCAP Countries: An Empirical Exercise. WTO/ ARTNeT Short-termResearch Project.

[5] Shrestha (2004) Shrestha. Rameshwar. 2004. Education Nepal. APARNET online publication available at: http://www.aparnet.org/documents/education_and_training_info/nepal.rtf.

locations favourable for study. The physical environment of Nepal's hill region is similar to that of Darjeeling and Deharadun, the traditional education service hubs of India.[6] The low cost of living is also a major positive factor, including for foreign students coming from well-to-do families. Also, clear investment regulations and simple cross-border provisions create a favourable environment for such export. In sum, a pleasant physical environment, the low cost of living, possible cultural and religious affinity, clear investment regulations, and simple cross-border provisions create a positive environment for educational service export.

The greatest potential of export is in the sectors of religious studies and medical and technical studies. Nepal has been witnessing substantial inflows of religious learners and devotees from India and Tibet to study Hinduism and Buddhism since ancient times.[7] In the medical and technical fields, quotas established by universities in Nepal (specifically, one-fifth of the total student intake) are filled to capacity. In short, it is clear that Nepal has an opportunity to create a market niche in this sector.

Barriers to Education Export

Nepal remains a net importer of education services with a significant trade deficit. To turn this around, significant changes are required. The barriers to export of education services are as follows:

Quality Barriers

- Low quality of education is one of the major impediments to enhancing education exports. The quality of Nepalese education is below world standards. In an educational index produced by the World Bank (2007), Nepal scored 1.60, lower than South Asia (2.1) and Western Europe (8.09);[8]
- Language is one of the leading non-technical barriers to education trade.[9] Although the eighth amendment to the NEA (2001) stipulates that teaching should be conducted in English at all educational levels and by all faculties, except for language courses, this provision is only followed nominally;

Market Development Barriers

- The amount of marketing used to promote and create awareness for Nepal's educational services is minimal. SAWTEE (2008) shows that around 70 per cent of the foreign student inflow is through personal contacts. Foreign diplomatic missions contribute little towards informing foreign students about the education services available in Nepal. Many of these diplomatic missions do not even have an education counselling section.

Institutional and Infrastructural Barriers

- The high degree of political interference, particularly in public institutions, creates a negative environment for education service export. This discourages many investors and students and makes Nepal's education less marketable;

[6] Khaniya (2007) *New Horizons in Education in Nepal. Kathmandu.* Requoted from SAWTEE (2008).
[7] Regmi (1971). *A Study in Nepali Economic History.* New Delhi: Manjusri Publishing, Requoted from SAWTEE (2008).
[8] World Bank (2007) *South Asia Growth and Regional Integration.* Washington, D.C.: The World Bank.
[9] Knight (2002), *Trade in High Education Services: The Implications of GATS.* United Kingdom: The Observatory, Requoted from SAWTEE (2008).

- Nepalese educational institutions lack sufficient infrastructure. They lack well-maintained lecture halls, laboratories, libraries, dormitories, and information centres.
- Among the five education sectors identified by the WTO (primary education, secondary education, higher education, adult education, and other education), Nepal has made commitment under GATS to liberalize trade in the latter three. However, there is poor implementation of this commitment so that the cost of doing business in this sector remains high. According to Karmacharya and Maskay, the failure to liberalize FDI and the high incidence of corruption are primary causes of decreasing foreign investment in this sector.[10]

Health Services

There are many variables to consider in analysing Nepal's export potential in health services. Still, the specifics of the country's national healthcare system, regulatory environment, and government policies are most important.

As indicated in the SAWTEE 2008 study cited earlier, export of health services via Mode 2 remains the dominant type of exports (foreign patients travelling to a Nepalese medical institution for treatment).

Environment for Nepalese Export of Health Services

While international trade in health services in Nepal is limited, particularly when compared to other trade services, the accession to the WTO and the ensuing commitments in the health sector have led to a gradual increase in export of health services.[11]

From a policy perspective, Nepal's accession to the WTO and its commitment to liberalize trade in health services have created opportunities for health service export. There are no major specific limitations in this sub-sector, except in market access in Mode 3, where foreign services providers must be incorporated in Nepal with a maximum foreign equity capital of 51 per cent.

Nepal's TYIP recognizes the potential for health service trade and incorporates strategies like establishing, promoting, and expanding telemedicine, developing and expanding *ayurvedic* and other alternative health service systems, providing computers and internet access to facilitate telemedicine, collecting information regarding herbs and intellectual property, and enhancing research activities. However, no concrete strategies have been identified to promote such developments.

From a trade perspective, a good physical environment, the lower cost of human resources, the lower cost of living, and the provision of *ayurvedic* practices are the major factors that make Nepal's health services attractive. Furthermore, the liberal policies adopted by the GoN has encouraged the involvement of the private sector and enhanced the overall competitiveness of the sector.

At present, however, Nepal remains a net importer of health services and, despite attractive policies, attracting investment in the health services sector remains a challenge.[12]

[10] Karmacharya, Binod Kumar and Nephil Matangi Maskay. 2006. *Economic Cooperation between East Asia and South Asia: Nepal Country Study.* Report Submitted to ADB.
[11] NRB (2005) *Nepal's WTO Service Sector Commitments and Its Impact on Balance of Payment Situation.* Kathmandu: Nepal Rastra Bank., quoted from SAWTEE (2008).

Barriers to Exports of Health Services

- Political instability in Nepal remains a challenge. The general business environment is not favourable for doing business, including in health services. This means less flow of FDI and fewer consumers;
- There is a lack of market integration in the sector. Different health care systems have different cost structures. Information available to the consumers is poor. There is little coordination among the various medical institutions. And, there is very little unified marketing of this export. Most consumers who come to Nepal to receive medical treatment are informed only by word of mouth. This lack of market integration limits Nepal's potential to market to a larger target population;
- Nepalese medical institutions tend to emphasize their low costs. While the cost of health services is indeed cheaper than in India, it is not the only factor that generates demand. Other factors, such as time needed to receive a service, quality of service, costs and quality of accommodation and transportation also need to be considered. A survey conducted by SAWTEE shows that there are consumers willing to pay a higher price for better quality. However, these other forms of differentiation are very rare and yet to be explored by Nepal's exporters of health services;
- Although the development of the health sector has been guided by policies, programmes and plans such as the National Health Policy of 1991, the subsequent Second Long-Term Health Plan (1997–2017), the Eighth, Ninth, and Tenth Development Plans, and the current TYIP, no concrete strategies and policies have been delineated for mode-specific export supply of this service;
- Skilled health care professionals are limited. In order to increase human resources in both quality and quantity, additional spending on training and education is required. However, due to the lack of market integration and specific policies, as well as due to political instability, generating more investment from both domestic and foreign investors is difficult;
- Other limitations include, but are not limited to, poor infrastructure, overcharging foreigners, security, language barriers, etc.

Labour Services

As shown earlier in this chapter, remittances from overseas Nepalese workers have become a major component of GNP.

Export of labour services is governed by the Labour Act of 1992, the Foreign Employment Act and Foreign Employment Regulations of 2007, and the Immigration Act of 1993 and the Regulations of 1995. Nepal has not made any commitment regarding this service under the WTO.

A positive step taken by the Foreign Employment Act of 2007, compared to the Foreign Employment Act of 1985, is the removal of the need for women to secure permission from a guardian, which had hampered their freedom and restricted their movement and chance to gain overseas employment. Though the Act has removed this provision, psychological fear and cultural values continue to limit the increase in women's overseas employment.

Barriers to the Export of Labour Services:

Barriers to labour export start right from the beginning of recruitment and remain until repatriation and reintegration with the family. Of the two main problems that hamper the export of professional human resources in developing countries, the first is the lack of distinctions between the temporary and permanent

[12] Maskay, et al (2006). Foreign Investment Liberalization and Incentives in Selected Asia-Pacific Developing Countries: Implications for the Health Service Sector in Nepal, Working Paper Series, No. 22, Asia-Pacific Research and Training Network on Trade. Quoted from SAWTEE (2008) http://www.unescap.org/tid/artnet.

movement of workers as the process is complicated, non-transparent and costly; and the second is the immigration policies. The other problems include lack of uniformity in training and standards of workers, lack of a uniform process for the evaluation of quality and skills of workers. The barriers to export of labour service from Nepal can be discussed under the following points:

- Nepal's export of labour services is not well organized on the government side. Bureaucratic requirements are centralized in Kathmandu and difficult to access for potential migrant workers. The lack of effective Nepalese embassies or consulates in receiving countries means very little support, monitoring and supervision by the GoN when needed. Nepalese government officials are ill-equipped to protect Nepalese workers from problems faced in receiving countries such as verbal and physical abuse; threat and mental harassment; impounding of passports by employers; long, irregular and arduous working hours; salary not provided according to contract; and lack of advisory and counseling services in the receiving country;
- There is extensive use of informal channels, which puts migrant workers at risk of abuse both in the receiving country and by agents who do not provide proper documents to workers. This tends to aggravate the lack of proper and adequate pre-departure orientation and training;
- Potential migrant workers have difficulty securing finance to cover the initial costs of their travel. They also often lack of information on safe channels to remit salaries;
- There is a lack of services aimed at easing the reintegration of returnees;
- Women migrant workers face problems and risks that are unique to them and which the GoN is ill-equipped to address, including protecting them in the receiving countries against violence and sexual abuse, psychological and physical trauma or work that is risk-prone.

Export of Engineering Services

Engineering services were liberalized as part of Nepal's accession to the WTO in April 2004. There are no restrictions of this service under Modes 1 and 2. Under Mode 3, up to 66 per cent foreign equity capital is allowed for firms incorporated in Nepal. Under Mode 4, the number of foreign employees cannot exceed 15 per cent of the number of local employees (including managers, executives, and specialists) as per Nepal's horizontal commitments that apply to other sectors as well.

Most exports of engineering services take place through the actual movement of engineers outside the country. Based on an interview with the Foreign Employment Association, the percentage of skilled labour among migrant workers is around 2.5 per cent, including engineers and surveyors as well. In addition, some engineering firms have started exporting computer-based designs to foreign companies (See Chapter 2 for details).

There is potential for exporting engineering services only because of the availability of engineers. There are about 20 engineering colleges in Nepal producing some 2,000 engineers every year. Of this, Nepal has an absorption capacity of approximately 500 engineers, forcing the rest to remain unemployed, seek employment in other fields, or seek foreign employment in their areas of expertise.

10.4 Overall Recommendations

Actionable recommendations are listed in the Action Matrix, and more detailed sector-by-sector recommendations are described in Chapter 2. Still, a number of broad cross-cutting issues can usefully be raised in these concluding paragraphs.

Institutional Issue

The service sector involves 17 agencies and government institutions. Because of this highly fragmented structure, there is not any particular institution looking after the interest of the services sector in a holistic manner. The MoCS has established a Service Enquiry Point under its WTO division. However, the enquiry point is not functioning properly for lack of necessary manpower, equipment and activities. The WTO Reference Centre established under the Department of Commerce for providing information services related to WTO matters also does not function effectively. Until now, the Trade and Export Promotion Centre (TEPC) has been looking only after the products sector.

The GoN needs to create a service export 'champion' and strengthen institutions intended to assist in the development and promotion of service exports in a coherent and effective manner.

Data Constraints

There is very limited data on the service sector and trade in services in Nepal.

Considering this problem, UN (2002) has prepared the Manual on Statistics of International Trade in Services.[13] The manual represents an important advance in providing a clearer, more detailed, and more comprehensive system for the measurement of such trade. The manual also proposes a phased approach to the implementation of its recommendations so that developing countries such as Nepal, which are beginning to develop statistics on international trade in services, can gradually structure the available information in line with the new international standard framework.

Nepal should also initiate the preparation of Tourism Satellite Accounting in the area of tourism.

The GoN needs to take a serious look at improving its measurement of the service sector and service trade in Nepal.

Quality of Services

The quality of services is one of the constraints on exporting services from Nepal. At present, weak human resources is a serious problem in the tourism sector due to the movement of skilled human resource abroad, forcing some hotels to run their businesses through internees. In the IT and web-based services, companies have to compete hard for getting better people. Availability of qualified professionals is also required to promote export of health, education, and engineering services. All these indicate the need for strengthening training and other capability development programmes and institutions, including those that support the sectors targeted for promotion of service exports.

Regulations

Nepal needs to formulate domestic regulations to abide by its WTO commitments in the area of services. The country needs to review and reform regulations and acts that govern individual sectors and that are out of step with current needs (e.g the Hotel and Restaurants Act 2036, formulated 30 years ago).

The current exchange limit of US$2,000 per Nepalese travelling abroad is a problem for service exporters in a number of sectors and needs to be revisited.

Insufficient competition in telecommunications results in high cost of internet bandwidth, which is a business impediment to most service sectors.

[13] UN (2002) Manual on Statistics of International Trade in Services.

Chapter 11
Trade Support Institutions: Business Development Services for Trade Supply Capacity

11.1 Introduction

Strengthening the capacity of current or potential Nepalese exporters across many export sectors, including the 19 sectors identified as export potentials in the NTIS 2010, requires a range of trade support services. In Nepal, trade support services are offered by a wide range of institutions that have geographical (national, sub-national, and bilateral), sector-specific, and functional remits. Nepalese Trade Support Institutions (TSIs) are either public, private, NGO, or even joint public-private organizations. A key to consolidating Nepal's export supply capacity lies in strengthening TSIs and improving the mechanisms for exporters to access their services. The most important factor underpinning the success of the country's trade support infrastructure is that it must reach out to producers at national and district level.

This chapter addresses:

- The needs of Nepalese exporters in the 19 priority sectors selected; and
- The capacity development needs of existing TSIs.

Twenty-eight TSIs (apex, sector, district, bi-national, and specialized institutions) and approximately 190 businesses were identified and surveyed. Institutions were surveyed through questionnairesand enterprises by means of focus groups meetings. Through the questionnaires TSIs were asked to describe their services, their strengths and weaknesses, as well as perceived needs.

TSIs and enterprises were selected mostly among the 19 priority sectors identified in the NTIS 2010. Twenty TSIs responded to the questionnaire. One hundred and forty-three enterprises attended the focus group meetings.

11.2 Nepalese TSIs: Capacity and Needs

This section provides a snapshot of the TSIs that responded to the questionnaire. It also incorporates the gaps identified by exporters in the services of the TSIs based on their relationship with those institutions.

Federation of Nepalese Chambers of Commerce and Industry (FNCCI)

The FNCCI is the apex TSI of the Nepalese private sector. It was established in 1965 to promote and protect the rights of businesses and industries. Its membership includes 92 district or municipality chambers of commerce and industry in all 75 districts, 73 commodity or sector associations, 342 public and private sector undertakings, and ten bi-national chambers of commerce and industry. It has a full-time secretariat, a business library, a training unit, a human resource development (HRD) centre, an ICT unit, a product display hall, and conference/meeting facilities.

The business development services (BDS) offered by the FNCCI include:

- Representing the business community in national and international fora;
- Preparing recommendations for promoting exports and investment;
- Promoting joint ventures;
- Providing advisory service to exporters, importers, and investors;
- Facilitating participation in national and international trade fairs and exhibitions;
- Promoting better industrial relations;
- Providing business information and research services;

- Strengthening sub-national chambers and associations;
- Promoting entrepreneurship;
- Conducting, training, workshops, and seminars on chamber management, industrial relations, productivity, entrepreneurship, quality management, environmental management, etc.;
- Providing publications, information exchange, documentation; and,
- Providing 'one-stop' service to members.

The FNCCI has projects and cooperation agreements with UN agencies, the World Bank, bilateral development agencies, and SAARC. In cooperation with USAID, it established the Agro Enterprise Centre to promote Nepal's agro business sector. The Federation and its member chambers issue certificate of origin for exports from Nepal. It has a WTO cell and a Non Resident Nepali NRN cell, which functions as the Secretariat of NRN Association. It promotes the Nepalese Young Entrepreneurs' Forum (NYEF) and the National Youth Business Forum (NYBF).

Observations from enterprises and other stakeholders:

- FNCCI has a shortage of trained human resources to provide adequate BDS, including market research and analysis of export and import trends;
- FNCCI lacks sufficient in-house capacity to provide enterprise-oriented TRTA to its constituent chambers and members;
- Linkages to most other TSIs are on an ad hoc basis;
- FNCCI's leadership among the network of Nepalese TSIs is weak;
- FNCCI is short of funds;
- FNCCI does not promote adequately dialogue and liaison between businesses and government;
- FNCCI lacks an up-to-date trade information unit; and,
- FNCCI needs technical assistance to provide onward support to stakeholders with regard to the WTO and other multilateral and bilateral obligations of Nepal.

Trade and Export Promotion Centre (TEPC)

The TEPC is the GoN's main trade promotion organization, established in November 2006 by merging three organizations: the Trade Promotion Centre, the Export Promotion Board, and the Carpet & Wool Development Board.

The TEPC's mandate is to:

- Advise the GoN in formulating policies for the development and expansion of trade and export;
- Strengthen the national economy by developing and expanding trade and export of the country;
- Support the goal of poverty alleviation through the development of the rural economy by enhancing internal and external markets for agro-based and other products;
- Launch programmes to increase the supply of exportable products by promoting coordination among different agencies;
- Diversify trade by identifying potential markets for exportable products;
- Support the development of additional institutions and organizations that can assist in diversifying trade;
- Seek technical assistance from national and international organizations to improve the quality and standard of exportable products;

- Implement appropriate programmes to attract national or foreign investment for export- or import-oriented projects;
- Collect, disseminate, and publish trade-related information;
- Identify and analyse foreign trade issues and advise the GoN on appropriate measures to solve these;
- Assist in market testing of exportable products;
- Organize buyers-sellers meetings;
- Conduct training seminars and workshops; and,
- Simplify procedures relating to quality control, insurance and transport and enhance support services for export transactions.

The TEPC has a branch office in Biratnagar in eastern Nepal, and has linkage benefits from bilateral and multilateral TRTA. At present, TEPC has a full-time GTZ adviser to assist with organizational and capacity-building issues. The organization is currently undergoing a change management process.

Observations from enterprises and other stakeholders:

- The TEPC should come out of its public sector 'shell' and become more responsive to and focused on clients' needs;
- The TEPC should re-profile its staff and match its human resources and skills with the BDS needs;
- The TEPC should focus on differentiating itself from other apex organizations and provide targeted BDS, instead of replicating the offerings of others; and,
- The TEPC lacks capacity to represent and promote service exports.

Nepal Tourism Board (NTB)

The NTB is the apex organization for the tourism sector. It was established as a joint government-private sector organization by an act of Parliament in 1999. It is responsible for marketing Nepal as a premier tourism destination. At present, the Board is working towards rebranding the image of Nepal internationally.

While the Board initially focused on marketing and promotion of the sector, its ultimate objective is to take over the sector's regulatory functions as well as product development activities. The tourist service fee finances the activities of the NTB, thereby assuring its financial independence.

As a PPP, the NTB works in coordination with tourism industry stakeholders like the Hotel Association of Nepal (HAN), the Trekking Agents Association of Nepal (TAAN), and the Nepal Association of Tour Operators (NATOs).

The NTB is working currently on the following targets:

- One million international arrivals; Forty per cent of the arrivals to travel beyond the present tourism destinations;
- Fifty per cent increase in investment in tourism infrastructure; and,
- Consolidation of domestic tourism.

Nepal's 'Tourism Vision 2020' targets are even more ambitious: two million annual international arrivals, one million individuals employed in the sector, and people-centered sustainable development for Nepal's tourism sector.

Observations from enterprises and other stakeholders:

- Industrial relations in the tourism industry need a renewed focus and partnership;
- The NTB should aggressively pursue investment promotion;
- The NTB should introduce and enforce quality standards;
- The NTB should promote community-based tourism initiatives;
- The NTB should work with other stakeholders to augment human resource standards and skills;
- The NTB should work with other stakeholders to improve Nepal's arrival gateways; and
- The NTB should work with other stakeholders tostrike a balance between tourism development and environmental factors.

Bi-national TSIs

Two bi-national chambers, namely the Nepal-India Chamber of Commerce and Industry and the Nepal-China Chamber of Commerce and Industry, responded to the questionnaire.

The **Nepal-India Chamber of Commerce and Industry (NICCI)** was founded in 1994. It is by far the largest bi-national TSI in Nepal, given that India is Nepal's largest trading partner. NICCI's main mission is to enable smooth and increased bilateral trade and investment between the two countries. Its current focus sectors are hydropower projects, high value agro-forestry products, and tourism. It seems to focus on lobbying and advocacy, including regular consultation with the GoN and investors from India.

The **Nepal-China Chamber of Commerce and Industry (NCCCI)** was founded in 1999. It is a key bi-national chamber in light of China's emerging relationship with Nepal. With the proposed rail and enhanced road links between the two countries, and given China's stated interest in FDI in Nepal, the NCCCI has an important role to play in furthering trade and investment relations between the two countries. The NCCCI has links, including exchange of information, with China's two major TSIs, China Council for the Promotion of International Trade (CCPIT) and the China Chamber of International Commerce (CCIC).

The NCCCI's sector focus for promoting bilateral trade includes handicrafts, Pashmina, garments, carpets, tea, vegetable seeds, cardamom, pulses, floriculture, leather, gems, ginger, herbs, coffee, honey, vegetables, and tourism. In addition, it focuses on the establishment of a Special Economic Zone (SEZ) between the two countries.

Observations from enterprises and other stakeholders:

- Both China and India have advanced TSI infrastructures from which Nepal could learn. In the case of China, the CCPIT has a very good network of offices both across China and overseas. Both CCPIT and CCIC have excellent bilateral technical cooperation programmes that can assist in building capacity at the NCCCI. In the case of India, nearly all Indian TSIs are private sector organizations. However, the Government's India Trade Promotion Organization (ITPO) provides assistance to NICCI under India's third country technical cooperation programme.
- The GoN should ensure the posting of economic counsellors in New Delhi and Kolkata, as also in Beijing and Lhasa.

ILAM Chamber of Commerce and Industry (ICCI)

ICCI was founded in 1967. It has between 70 and 80 member enterprises that export large cardamom, tea, and ginger to the region (South Asia) and the Middle East. This TSI has a proactive management that is focused on the needs of its clients. Despite its small size, limited infrastructure, and budget, it has used innovative methods to provide BDS to its clients such as enlisting retired professionals from civil society to help with capacity building and knowledge dissemination activities.

ICCI is hampered by lack of capacity to train cardamom farmers in fighting the spread of diseases that have reached almost epidemic proportions in the area. Farmers are reluctant to seek advice from inexperienced government agricultural extension officers. And despite requests to Kathmandu, including through the FNCCI, no assistance has been forthcoming. This situation is quite representative of the difficulties local TSIs confront in rural Nepal in trying to address effectively the needs of their clients. ICCI is also hampered by its limited financial resources that restrict its ability to organize meetings and seminars.

Observations from enterprises and other stakeholders:

- ICCI and similar sub-national TSIs need better technical and substantive support to service the needs of their members;
- Support for extension services is also an important requirement; and,
- There is need for an institutionalized mechanism to ensure prompt assistance from Kathmandu.

Large Cardamom Association of Nepal (LCAN)

LCAN is based in Birtamod, Eastern Nepal and has been active since 2002.

There are about five serious exporters of large cardamom from Birtamod. Though small in number they are the largest players by virtue of the town's location as a major market for hill produce. LCAN was created with technical and financial support of Mercy Corps/USAID, as part of their support to boost rural household incomes in the area around Birtamod. A major achievement of the technical support provided through USAID and by SNV has been to replace the traditional weights and measures 'Fawa' system, biased against growers, with a more equitable system of weighing produce.

Observations from enterprises and other stakeholders:

- The service capacity of LCAN is very limited. Yet, the needs of growers are great;
- Plant diseases have reduced planted acreage by almost 40 per cent in the preceding five years, which urgently needs to be arrested. With proper resources, LCAN could help in providing extension services to growers (like ICCI mentioned above); and,
- New farming and post-harvest methods need to be introduced. Current practices are more than a century old and reduce the resistance of plants to diseases. Likewise, LCAN and similar district-level organizations could help educate farmers.

Nepal Ginger Producers and Traders Association (NGPTA)

The NGPTA was established in Jhapa in 2005. It is the TSI for the ginger sector in Nepal.

More than 100 enterprises are involved in trading and processing ginger in Nepal with around 30 to 40 enterprises operating in the eastern region. The NGPTA was set up through the assistance of Mercy Corps/ USAID. It supports ginger farmers and traders by providing technical support at farm level and in post-harvest handling. The association is trying to move up the value chain by establishing a processing facility and seeking linkages with an agricultural research institute for enhancing post-harvest management of ginger. It also provides support to producers and traders in marketing and helps create awareness of CODEX standards.

Observations from enterprises and other stakeholders:

- Ginger being a high-value product, there is scope for further in-country value addition. The NGPTA should disseminate information on value addition opportunities among growers, traders, and processors;
- Much work needs to be done to inform businesses about quality management systems and introduce those in the sector to ensure acceptability of the product in higher value markets than in the South Asia region. This, again, is an area where the NGPTA should inform and disseminate knowledge among economic actors in the sector;

Apiculturists Network Nepal (Apinet)

Founded in 2002 and based in Lalitpur, Apinet is the TSI representing honey producers and exporters in Nepal.

There are around 15 major exporters of honey in Nepal. The country possesses potential to develop substantial capacity for organic honey production due to favourable beekeeping ecology and biodiversity. Up to 10,000 tons of honey are produced every year without sucrose feeding. However, due to lack of technical know-how and lack of a clear export strategy, Nepal is unable to harness the available opportunities. In addition, despite the high quality of Nepalese honey and high demand for the product in international markets, especially in Europe, Nepalese enterprises are unable to export honey due to the lack of MRL control and testing capacity, which is a serious SPS issue.

Observations from enterprises and other stakeholders:

Apinet is in a position to provide pertinent BDS to beekeepers and exporters, but is constrained by limited financial resources. Nevertheless, it could focus on the following BDS:

- Provide beekeeping training;
- Carry out beekeeping research and development;
- disseminate trade information on honey;
- encourage consolidation of beekeeping in larger production units;
- encourage development of honey packaging;
- provide inputs for beekeeping and honey processing;
- help in marketing of honey;
- help in raising awareness of SPS issues;
- encourage foreign investment in apiculture;
- lobby for the development and implementation of a national policy for apiculture; and,
- lobby for the prompt establishment of an internationally accredited laboratory.

Association of Nepalese Rice, Oil, and Pulses Industry (ANROPI)

Founded in 1972, ANROPI is based in Kathmandu and the lentil (pulse) sector of Nepal. There are 30 processing mills for lentils in the country specializing in split and whole lentils. The sector is highly dependent on output and domestic demand and is characterized by volatility. ANROPI claims that a lot of its work involves dealing with government as a lobbyist for the sector. It promotes the sector mostly through direct marketing involving buyer and seller interfaces at trade fairs and exhibitions. The main export markets for the product are within the region, with minimal quantities being exported to markets in the Middle East and Eurasia.

Observations from enterprises and other stakeholders:

- ANROPI should support the sector in consultation with the Government;
- ANROPI should assist with the sector's marketing activities;
- ANROPI should develop a strategy to assist growers in dealing with the highly cyclical nature of the sector; and,
- ANROPI should carry out a cost-benefit analysis comparing domestic and export marketing and educate growers and processors about its findings.

Himalayan Orthodox Tea Producers' Association/Himalayan Tea Producers' Cooperative (HOTPA/HIMCOOP)

Founded in1998 and based in Lalitpur, HOTPA/HIMCOOP is the TSI supporting Nepal's tea growers and exporters. The sector includes approximately 30 large exporters. India, Japan, Germany, and the USA are main export markets. The tea planted in Nepal is the Himalayan Orthodox variety. HTPA/HIMCOOP offers technical and commercial assistance to growers, processors, and exporters on planting, post-harvest handling, and cross-border transactions. Nepal's tea is a niche product and targeted market entry can result in greater revenues. Brand development and superior packaging of product can increase revenue retention. Furthermore, product differentiation and increasing organic cultivation could further improve market potentials and increase revenues.

Observations from enterprises and other stakeholders:

- In addition to its current support to growers, processors, and exporters, HOTPA/HIMCOOP should assist in creating greater awareness and understanding of quality standards and help introduce those in the sector;
- The associations should work also with the sector to improve packaging and bring it up to international standards; and,
- The association should play an important role in brand extension and increasing organic tea planting and processing.

Nepal Handmade Paper Association (HANDPASS)

HANDPASS was established in 1992. It represents and supports 20 enterprises that export to over 80 countries. It focuses on:

- Developing and promoting paper-making enterprises in the central and rural areas of the country and improving the living standards of low income communities;

- Helping paper manufacturers in marketing their products, in product development, and in skill enhancement;
- Creating a supportive community among handmade paper producers and product manufacturers;
- Organizing enterprises engaged in production of indigenous Nepali paper and various types of materials made of such paper; and,
- Organizing training and seminars on topics such as promotion and production standards.

Observations from enterprises and other stakeholders:

- In addition to its current support, HANDPASS should assist with and lobby for the identification of a sector strategy to promote greater growth and sustainability; and
- HANDPASS should also assist with brand building for traditional Nepalese paper to help create higher value and enhanced market visibility.

Federation of Handicraft Association of Nepal (FHAN)

FHAN was established in 1972 and is based in Kathmandu. FHAN supports the gem and jewelry sector in Nepal. Approximately 350 enterprises operate in this sector. The sector is faced with issues that negatively impact its competitiveness in export markets. These include:

- Lack of modern machinery and technology;
- Absence of specific rules and regulations concerning export and import of gems and related materials;
- Weak promotion support from the Government to gems and jewelry exports. GoN institutions are not familiar with the working of the industry;
- The mixing of cadmium with silver undermines the export potentials of silver jewelry;
- The sector is confronted with labour issues;
- The tax regime impacts the sector negatively; and,
- The sector lacks a gemmology institute.

Observations from enterprises and other stakeholders:

- The Association should help in creating a gemmology institute to assist in standard-setting for the sector and to encourage innovation and product diversification;
- The Association should lobby for a transparent and rule-based export regime for the sector;
- The Association should lobby the Government to provide greater attention and support to a sector that is a potential export champion.

FHAN also supports the woollen product sector where some 250 enterprises operate. The woollen products sector is beset by many problems, including:

- The GoN policies and regulations are not transparent;
- The sector is dependent on imported raw materials and should strive for self-sufficiency;
- GoN needs to support skills training and development in the sector as it exhibits great potential for employment of women and socially disadvantaged citizens; and
- The woollen products sector needs tax incentives to remain internationally competitive.

Observations from enterprises and other stakeholders:

- The sector needs a supportive and sustained strategy with practical and enabling support measures to ensure its competitiveness and success in international markets. The Association has a role to play in lobbying GoN;

Nepal Pashmina Industries Association (NPIA)

The Pashmina sector has approximately 175 active enterprises, exporting to over 80 countries worldwide. The NPIA provides support to its members in the following areas:

- Lobby on behalf of the sector and seek to improve the business environment for the sector;
- Facilitate sourcing of raw materials;
- Encourage and assist people living in the high altitudes for chyangra (capra hircus) farming for the production of top quality Pashmina;
- Help promote national and international markets for Pashmina products;
- Develop linkages among industrial, commercial, governmental, and non-governmental actors in the sector;
- Promote quality of Pashmina products by providing a Pashmina collective trademark. In particular, NPIA has recently finalized a 'logo and brand identity' and has embarked on an aggressive worldwide registration programme of its trademark to ensure the integrity of this brand; and,
- NPIA provides specific training in product design and product development to help producers respond to market demand.

Observations from enterprises and other stakeholders:

- Stakeholders wish to see continued support and strengthening of the Association's capacity in areas in which it is already active.

Federation of Contractors' Association of Nepal (FCAN)

FCAN supports the civil engineering sector in Nepal. The construction sector contributes around 11 per cent to the country's Gross Domestic Product (GDP). It provides large employment to semi-skilled and seasonal workers. Representatives of the sector tend to focus on domestic market needs.

Observations from enterprises and other stakeholders:

FCAN should:

- Lobbythe GoN to review and update the existing Acts and Regulations related with construction industry;
- Encourage introduction of a transparent and business-friendly tax assessment system;
- Introducea standard contract document to achieve uniformity in contract administration;
- Seek donor support to sustain some of its training activity. To improve the management capability and skill of construction professionals and trades people, FCAN has established a Construction Industry Training Centre in Kathmandu. Various training programmes have been launched but they are not sustainable without external support; and, Lobby GoN to ensure that the Construction Industry Development Board functions efficiently and proper budget support to the Board is allocated.

Computer Association of Nepal (CAN)

Web-based service companies in Nepal are represented by CAN.

Observations from enterprises and other stakeholders:

CAN should:

- Lobby GoN so that Nepal's ICT Policy 2000 (Revised in 2003) with an attendant action plan and implementation time line is approved by the Cabinet;
- Lobby for speedy implementation of the eGMaP project;
- Encourage immediate establishment of a Digital Signature Infrastructure (PKI);
- Encourage establishment of an electronic Payment Gateway and Digital clearing House;
- Help promote Nepal as an alternative destination for software and BPOs;
- Participate in the industry international trade shows;
- Help enter the GLOCAL market;
- Support efforts by the sector to attain ISO and CMM standards;
- Create incubator for new entrepreneurs; And,
- Attract Venture Capital and Angel Investment.

Hotel Association of Nepal (HAN)

HAN was established in 1966 to represent the hospitality industry. It is based in Kathmandu and its 400 members represent the full star spectrum of hotels. HAN works closely with the other travel-related TSIs and the Nepal Tourism Board. With 2011 being the 'Visit Nepal Year', HAN is gearing up to welcome the expected increase in tourist traffic.

Tourism, an important revenue earner for the country, has its own share of problems, most of which have to do with industrial relations and investment. In addition, Nepal, thus far, has not capitalized on the niche for affordable, yet comfortable, tourist class hotels that some countries in the regions have developed successfully to create greater 'pull' on quality and budget conscious travellers, a growing segment of the overall trade. Still, several of Nepal's more established hotel groups are now venturing into management contracts in neighbouring countries, including China, an indication of the maturing of the industry.

Observations from enterprises and other stakeholders:

- HAN should actively seek to export Nepal's management expertise in the hospitality sector;
- HAN has a role to play in improving industrial relations in the sector; and,
- HAN should work with investors in the sector to encourage investment in quality hotels and budget 'value for money' projects.

Association of Private Hospitals and Nursing Homes (APHNH)

APHNH represents the private healthcare sector in Nepal. Currently, in Nepal private hospital beds outnumber government hospital beds by a ratio of over 2:1. Nearly 90 per cent of the country's medical professionals graduate from private sector colleges.

Stakeholders believe there is wide scope for increased public-private partnership (PPP) in the sector to enhance service delivery in the country and increase export opportunities, including bridging human resources gaps, improving management of government district and zonal hospitals, introducing telemedicine to improve access to medical services in remote areas, using the private sector medical system to provide public health functions (e.g. immunization, family planning), etc.

Observations from enterprises and other stakeholders:

- APHNH has a critical role to play in helping change the structure of the sector, including changing the mindset of government officials (both politicians and bureaucrats) and helping evolve the role of government from that of a service provider primarily to that of a service ensurer, facilitator, policy maker, financier, regulator, quality controller, promoter of partnership;
- APNH should lobby for moving towards a sector strategy and policy framework that focus on PPP, including a time-bound action plan for the sector;
- APNH can help enhance the conceptual understanding of PPP on both sides through regular dialogue, sharing and learning sessions, and joint projects;and,
- APHN has a critical role to play in changing the mindset of the public sector. It needs to realize that private sector institutions are valuable partners, not subordinates.

11.3 Overall Observations

1. TSIs have a critical role to play in business advocacy, including identifying and lobbying for sector-specific issues and helping shape the business environment. In general, however, the capacity of TSIs in this area is weak. Most TSIs are 'reactive' rather than 'proactive' and the lack of clear sector strategies often results in ad hoc responses to government initiatives. Ongoing advocacy should be mainstreamed into their business models. The creation of the Nepal Business Forum (NBF) is an opportunity to set the dialogue between the government and the business, including export business, on a new footing. TSIs should support speedy implementation of the NBF.

2. Related to the above, the FNCCI should merge or bring its recently created Export Promotion Forum (EPF) under the umbrella of the Working Group on Trade to be formed in the NBF to avoid spreading resources and focus thin.

3. Nepal has a TSI infrastructure that spans the apex, sector, bi-national, and district level. However, despite formal institutional affiliations, the level of effective networking seems to be limited to the times of TSI elections or in periods of crisis. Constant networking is lacking. Nepal should encourage the creation of a structured and effective network of TSIs as other countries in the regions have done. The network could be used to identify and address capacity needs of different TSIs, taking into account the different roles that each might best be positioned to serve.

4. Related to the above, the survey conducted in preparation of this chapter indicates that TSIs have an important role to play to assist exporters in areas of trade information, market analysis, market development, understanding of market requirements, including standards, understanding of opportunities resulting from regional and global (WTO) trade integration, product design and product development, technology, enterprise management, interaction with government agencies, and others. There is a marked shortage of trained manpower within TSIs and urgent need to build such capacity so that they are better equipped to assist their clients.

5. Also related to the above is the need for strengthening institutional governance mechanisms of TSIs. A professional cadre of managers needs to be built--at least in some of the largest TSIs--and be empowered independent of the elected office-bearers. Most TSIs in the country seem to be moulded on the basis of elected leadership. Trained full-time managers are needed to operate TSIs in adherence to the institution's mandate and in line with the needs of the membership.

6. Evidence suggests that the agricultural sector, which includes a number of export potential products, is negatively affected by the lack of effective extension services to farmers, to enable them to confront a disease that is affecting the cardamom plants. In many areas, however, district-level and local TSIs could respond to this need provided they have minimum resources and trained human resources. Creating a stronger TSI infrastructure at grass roots level is the key to ensuring Nepal's success in further developing export opportunities in the agricultural sector in particular.

7. Exposure to new and emerging technologies, cutting-edge business processes, sunrise sectors with potential for growth in Nepal as well as support for novel business ventures through project incubation, can contribute to improving Nepal's business landscape, through improved productivity and innovation, resulting in the country's exports becoming diversified, and new and more competitive products being developed. Selected TSIs should build capacity to provide their member businesses proactively with exposure to new and innovative ways of doing business, as well as developing mechanisms for business incubation support.

8. As part of a focus on developing and strengthening a structured Trade Support Network, the mandate and functions of the TEPC should be redefined and strengthened. Staff skills and human resources in the TEPC should be clearly aligned with the mandate and functions of the organization. The lack of a representative organization that speaks for the interest of the ever more important service exports sectors should also be looked at closely, be it through strengthening of the TEPC in this area or through another institution.

9. The GoN should make stronger use of its overseas diplomatic missions to assist exporters in accessing markets by posting trained commercial counsellors and encouraging strong interactions between those and TSIs. The focus of these postings should be in countries where Nepal is already a large exporter as well as in countries where the NTIS 2010 has identified strong market opportunities.

Chapter 12
Managing AfT and TRTA to Implement NTIS 2010

NTIS 2010

12.1 Introduction

Implementation of the Actions proposed in NTIS 2010 will require mobilizing fresh donor resources, as well as putting in place robust coordination and implementation arrangements. In doing so, the GoN should keep in mind the lessons learned from the implementation of the earlier NTIS 2004, including the need for stronger coordination and leadership on the part of the Government. In addition, the GoN needs to be mindful of the changing environment for ODA disbursement, implementation and management in adherence to the principles of the '2005 Paris Declaration on Aid Effectiveness'.

The GoN has identified several preliminary mechanisms to enhance country ownership of TRTA, including through the implementation of the Enhanced Integrated Framework (EIF) and the promotion of a Sector Wide Approach (SWAp), like approach to improve government-donor coordination.

Such mechanisms will include but are not limited to:

- a National Steering Committee (NSC), chaired by the Chief Secretary and co-chaired by the Secretary, MoCS. The NSC is to include key trade stakeholders on the Government, private sector, and donor sides;
- a National Implementation Unit (NIU) based in the MoCS;
- Technical Committees (TCs), with representatives of key line ministries with a stake in the trade sector. The TCs will work in close cooperation with the NIU;
- a Nepal Business Forum (NBF);
- a Donor Facilitator (DF), currently UNDP Nepal.

Technical assistance support will be required to strengthen the capacity of those various implementation arrangements. The GoN has secured the support of the EIF-Tier 1 Trust Fund to assist with some of this capacity building.

This chapter reviews:

- The new environment for TRTA;
- The National Implementation Arrangements (NIAs) being considered by the GoN in support of NTIS 2010;
- Possible capacity development needs to strengthen the proposed NIAs;
- Examples and lessons from other countries that have taken steps to put in place similar arrangements.

12.2 What Has Changed in Trade Related Technical Assistance?

The 2005 Paris Declaration on Aid Effectiveness and the Accra Agenda for Action

The 'Paris Declaration on Aid Effectiveness', drafted in 2005 by the OECD Development Assistance Committee (DAC), laid out new guidelines to harmonize donor practices and increase the effectiveness of aid. The Declaration was endorsed by over 100 Ministers, Heads of Agencies, and Senior Officials that committed their countries and organizations to working towards greater harmonization, alignment, and management of aid for results based on measurable actions and monitoring indicators. The GoN is a signatory to the Paris Declaration.

The key principles included in the Declaration are:

Ownership: *Developing countries set their own strategies for reducing poverty, improving their institutions, and tackling corruption.*

Alignment: *Donor countries align behind these objectives and use local implementation systems.*

Harmonization: *Donor countries coordinate, simplify procedures, and share information among themselves and with Governments to avoid duplication.*

Results: *Developing countries and donors shift focus to development results and results get measured.*

Mutual Accountability: *Donors and partners are accountable for development results.*

The Accra Agenda for Action (AAA), drawn up in 2008, builds on the commitments agreed upon under the Paris Declaration and adds:

Predictability: *Donors will provide partner countries three-to-five-year forward information on their planned aid.*

Country Systems: *Partner country systems will be used to deliver aid as the first option, rather than donor systems.*

Conditionality: *Donors will switch from reliance on prescriptive conditions about how and when aid money is spent to conditions based on the developing country's own development objectives.*

Untying: *Donors will relax restrictions that prevent developing countries from buying the goods and services they need from whomever and wherever they can get the best quality at the lowest price.*

Nepal's Progress in Meeting the Paris Declaration Principles

While Nepal is a signatory to the 2005 Paris Declaration, the country was not included in the first round of detailed monitoring for the Declaration. Still, annual surveys are conducted among all countries to evaluate progress made in integrating the five main principles into their respective development agenda. Table 12.1 summarizes the progress made by Nepal as of the end of 2007.

Table 12.1
Implementation of the Five Paris Principles on Aid Effectiveness in Nepal, 2007

PRINCIPLES	2007	CHALLENGES	PRIORITY ACTIONS
Ownership	Moderate	Enhancing country capacity and commitment for ownership of development plans and programmes in the post-conflict environment	Implement Poverty Reduction Strategy Paper and Three-Year Interim Plan; establish clearer linkages with the annual budget
Alignment	Moderate	Limited extent to which aid flows are on budget and to which detailed information on disbursements is provided to government	Government to implement public expenditure and financial accountability action plan
Harmonization	Low	Limited use of programme-based and sector-wide approaches	Extend sector-wide approaches into sectors beyond health and education
Managing for results	Moderate	Relative absence of measurable performance assessment framework	Donors and government to agree on common monitoring and evaluation framework in sector-wide support programmes
Mutual accountability	Low	Lack of mechanism for mutual assessment of aid effectiveness	Build and implement a joint action plan for aid effectiveness

Source: OECD, Development Assistance Committee, *2008 Survey on Monitoring the Paris Declaration: Making Aid More Effective by 2010*, OECD Publications.

According to the *2008 Survey on Monitoring the Paris Declaration: Making Aid More Effective,* '… harmonization is relatively unadvanced in Nepal. To date, little use is made of programme-based approaches (PBAs) and only a small proportion of country analytical work is conducted jointly. Some progress has been made in the health and education sectors but it needs to be deepened; overall, harmonization needs to be expanded to other sectors.'[1] The stress put on the use of SWAp as a way to better harmonize interventions by donors and the need to agree, as soon as possible, on a common monitoring and evaluation framework should be noted. Harmonization of aid delivery procedures and adoption of common arrangements help reduce duplication of efforts and overlap among interventions and lower the steep transaction costs of managing aid.

Aid for Trade Initiative

Aid for Trade (AfT) is about helping developing countries, in particular LDCs, to build the trade capacity and infrastructure they need to benefit from market opening, including through the WTO Agreements. It is part of overall Official Development Assistance (ODA)—grants and concessional loans—targeted at trade-related programmes and projects.

Because trade is a broad and complex activity, AfT is broad and not easily defined. It includes technical assistance—helping countries to develop trade strategies, negotiate more effectively, and implement outcomes as well as some infrastructure investment (especially that which benefits trade facilitation and ease of doing business.)

The success of the initiative depends on building closer cooperation in national capitals among trade, finance, and development officials. This needs to be matched by closer cooperation at international and regional level among intergovernmental organizations with core responsibilities in these areas and their member countries.

Engagement of Nepal's Development Partners in TRTA

The political changes that have occurred in Nepal since 2006 in Nepal have made it difficult for many Nepal-based development partners (DPs) to commit long-term support to a trade development agenda. This is demonstrated by the relatively low level of implementation of the NTIS 2004 recommendations.

[1] OECD, Development Assistance Committee, *2008 Survey on Monitoring the Paris Declaration: Making Aid More Effective by 2010,* OECD Publications.

That being said, Nepal has benefited from some, if limited, support from multilateral and bilateral DPs over the past few years. These include UNDP Nepal--which provided support to GoN before and following the WTO accession--the World Bank, the Asian Development Bank, the European Commission, a number of agencies from the UN system (ESCAP, FAO, ITC, UNIDO, UNCTAD, WTO, to name a few) in their respective spheres of competence, as well as GTZ, DFID, and Finnish Cooperation.

While most of the DPs mentioned above have indicated willingness to support more trade development and more trade mainstreaming actions, many are waiting for strong signs from the GoN that it genuinely considers trade as an engine of economic growth and poverty reduction. The much-awaited Nepal Development Forum, as well as the three-year plan scheduled to be released in mid 2010 could prove the right opportunities to provide such public and political endorsement, especially if the Actions proposed under the NDF and the three-year plan are aligned with those identified in NTIS 2010.

Enhanced Integrated Framework

The EIF, hosted in the WTO and financed through a trust fund financed by a significant number of bilateral and multilateral DPs, is a key mechanism through which LDCs can access AfT.

The EIF seeks to assist LDCs in integrating the world economy in a manner that supports their development and poverty reduction objectives by:

- Mainstreaming trade into national development plans, especially the Poverty Reduction Strategy Papers (PRSPs);
- Promoting a coordinated delivery of TRTA;
- Strengthening country-level management of AfT and TRTA in a manner consistent with the Paris Declaration; and,
- Enhancing supply side capacity for trade.

Concretely, LDCs can access funds made available by donors through two windows (Tier 1 and Tier 2) by submitting to the EIF project proposals that focus on:

- Building the institutional and human resource capacity of the EIF NIAs;
- Providing operational support to NIAs, including some local running costs and equipment;
- Preparing and updating a Diagnostic Trade Integration Study (DTIS); or,
- Facilitating and supporting trade mainstreaming actions identified in the DTIS.

As noted earlier, Nepal has secured support from the Tier 1 window to assist in establishing its NTIS NIAs.

12.3 Nepal's Proposed National Implementation Arrangements

To help implement the Actions identified in NTIS 2010, the GoN has been organizing a number of NIAs intended to capture the requirements of the job at hand and the new environment for aid effectiveness, including some of the EIF guidelines. Some of those arrangements are likely to evolve as the GoN internalizes some of the challenges and requirements arising from NTIS 2010 and as some building blocks begin to take shape.

National Steering Committee

A National Steering Committee (NSC) has been established with the Chief Secretary as chair and the Secretary of the MoCS as co-chair. Secretaries from various line ministries, high-level officials from the agencies concerned and representatives from the private sector are also members of the NSC. The main role of the NSC will be to monitor implementation of the NTIS 2010Actions, ensure proper AfT support, ensure their mainstreaming

into national development plans, and ensure effective coordination and buy-in among various government institutions, private sector, civil society, DPs, and other stakeholders.

As part of its mandate, the NSC will monitor the work of the NIU, assess the NTIS and its Action Matrix, approve prioritized interventions, provide national space for discussion and identification of NTIS priorities, and monitor and coordinate with various initiatives originating from the EIF Secretariat.

EIF Focal Point

The Secretary of the MoCS has been designated as the EIF Focal Point (FP). The EIF-FP will provide senior management oversight of the NIU. The EIF-FP will work closely with the relevant line Ministries, the Donor Facilitator (DF), DPs, the Executive Secretariat of the EIF and EIF agencies to ensure that TRTA projects are mainstreamed into the PRSP and respond to the DTIS priorities.

National Implementation Unit

An NIU is being established in the MoCS. The Joint Secretary who heads the Planning and International Trade Cooperation Division[2] will serve as NIU Coordinator and EIF Tier 1 Project Director. The NIU will work closely with other designated Focal Points (FPs) in key Ministries and departments, particularly the Ministry of Finance, the NPC, the Ministry of Agriculture, the MoTCA as well as other trade-related ministries and public, private and non-governmental institutions to ensure coordination at all stages of the NTIS implementation process. The current idea is to strengthen the existing network of WTO FPs so as to create an 'extended NIU' composed of the NIU itself and a network of FPs. The FPs will benefit from many of the same capacity development initiatives targeted at the NIU.

The NIU will monitor the implementation of the Tier 1 project. With support of the network of FPs (the 'extended NIU') and the TCs, the NIU will lead the development and formulation of projects intended to support the implementation of the NTIS 2010 actions (to be financed by DPs based in Nepal or other sources such as the EIF Tier 2 trust fund resources), will be responsible for preparing a multi-year work plan and detailed annual operational plan supporting the implementation of the NTIS 2010 recommendations, and will be responsible for monitoring progress and for reporting to the NSC and the EIF Executive Secretariat.

NTIS Technical Committees

To assist the NSC and the NIU, several technical committees will be established to address various priority areas identified in NTIS 2010. The technical committees will be chaired by the Secretary of the Ministry designated to lead the particular committee. While five technical committees have been proposed thus far, their structures and numbers will be reviewed once the recommendations of the NTIS 2010 have been fully internalized by the Government (see **Appendix 8**).

The technical committees will probably include private sector representatives as well as DP representatives in addition to government officials from pertinent line Ministries. The technical committees will work closely with the FPs of the 'extended NIU' to assist in the identification and formulation of pertinent Technical Assistance projects to facilitate implementation of the NTIS recommendations.

A critical issue to be addressed early on will be coordination between the technical committees being created as part of the NIAs and the working groups created under the Nepal Business Forum (NBF). Many issues tackled under the NBF are likely to be similar to those addressed in the NTIS 2010 proposed actions.

[2] Formerly known as the WTO Division.

Nepal Business Forum

On May 16, 2010, the Cabinet approved the creation of the NBF--a new public-private dialogue mechanism aimed at analysing and finding concrete solutions to business environment problems in Nepal. The NBF was launched formally on May 26, 2010. The Forum has six working groups, including a working group on trade promotion.

The business community will need to review how best to pull the efforts of the recently created 'export development forum' --a joint initiative of the MoCS and the FNCCI--under the umbrella of the NBF and its working group on trade promotion to avoid unnecessary duplication. And more broadly, as suggested previously, there will be a need to find an appropriate balance between the work of the NBF working groups and the NTIS technical committees.

Donor Facilitator

Experience from other LDCs that have taken steps to implement the EIF structures and a Trade SWAp suggests that the DF has a critical role to play in ensuring proper coordination among DPs and between DPs and the Government. In recent years, UNDP-Nepal has been serving as a DF. Going forward, the GoN and DPs will also need to review this particular arrangement.

12.4 Capacity Constraints of the National Implementation Arrangements

Lack of strong ownership, weak inter-ministerial coordination, lack of GoN-DP coordination, weak technical resources are some of the factors that have contributed to uneven implementation of the NTIS 2004.

The NTIS 2010 NIA structure that is taking shape has the potential to remedy many of those past limitations provided the present capacity needs of the various building blocks are recognized and addressed. The EIF Tier 1 project secured by the GoN will go some distance in addressing some of those needs, though experiences from other countries also suggest that DPs will need to bring additional support to fulfill all needs.

NSC Constraints

In theory, the NSC is a formidable tool to push forward the trade development agenda, take stock of the present situation, monitor progress and implementation of the NTIS recommendations, and bring a higher level of public debate about the role and importance of trade in inclusive development.

However, it is important to recognize that the role of trade as an engine of inclusive growth and poverty reduction is not fully understood or internalized at senior policy level. So, there is still a lot of awareness-raising work to be done to put the NSC in a stronger position to provide leadership to this issue.

The participatory and inclusive approach used by the GoN and DPs in the preparation of NTIS 2010, the interest shown by the GoN to coordinate the findings of NTIS 2010 with some of the issues to be highlighted in the new Three-Year Plan being prepared by the NPC, the creation of a Working Group on Trade Promotion under the NBF are all positive signs that trade development is being elevated within the GoN's policy agenda. But more work will need to be done to confirm that the issue is being strongly anchored within that agenda.

NIU Constraints

The Planning and International Cooperation Division (PITC) of the MoCS has been designated as the NIU. The PITC is also the main division of the MoCS dealing with the WTO and other multilateral trade issues, relations with international organizations, bilateral and multilateral trade agreements. The division is also in charge of donor mobilization and aid coordination, but, at present, given the low level of TRTA resources generated in Nepal, this function is limited to a few activities with local donors.

The NIU has dedicated terms of reference (ToRs). However, the ToRs come in addition to the regular work of the division and its officials. To address this constraint, the GoN is planning to increase gradually the dedicated full-time staff of the NIU. At present, no PITC official is dedicating or can dedicate 100 per cent of his/her time to TRTA or Trade Mainstreaming Actions. It is even more difficult for those officials to go beyond the immediate needs of the MoCS and address wider NIA constraints and the requests of line ministries for technical assistance, including strengthening and developing the FP network of the 'extended NIU'.

Institutional, individual, and systemic capacity constraints of the NIU are described in detail in the Institutional Capacity Assessment commissioned by the MoCS in April 2009 in preparation for the Tier 1 proposal development. The main findings of that assessment in terms of addressing the capacity needs of the NIU are discussed below.

Because of the limited TRTA resources mobilized from local donors in the recent past, Nepal, at present, cannot count on additional advisory services that it will need above and beyond the support received under its Tier 1 project. In particular, the limitations put by Tier 1 guidelines on the recruitment of long-term advisors will mean that Nepal will need to find additional resources to fund such advisors. Experiences from other countries clearly point to the need for such advisors, including to supervise and guide the implementation of the capacity development plan formulated under Tier 1, to put in place the mechanisms and procedures for a Trade SWAp-like donor coordination approach in Nepal, to ensure smooth monitoring and evaluation of the NTIS recommendations, and to sustain the continuing buy-in from GoN and the DPs through regular dialogue.

TCs Constraints

The current technical committees created by the NSC are based in part on the recommendations of the NTIS 2004. The composition of the technical committees will need to be reviewed in conjunction with the finalization and launch of NTIS 2010 to ensure they truly support the priorities identified in it.

In addition, at present, the technical committees cannot be considered as fully functional. While efforts have been made to assign government officials to each of the five technical committees, the representation of the private sector and of the DP communities is still nascent. Furthermore, the proper relationship between the NTIS technical committees and the NBF working groups will need to be identified. Much work remains to be done in these areas.

DF Constraints

The current DF constraints are several. First, the institutional structures needed to ensure that more TRTA is mobilized, managed, and coordinated in an effective manner by the GoN are not yet fully in place, making it difficult for the DF to help mobilize more technical assistance to be channeled through the NIAs.

Second, DPs want clear signs that the GoN is making trade development a national development priority to fully commit themselves.

Third, capacity development is a long-term investment and needs multi-donor, long-term support, which at times may conflict with donor headquarters' emphasis on short-term results.

12.5 Addressing Capacity Needs of the NIAs

To formulate and implement a response, the GoN will need to not only address the constraints identified above but also incorporate the need to shift from a project to a programme approach.

The efforts to bring about responses should be coordinated by the NIU, acting as a Secretariat to the NTIS implementation, and should contemplate many types of capacity development actions, from short-term training courses on hard management skills to coaching and mentoring, practical hands-on support to development, implementation, and monitoring of sound technical assistance projects. Experiences from other LDCs in the region could prove useful to Nepal in many ways.

National Steering Committee

The high-level participation in the NSC might make it hard for individual members to keep track of all development on the TRTA, AfT, and EIF, or day-to-day implementation of the NTIS 2010.

Still, the NSC will need to:

- Review progress in NTIS implementation measured against monitoring indicators developed for the NTIS;
- Endorse funding decisions for the technical assistance proposals submitted by stakeholders and appraised by the NIU;
- Provide guidance on priority areas for the country's trade development agenda;
- Ensure good governance and transparency in the use of trade-related technical assistance resources.

The NSC will need to rely on the work of the NIU for its regular sessions. The FPs of the 'extended NIU' will be a key relay between the NSC members, the NIU, and the line ministries.

In the early stages of NTIS implementation, awareness training in AfT and NTIS 2010 should be provided to all members of the NSC. It is important that the NSC members understand the AfT mechanisms, how those may apply to Nepal, and why the GoN needs a different approach to management of aid in the trade area.

NIU and 'Extended' NIU/Network of Focal Points

Some of the key capacity needs of the NIU and 'extended' NIU are summarized in table 12.2.

Table 12.2
Capacity Needs of the NIU and Network of Focal Points ('Extended' NIU)

	SHORT TERM (1-12 months)	MEDIUM TERM (12 – 24 months)	LONG TERM (24 months and beyond)
INSTITUTIONAL DIMENSION	▸ Develop ToRs for NIU, assign position, provide dedicated space, purchase equipment ▸ Recruit outside support ▸ Develop inventory of training providers (local and international) ▸ Update training plan	▸ Develop management tools, operation manual, procedures, checklists. Increase exposure of all MoCS staff to NIU work ▸ Monitoring and evaluation mechanisms developed (support from outside long-term non-resident TA)	▸ Empower NIU, engage management, institutionalize use of operation manual management tools for all TRTA projects in MoCS ▸ Start developing basis for SWAp-like approach in Nepal for trade mainstreaming and resource mobilization
INDIVIDUAL DIMENSION	▸ Develop individual ToRs and how TDF work becomes part of individual aspirations and career development plan ▸ Recruit an NIU manager ▸ Develop internal and external reporting lines with FP, NSC ▸ Start implementing training plan	▸ Participation in trade-related training at home and overseas ▸ Individual training actions on soft skills (depending on orientations and objectives of NTIS)	▸ Regular update and implementation of Capacity Development plan ▸ Performance Appraisal Systems and Promotion mechanisms, non-financial incentives ▸ Develop internal capacity transfer plan, assigning one staff to be coached by programme director
SYSTEMIC DIMENSION	▸ Organize awareness raising/orientation workshop of extended NIU on NTIS 2010, Action matrix, EIF ▸ Develop 'Quick-Win' TRTA proposals supportive of 'Short-to-Medium-Term' Priorities working through Extended NIU and Technical Committees ▸ Develop TRTA/NTIS/EIF communication strategy	▸ Start monitoring 'Quick-Win' TRTA projects ▸ Awareness raising campaign on NTIS and EIF with donors, private sector ▸ Regular social events ('tea-cookies') by EIF FP ▸ Develop an NTIS/EIF website ▸ Develop other communications tools for NIU	▸ Develop strategy for new TRTA proposals, including EIF Tier 2 proposal generation ▸ Assist line ministries, private sector through technical committees to develop new TRTA proposals, including EIF Tier 2 proposals

Technical Committees

As noted earlier, the focus and membership of the technical committees will need to be reviewed on the basis of:

- Recommendations emerging from the NTIS 2010 validation workshop;
- The emerging structure of the NBF and the relationships between the working groups dealing with trade and services issues in the NBF and the proposed technical committees in the NTIS NIAs; and
- Possible support individual DPs to one or several technical committees through ongoing or planned technical assistance.

Following a model developed in other countries, it might be possible for individual development partners to serve as co-coordinator of TCs during the start-up of NTIS 2010 implementation, while the government capacity to manage, monitor, and update the country's trade development agenda is steadily developed.

Technical committees, with the support of the FPs of the 'extended' NIU will play a critical role in implementing the NTIS recommendations. Many ideas and proposals for TA projects in support of the NTIS Actions are

expected to emerge from the committees, to be formulated by their members, and/or be 'vetted' through them. Many projects are expected to be implemented by individual line ministries, agencies or private sector partners associated with the committees. The committees will work with the NIU to monitor implementation. Accordingly, their capacity needs to be developed early on.

Based on the experiences from other countries, it is paramount for the success of NTIS implementation that:

- Officials from line ministries as well as private sector representatives are formally appointed early so they can contribute to the work of the designated TCs. This should also include identification of team leaders/coordinators for each TC;
- A roadmap for each TC is prepared proposing short-term objectives and long-term outcomes, as well as actions and inputs needed to reach those. The roadmap could also include draft annual work plans and 12-18 months monitoring indicators;
- Technical assistance is provided to each TC on how to develop work plans and bankable proposals to be submitted to DPs;
- Awareness of AfT, the country's trade development agenda, the NTIS and the Integrated Framework is created in all TCs;
- Regular training sessions are organized on specific areas of Nepal's trade development agenda;
- Progress reports are forwarded on a regular basis to the NSC and the NIU, and be posted on a website;
- Progress reports are shared with relevant working groups under the NBF, based on the arrangements that are ultimately identified between the NTIS TCs and the NBF working groups.

Nepal Business Forum

As suggested previously, there will need to be consultations and discussions early on to clarify the nature of the working relationship between the working groups of the NBF and the NTIS TCs. The NBF will play a key role in identifying constraints, limitations, and barriers to investment and business and in mobilizing concerned line ministries and agencies to solve the problems. The NBF could take advantage of the existing NTIS TCs to better bridge the gap between private sectors constraints and issues requiring technical assistance and resources available from the DPs to support Nepal's trade development agenda.

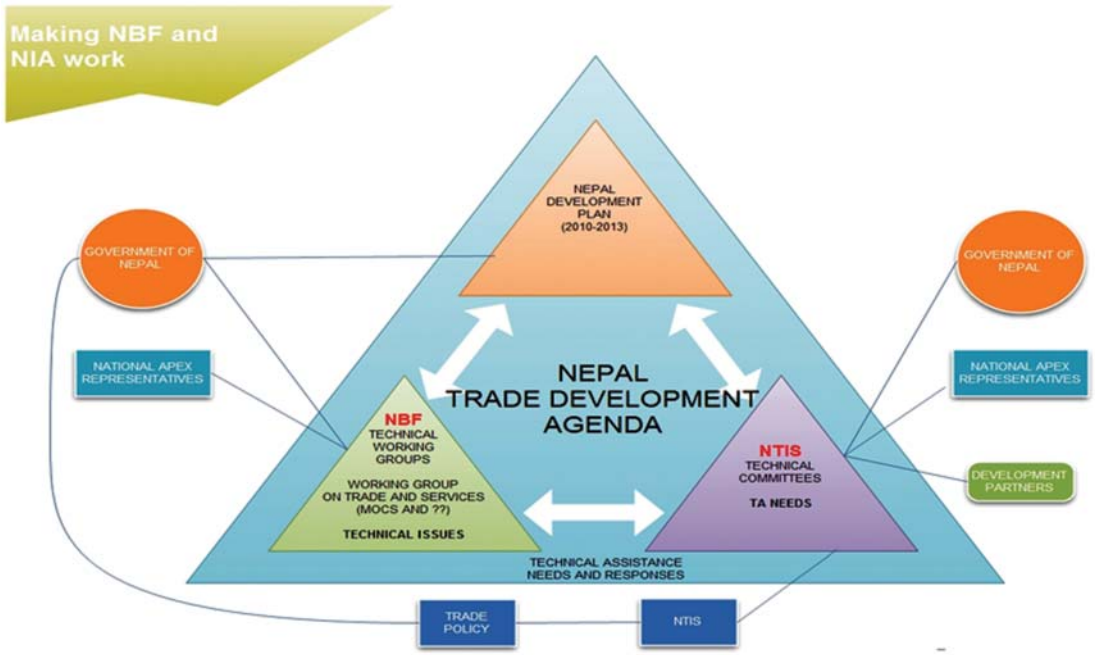
Nepal might usefully learn from the experiences from other South East Asian countries (e.g. Cambodia, Laos PDR, Bangladesh, others) where similar mechanisms have been operating for a number of years. In the cases of Cambodia and Laos, although DPs are strongly involved in trade-related technical assistance, in particular through the Trade SWAp TCs (called 'Pillars' in Cambodia), there is insufficient coordination between the issues dealt with at technical level in the working groups of the respective government-private sector forum's working groups and those addressed in the TCs.

Diagram 12.1 presents, in a simplistic form, the coordination mechanisms that could be developed in Nepal for an effective and efficient relationship between the NBF and the NTIS implementation structure.

Several initiatives could help the NBF and the NTIS NIAs heading towards the same sustainability objectives:

- Presentation of the NTIS conclusions and recommendations at NBF plenary meetings;
- Presentation of the NTIS conclusions and recommendations at WG meetings; and,
- Possibility of cooperating by strengthening capacities in key institutions (private sector organizations, administrative staff college, etc.), including joint preparation of TA proposals;

Figure 12.1: Possible Linkages between NTIS Technical Committees and NBF Working Group



12.6 Shift to a Programme-based Sector-Wide Approach (SWAp)

A SWAp is a programme-based approach to development that brings together governments, donors, and other stakeholders within a sector. Rather than focusing on a short- to medium-term limited package of specific policies and/or activities aimed at supporting those, a SWAp is driven by a set of operating principles. The approach involves responding over time to changes and moving under government leadership towards broadening of the policy dialogue, the formulation of a single, shared sector strategy (that addresses private and public sector issues), the development of a common, realistic expenditure programme (including both government funding and DP resources) to implement the strategy, the formulation of common monitoring arrangements, and more coordinated procedures for funding and procurement.

As experience elsewhere shows, the formulation of the NTIS, the steps taken to put in place the NTIS NIAs with EIF support, and the shift to a SWAp approach can happen in parallel. But a note of caution needs to be raised here that a Trade SWAp is in practice more difficult to put in place than in most other sectors in no small part because trade development issues cut across many ministries and agencies and intra-governmental coordination may take time to achieve. This is in contrast to SWAps in sectors such as health or education where often one or two ministries, at most, are responsible for the sector's development.

12.7 Possible Options for Nepal's NTIS NIAs: Lessons from Other LDCs.

Ultimately, each country will design a set of NIAs that fit within its own system of government, political arrangements, set of cultural values, etc. The same should happen in Nepal.

Figures 12.2, 12.3, and 12.4 show how three countries, namely, Cambodia, Laos, and Tanzania, have proceeded, thus far, to establish arrangements to implement their trade development strategy in a manner that helps put government 'in the driver's seat' and promote the Paris Principles of Aid Effectiveness.

Figure 12.2: Cambodia NIAs

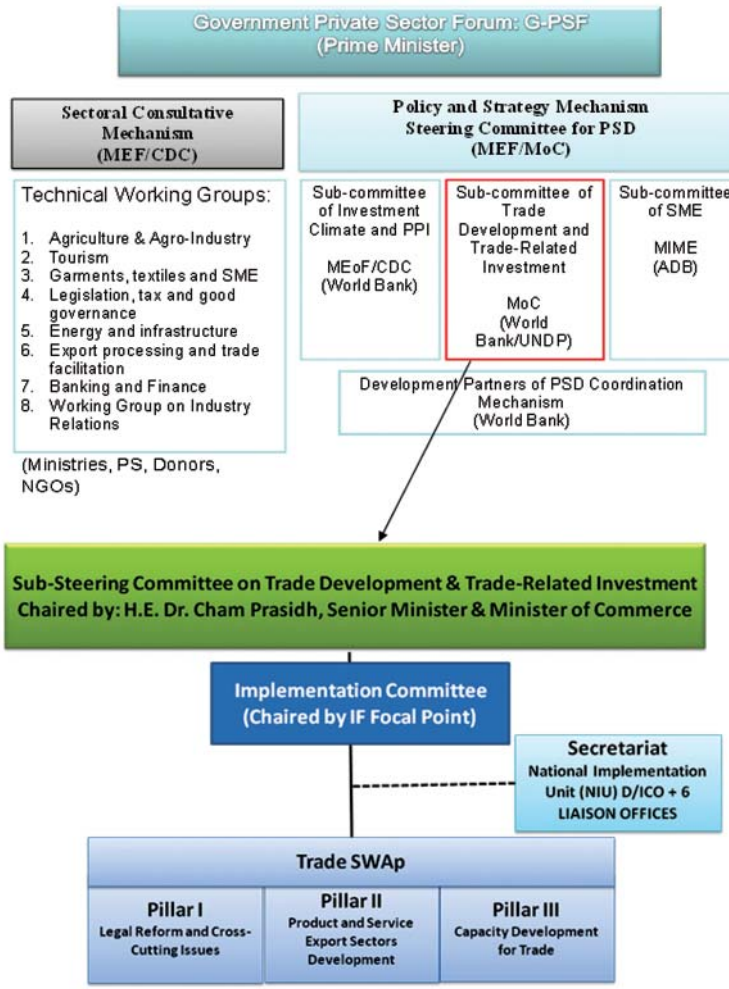


Figure 12.3: Lao PDR NIAs

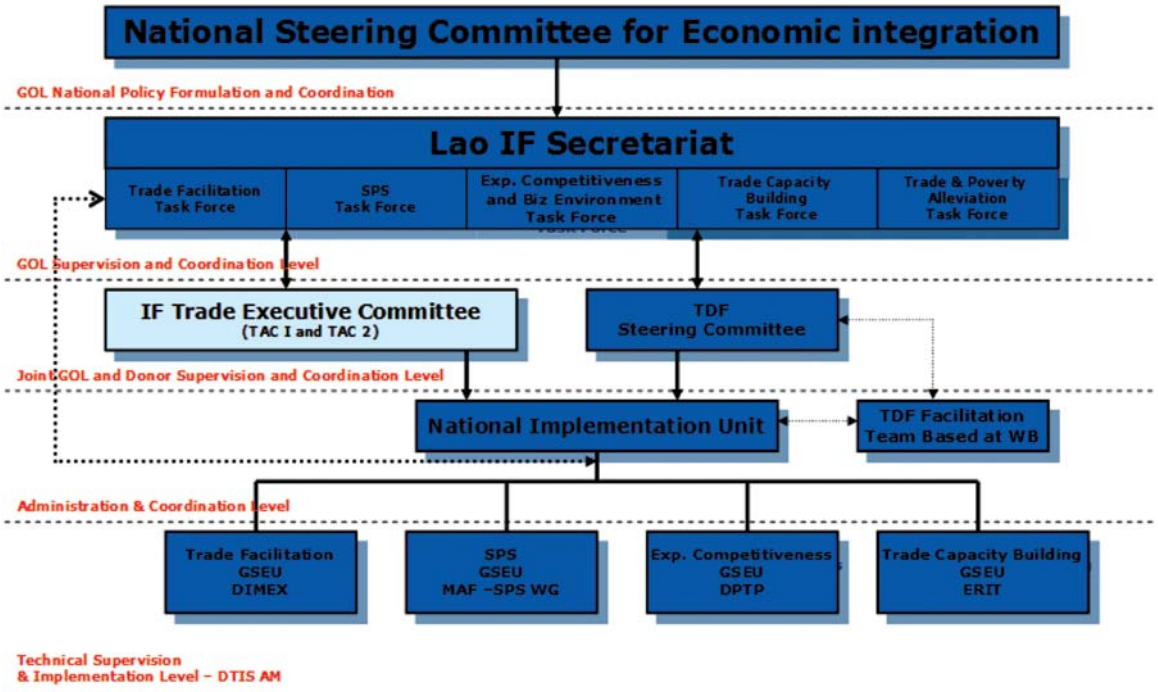
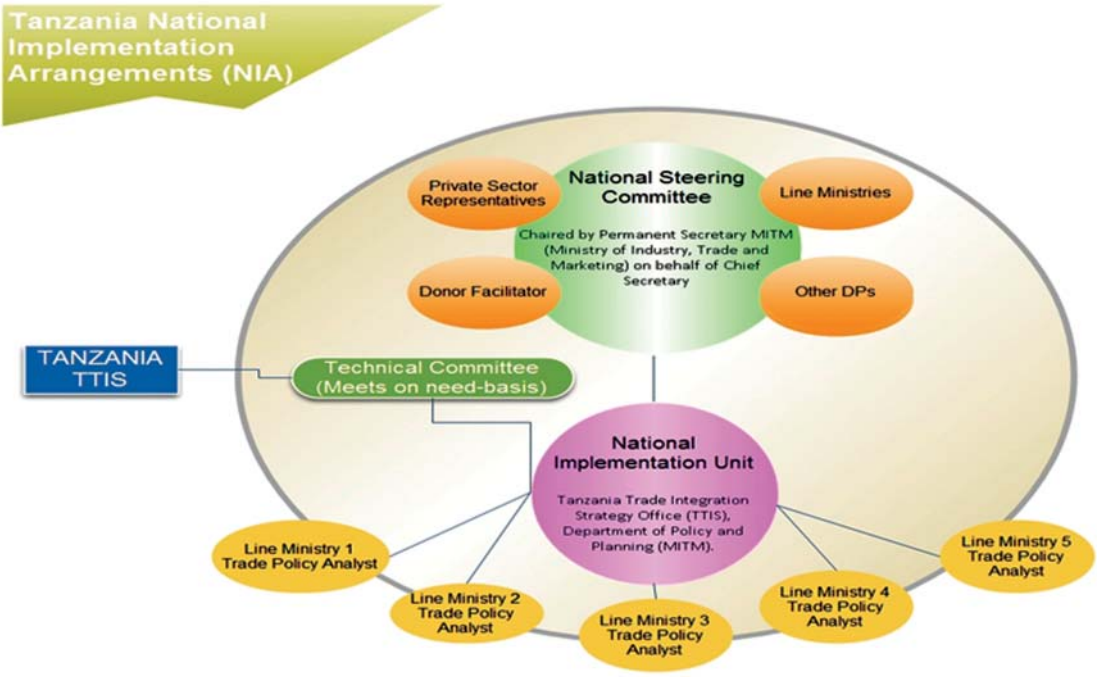


Figure 12.4: Tanzania NIAs



12.8 Recommendations

The issues raised in this chapter lend themselves to a fairly straightforward set of recommendations:

1 Nepal needs to put in place the key building blocks of the NIAs that will support the implementation of NTIS 2010. The NSC is already largely in place. Other structures need attention. These include a functional NIU in the MoCS with adequate staffing, consolidation of the network of FPs, TCs, and confirmation of a DF;

2 Nepal needs to fully formulate and quickly initiate a programme of capacity development for the various structures of the NTIS NIAs along the lines suggested earlier in this chapter. The GoN also needs to work with DPs to identify resources above and beyond those recently secured under EIF Tier 1 to support the capacity development programme;

3 The NSC, with support from MoCS IF FP, needs to thoroughly examine and consult with the NBF to define the best possible relationship between the NTIS TCs and the NBF working groups;

4 The NSC and the TCs need to focus early on the formulation of Quick Win proposals to be funded by DPs to pursue some of the short- to medium-term priorities identified in the NTIS to keep the momentum forward;

5 The NSC, with support of the MoCS, needs to take early steps to promote mainstreaming of the Trade Development agenda, including adoption of NTIS 2010 by the Cabinet, proper alignment of the trade priorities identified in the forthcoming three-year development plan and the NTIS 2010 priorities and actions, and appropriate representation of the trade development agenda in the forthcoming NDF.

Bibliography

Acharya, S. (2009). Barriers to hydropower development – A policy perspective. Presentation held at IPPAN'S Forum, 2009.

ADB (2007). Nepal: West Seti Hydroelectric Project. Prepared by West Seti Hydro Limited for the Asian Development Bank (ADB). ADB, Manila.

ADB (2009). Nepal: Preparing Electricity Connectivity and Energy Efficiency Project I. ADB, Manila.

Agri-Business and Trade Promotion Multi-Purpose Co-operatives Ltd (2006). Study Report On Trade Competitiveness of Nepalese Honey. Agro Enterprise Center (AEC)/Federation of Nepalese Chambers of Commerce and Industry (FNCCI).

Agri-Business and Trade Promotion Multi-Purpose Co-operatives Ltd (2004). Study Report on Administrative and Policy Constraints Faced by Honey Producing Small Farmers in Dang District. Agro Enterprise Center (AEC)/Federation of Nepalese Chambers of Commerce and Industry (FNCCI).

ANGHOS (2005). Association of Non Government Hospitals, Nepal, Kathmandu, Nepal (Brochure of NGO Hospitals).

Aryal, Prajjwal S. (2008). Problems, Issues and Institutional Arrangements of Foreign Employment in Nepal, Paper presented at IESON Seminar organized by the Centre for Economic Development and Administration (CEDA).

A.T. Kearney (2009). Global Services Location Index. A.T. Kearney, Chicago.

B&B Hospital, Kathmandu University Teaching Hospital, Introductory Brochure

CAAN (2009). Civil Aviation Report 2008, Babar Mahal, Kathmandu.

CAAN (2009). The Aviation Policy 2006, Babar Mahal, Kathmandu.

CEI (2009). Central Electricity Authority (India). Load Generation Balance Report. Available at http://www.cea.nic.in/god/gmd/lgbr_report.pdf

Chitrakar, Ramesh C. (2009). National Services Policy Review (NSPR) for Nepal, Submitted to United Nation's Conference on Trade and Development (UNCTAD), Division on International Trade in Goods and Services, and Commodities (DITC) (Draft Report).

Chitrakar, Ramesh C. (2008). *Study of Intraregional Trade and Investment in South Asia Country-Investment Study-Nepal,* Study Conducted for ADB, Manila, 2008.

Chitrakar, Ramesh (2009). Regulatory Barriers to Services, paper presented at NTIS Review Workshop, November 2, 2009.

Shah, S. (2008). Nepal's Energy Sector.

GoN / MOCS (2009), A Journal of Trade and Development, Vol. 1, No. 2, June/July, Issue 2, Singhdurbar, Kathmandu.

GoN / High Level Commission for Information Technology, A Fact Book on Information and Communication Technology Sector of Nepal, Singh Durbar, Kathmandu, Nepal.

GoN / MoF (2009), Economic Survey 2009/10.

GoN / MOTCA (2005). Government of Nepal, Ministry of Culture, Tourism and Civil Aviation, Introductory Booklet (in Nepali), Singdurbar, Kathmandu.

GoN / MOTCA (2009). Tourism Vision 2020: Tourism for Peace, People and Prosperity

Grandon, Raman (2007). Nepalese Tourism: The Challenges, Nepal Association of Tour and Travel, Kathmandu

GTZ (2008). Honey in Nepal. GTZ Nepal, Kathmandu.

Hard Nepal & Pro – Con (2008), Socio-economic Development Panorama, (A multi-Disciplinary Research Study Series), Volume. 1 No.3, July 2008.

ILO (2004). An Overview Paper on Overseas Employment in Nepal. ILO, Nepal.

IMF (2008). Staff report for the 2008 Article IV Consultation. IMF, Washington D.C.

ITC (2007a). Export Potential Assessment in Nepal. ITC, Geneva.

ITC (2007b). Chyangra cashmere and silk products – Export Performance and potential. ITC, Geneva.

ITC (2007c). Sector study on large cardamom. ITC, Geneva.

ITC (2007d). Sector study on Tea. ITC, Geneva.

ITC (2007e). The Lentils Sector in Nepal: Export Performance and Potential. ITC, Geneva.

ITECO, Introduction about ITECO Nepal (P) Ltd, Kathmandu, Nepal (www.iteconepal.com)

Kafle Shivadevi (2009). "Foreign Employment, Remittance and Balance of Payment: Nepalese Context" (in Nepali) in Nepal Rastra Bank News, 54 Annual Special Issues.

Khaiju, Ramkaji (2009). "Remittance Management in Nepal" in Nepal Rastra Bank News, 54 Annual Special Issues.

Khatri, Sridhar K. (2009). Labour Migration, Employment and Poverty Alleviation in South Asia, SACEPS Paper No. 15, Kathmandu, Nepal

Lautier (2008). Export of health services from developing countries: The case of Tunisia. Social Science and Medicine 67 (2008). 101-110.

Manipal College of Medical Sciences (MOMS). Admission Prospectus '08-09', Pokhara, Nepal.

Manipal College of Medical Sciences (MOMS). Admission Prospectus '08-09', Pokhara, Nepal.

McKinsey (2005). The Emerging Global Labour Market: Part I—The Demand for Offshore Talent in Services.

MDT (Mount Digit Technology) Pvt. Ltd. (2004). Desk and Field Research On ICT Resources In Nepal. Kathmandu, Nepal.

MOE (2009). Nepal Education in Figures 2009 At-A-Glance, Monitoring Evaluation and Supervision Division, Research and Educational Information Management Section (REIMS). Kaiser Mahal, Kathmandu.

MOTCA (2008). Nepal Tourism Statistics 2008. MOTCA, Kathmandu.

MOTCA (2008). *Tourism Policy – 2008* (in Nepali). MOTCA, Kathmandu.

MoF (2009). Economic Survey, Kathmandu: Ministry of Finance, Government of Nepal

Nepal Medical College Journal, Vol. 11 No.3, September 2009, Attarkhel, Jorpati, Kathmandu.

Nepal Engineers' Association (2005). 9th Convention of Engineers (May 6-8). Pulchowk, Lalitpur, Nepal.

Nepal Engineers' Association, Newsletters, Various Issues (www.nea.net.np)

NEA, Annual Report, 2006 (in Nepali)

NEA (2009). Technical Journal, 27th Executive Council, May 2009

NEA (2009). Souvenir: 11th National Convention of Engineers: Converging Development Vision with Reality: Engineers Leadership, 13-15 May, 2009, Kathmandu Nepal

NTB (2009). Celebrating a Decade of Partnership in Tourism: In Focus 2008, Kathmandu, Nepal Tourism Board

NTB (Various Issues). Tourism News, Kathmandu: Nepal Tourism Board

NTB, Annual Operation Plan, Fiscal Year 2008/09

NTB, CDs produced on NTB, Adventure Tourism, Buddhist Circuit

Pant, Bhubanesh (2006). Remittance Inflows to Nepal: Economic Impact and Policy Options. NRB Economic Review No. 18, April 2006. NRB, Kathmandu.

Pant, Bhubanesh (2008). Mobilizing Remittances for Productive Use: A Policy-oriented Approach. NRB Working Paper No. 4. NRB, Kathmandu.

Pokhara Tourism Council (2066). A Report of Interaction Programme of Pokhara Tourism Authority (In Nepali)

Pokhara Tourism Council, Pokhara Tourism Mirror, Vol. 11 Issue 21, September 2008, Pokhara.

SAWTEE (2008). Nepal's Export Potential in Services. South Asia Watch on Trade, Economics & Environment, Kathmandu.

SCAEF (2007). Development of Consulting Industry in Nepal: An Overview, A Souvenir Published on the Occasion of 17th Annual General Meeting of SCAGE, February, 2007

SCAEF (2009). Technical Consultancy Development Programme for Asia and the Pacific, Pre-conference Proceeding on International Conference on 'Making Globalization Work: The Role of Consultants', 11-13 March, 2009, Kathmandu, Nepal

SCAEF (2006). Business Initiative (Byabasahik Prarambha). A monthly magazine devoting on the consulting service industry of Nepal of SCAEF, Year 1, No.8

Shrestha, Bijaya (2008). "Contribution of Foreign Employment and Remittances to Nepalese Economy" in Economic Review, Occasional Paper, Number 20, Nepal Rastra Bank, Kathmandu, Nepal

Thapa, Ajit N.S. (2006). Concept Paper on Study of Nepalese Tea Industry – Vision 2020.

TIO (2009). Tilganga Newsletter, Vol. 01, Issue 03, Bi-annual Journal of Tilganag Institute of Opthalmology (Tilganga Eye Centre).

TU / Institute of Engineering (2009). Introductory Book on entrance test and campus admission of Bachelor Degree in Engineering, (in Nepali).

Tribhuvan University, Institute of Medicine (TU/ IOM). Annual Report 2009, Department of Information Technology, Maharajgunj, Kathmandu, Nepal.

UGC, Brochure on Second Higher Education Project (SHEP) 2007-2014, a grant support of IBRD and IDA to the Government of Nepal, Sanothimi, Bhaktapur.

UGC (2066). Quality Improvement Program 2066 (in Nepali). Sanothimi, Bhaktapur.

UGC, Annual Report 2007/2008, Sanothimi, Bhaktapur.

UNCTAD (2010). National Services Policy Review Of The Federal Republic Of Nepal: Tourism and IT and Computer Services, UNCTAD, Geneva.

UNESCO (2009). Global Education Digest 2009. UNESCO, Paris.

University Grants Commission (UGC: 2008). Quality Assurance and Accreditation for Higher Education in Nepal.

UNWTO (2009a). Yearbook of Tourism Statistics. UNWTO, Madrid.

UNWTO (2009b). Tourism Highlights 2009 Edition. UNWTO, Madrid.

WEF (2009a). The Global Information Technology Report 2008/09. World Economic Forum, Geneva

WEF (2009b). The Travel & Tourism Competitiveness Report 2009. World Economic Forum, G

WHO (2008). Medical visas mark growth of Indian medical tourism. WHO Bulletin 85/
www.who.int/bulletin/volumes/85/3/07-010307.pdf

World Instant Noodles Association" (WINA). accessed at http://instantnoo

WTO (2008a). Trade Policy Review China. WTO, Geneva.

WTO (2008b).Measuring GATS Mode 4 Trade Flows. Staff W

ZRS (2008). Nepal – Tourism Sector Analysis. Universi

NEPAL TRADE INTEGRATION STRATEGY 2010
ACTION MATRIX PART I

CONSOLIDATED CROSS-CUTTING ACTIONS

NEPAL TRADE INTEGRATION STRATEGY 2010
ACTION MATRIX PART I: CONSOLIDATED CROSS-CUTTING ACTIONS

Main Outcomes	Recommended Actions	National Partner(s)	Requirements			Possible Timeframe	Recent or Current TA
			Policy And Regulatory Development/ Reform	Institutional Strengthening/ Development	TA		
Objective 1: Strengthen trade negotiations (especially Bilateral)							
Trade Negotiations	Multilateral and Regional • Develop negotiation agenda and strategy and strengthen inter-ministerial consultation mechanisms	MoCS and concerned Ministries	Yes			2 years	
	Bilateral • Develop negotiation agenda and strategies and strengthen bilateral focus on potential export sectors	MoCS and concerned Ministries	Yes			2 years	
	India • Accelerate formalization of Nepalese transit cargo's access to a second eastern Indian port and a western Indian port	MoCS and concerned Ministries	Yes			1 year	
	• Review procedures relating to cross-border movement of rail wagons at Raxaul in the context of Rail Service Agreement	MoCS	Yes			2 years	
	• Negotiate increased and expedited transparency in applicable Indian customs rules, duties, procedures and non-discriminatory application of such. Create a system for Nepalese traders to report issues to MoCS	MoCS, MoF/DoC	Yes	Yes		2 years	
	• Negotiate elimination of fees and duties imposed by Indian states on Nepalese exports in contravention of WTO rules and commitments	MoCS, MoF	Yes			5 years	
	• Negotiate with India a more robust law enforcement against tampering of seals and cargo content within India and develop procedure for registering and addressing Nepalese traders' complaints	MoCS, MoF/DoC	Yes	Yes		2 years	
	• Establish a coordination committee with India to discuss harmonization of computerized customs systems	MoF/DoC, MoCS	Yes			2 years	
	• Negotiate increased number of Indian border points with ability to clear all cargo, including SPS-sensitive cargo, and develop integrated check-posts	MoCS, MoF/DoC, MoAC, MoI and line concerned Ministries	Yes	Yes	Yes	2 years	

NEPAL TRADE INTEGRATION STRATEGY 2010
ACTION MATRIX PART I: CONSOLIDATED CROSS-CUTTING ACTIONS

Main Outcomes	Recommended Actions	National Partner(s)	Requirements			Possible Timeframe	Recent or Current TA
			Policy And Regulatory Development/ Reform	Institutional Strengthening/ Development	TA		
Objective 1: Strengthen trade negotiations (especially Bilateral)							
Trade Negotiations	China • Complete the (underway) negotiations on preferential tariff rates for Nepalese goods	MoCS and concerned Ministries	Yes			2 years	
	• Negotiate improved rules of origin	MoF/DoC, MoCS	Yes			2 years	
	• Negotiate improved access for selected Nepalese service exports (e.g. tourism, including passenger transport by road, health)	MoCS, MoTCA, line concerned Ministries	Yes			1 year	
	• Negotiate increased and expedited transparency in applicable Chinese customs rules, duties, procedures, standards, and negotiate non-discriminatory application of such. Create a system for Nepalese traders to report issues to MoCS	MoCS, MoF/DoC	Yes			2 years	
	Other Bilateral Negotiations • Negotiate additional bilateral agreements with labour-importing countries to assist with temporary migration of Nepalese workers	MoCS, line concerned Ministries	Yes			2 years	
	• Establish embassies or consular offices in main destinations for Nepal labour exports	MoFA, MoLTM					
	Cross-cutting • Develop negotiations skills and develop trade policy research capacity	MoCS/NIU and concerned Ministries	Yes	Yes	Yes	2 years	
Objective 2: Strengthen the technical capacity of domestic NTB and other business environment supportive institutions							
Investment Facilitation	• Formulate and adopt an Act establishing a Board of Investment (BoI)	MoI/Council of Ministers	Yes		Yes	2 years	
	• Establish BoI, provide budget, recruit qualified staff	MoI, MoF		Yes	Yes	2 years	

Main Outcomes	Recommended Actions	National Partner(s)	Requirements			Possible Timeframe	Recent or Current TA
			Policy And Regulatory Development/ Reform	Institutional Strengthening/ Development	TA		
Objective 2: Strengthen the technical capacity of domestic NTB and other business environment supportive institutions							
Investment Facilitation	• Develop and implement capacity development programmes for BoI staff	BoI		Yes	Yes	5 years	
	• Establish one-stop investor facilitation service within BoI	BoI		Yes	Yes	2 years	
	• Amend and enact draft SEZ bill, including removal of 75% export requirement. Duties on domestic production to remain. Negative list to replace positive list	MoI		Yes		1 year	
	• Undertake rigorous investment benchmarking studies comparing Nepal to other locations	BoI, MoI, MoCS			Yes	2 years	
	• Develop a strategic investment promotion plan for Nepal	BoI, MoI		Yes	Yes	2 years	
	• Carefully review opportunity and merit of consolidating investment promotion and trade/export promotion functions in a single agency	MoI, MoCS	Yes	Yes	Yes	5 years	
	• Implement investment campaign in key target sectors, monitor results, improve approach	BoI		Yes	Yes	5 years	
	• Consider supplier development scheme linked to FDI in SEZ to promote local multiplier effect and technology transfer	BoI		Yes	Yes	5 years	
Trade Facilitation	• Implement Customs Reform and Modernization Plan 2009-13	MoF/DoC		Yes	Yes	5 years	IMF
	• Customs automation: Introduce new ASYCUDA modules, including selectivity module; redesign procedures; train staff	MoF/DoC		Yes	Yes	2 years	
	• Valuation: Improve valuation database and create interface with ASYCUDA; train staff	MoF/DoC		Yes	Yes	2 years	
	• Post-clearance audit: Build capacity within DoC; train staff	MoF/DoC		Yes	Yes	2 years	
	• Risk management: Formulate a risk management plan, including establishment of procedures, identification of monitoring indicators, and creation of unit; train staff	MoF/DoC	Yes	Yes	Yes	2 years	
	• Strengthen National Trade Facilitation Committee to improve inter-agency cooperation and coordination of inspection at border	MoCS, MoF/DoC		Yes		2 years	
	• Review licensing arrangements for customs brokers; increase transparency; allow for new entrants	MoF/DoC	Yes			2 years	
	• Formulate a master plan and improve physical facilities at border points (warehousing, cold storage)	MoF/DoC, MoC, concerned Ministries		Yes	Yes	5 years	ADB, GoI, PRC, GoN in different areas

Main Outcomes	Recommended Actions	National Partner(s)	Requirements			Possible Timeframe	Recent or Current TA
			Policy And Regulatory Development/ Reform	Institutional Strengthening/ Development	TA		
Objective 2: Strengthen the technical capacity of domestic NTB and other business environment supportive institutions							
	• Further negotiations with India on movement of rail wagons and access to sea ports. See Objective 1						
Technical Standards	• Speed up revision of Act and Regulations on Nepal Standards	MoI, NSBM, MoCS	Yes			1 year	
	• Circulate draft revised Act, including among WTO member countries, as per WTO provision for comments	MoCS, MoI NBSM TBT Enquiry Point	Yes			2 years	
	• Nepal Council of Standards (NCS) to enforce 'Code of Good Practice for Preparation, Adoption and Application of Standards' and notify ISO/IEC	NCS		Yes	Yes	2 years	EU/UNIDO + ESCAP project
	• Post-clearance audit: Build capacity within DoC; train staff	MoF/DoC				2 years	
	• Establish a national accreditation board; establish affiliation to international accreditation bodies; start accreditation process within Nepal	MoCS, MoI		Yes	Yes	5 years	
	• Develop and maintain registry of private, government or NGO, domestic or international product/ system certifiers operating in Nepal	New National Accreditation Board		Yes		2 years	
	• Strengthen WTO/TBT Enquiry Point to assist in providing Nepalese exporters with information on standards to be met in importing countries; strengthen capacity of Enquiry Point to coordinate preparation of WTO notifications	MoCS, NBSM	Yes	Yes	Yes	2 years	
	• Raise awareness of exporters about product and process standards	NBSM, DFTQC, product associations		Yes	Yes	2 years	
	• Formulate national standards for products of export interest harmonized with ISO/CODEX/IEC standards	NBSM, DFTQC	Yes			5 years	
	• Accelerate accreditation of government and private sector laboratories, including NBSM and DFTQC laboratories. for product certification by internationally recognized accreditation bodies. In SPS, focus should be on accredited food testing, including MRL and microbiology	NBSM, DFTQC, other NGO or private sector organizations		Yes	Yes	5 years	EU/UNIDO and ESCAP project; WB; ADB
	• Facilitate establishment of specialized laboratories by product associations under the PPP approach for special purposes (e.g. collective mark, trademarks, non-destructive assessments, etc.)	Product associations, MoI, NBSM, DFTQC, MoCS		Yes	Yes	5 years	

Main Outcomes	Recommended Actions	National Partner(s)	Requirements			Possible Timeframe	Recent or Current TA
			Policy And Regulatory Development/ Reform	Institutional Strengthening/ Development	TA		
Objective 2: Strengthen the technical capacity of domestic NTB and other business environment supportive institutions							
	• Accreditation of several ISO 9000, ISO 14000, SA 8000 certifiers, including possibly NBSM; review/address possible conflicts with standard setting role of NBSM	NBSM, other NGO or private organizations		Yes	Yes	5 years	EU/UNIDO and ESCAP project; WB; ADB
	• Accreditation of several HACCP and ISO 22000 certifiers, including possibly DFTQC; review/address possible conflicts with standard setting role of DFTQC	DFTQC, other NGO or private organizations		Yes	Yes	5 years	EU/UNIDO and ESCAP project; WB; ADB
Sanitary and Phytosa-nitary Measures	• Adopt Regulations under the new Plant Protection Act 2007	MoAC/PPD	Yes	Yes		Just completed	
	• Amend current Food Act 1966	MoAC/PPD/ DFTQC	Yes		Yes	2 years	FAO
	• Review Animal Health and Livestock Act 1998 and Nepal Veterinary Council Act B.S.2055 (2000)	DOLS	Yes		Yes	2 years	OIE
	• Review Pesticides Act 1991 and Pesticides Rules B.S.2050 (1994) to ensure that crop protection comply with changing and most stringent MRL requirements of trading partners	MoAC/PPD/ DFTQC	Yes		Yes	2 years	FAO + WHO (CODEX)
	• Strengthen WTO SPS Enquiry Point, including up-to-date website, staffing and procedures to answer queries, etc.	MoAC/PPD/ DFTQC		Yes	Yes	2 years	FAO + WHO (CODEX)
	• Launch internationally acceptable traceability systems based on GAP certification run through TPC. Could be launched initially for tea, lentils, cardamom, and ginger	PPP involving specialized NGOs, private sector and farmers, MoAC/ DFTQC	Yes	Yes	Yes	2 years	
	• Consolidate SPS focal points (currently spread among DFTQC, PPD, DoLA, MoFSC) in a newly created biosafety agency with specialized staff outside traditional public servant staff rotation system	DFTQC, PPD, DoLA, MoFSC	Yes	Yes	Yes	2 years	FAO
	• Launch efforts to promote enabling environment for food production and processing with focus on: clean air, potable water, proper treatment and disposal of soiled water and solid waste	Partnership between MoAC, MoH, NGOs	Yes	Yes	Yes	5 years	WHO

Main Outcomes	Recommended Actions	National Partner(s)	Requirements			Possible Timeframe	Recent or Current TA
			Policy And Regulatory Development/ Reform	Institutional Strengthening/ Development	TA		
Objective 2: Strengthen the technical capacity of domestic NTB and other business environment supportive institutions							
Intellectual Property	• Amend (or legislate new) Industrial Property Act to include collective and certification marks and to comply with WTO TRIPS Agreement	MoI, MoCS	Yes		Yes	2 years	
	• Legislate Traditional Knowledge (TK) and Geographical Indication (GI) laws	MoI	Yes		Yes	2 years	
	• Strengthen capacity of current intellectual property offices, including training of staff, and equipment. Develop relevant registration databases	MoI, Ministry of FAPACA & Culture		Yes	Yes	2 years	
	• Launch awareness campaigns among businesses on the use of intellectual property protection as a competitive advantage, including among exporters in NTIS export potential sectors	MoI, Ministry of FACAPA & Culture		Yes	Yes	2 years	
	• Establish GIs for several export commodities	MoI, MoAC		Yes	Yes	2 years	
	• Establish an intellectual property training institute to train users, regulators, creators, judges, lawyers, and all who work on IP issues	MoI		Yes	Yes	5 years	
	• Consolidate all intellectual property and copyright matters in an intellectual property agency with specialized staff outside traditional public servant staff rotation system	MoI, Ministry of FACAPA & Culture	Yes	Yes	Yes	5 years	
Service Sectors Environment (cross-cutting)	• Establish a 'champion' institution to promote Nepalese service exports (current WTO Service Enquiry Point weak; TEPC focuses on goods; 17 uncoordinated agencies responsible for services)	MoCS and concerned Ministries		Yes		2 years	
	• Carry out detailed review of domestic laws and regulations pertinent to individual service sectors and their impact on service exports	MoCS and concerned Ministries		Yes	Yes	2 years	
	• Modify current restrictions on foreign exchange imposed on Nepalese residents ($2,000)	MoF, Nepal Rastra Bank	Yes			1 year	
	• Formulate regulations for full enforcement of the Telecommunications Act to heighten competition (and lower cost) of high band-width internet	MoIC, NTA	Yes		Yes	2 years	
	• Improve government statistical instruments to measure, forecast and monitor contribution of services and services exports to Nepalese economy	CBS Nepal Rastra Bank		Yes	Yes	5 years	
	• Upgrade airport infrastructure, including at TIA	MoTCA, CAAN		Yes	Yes	5 years	

Main Outcomes	Recommended Actions	National Partner(s)	Requirements			Possible Timeframe	Recent or Current TA
			Policy And Regulatory Development/ Reform	Institutional Strengthening/ Development	TA		
Objective 3: Strengthen the export capacity of 'inclusive' export potential sectors							
Individual Priority Export Potential Sectors	• For possible actions in the 19 Priority Export Potential Sectors identified in *NTIS 2010*, see individual SWOT analyses with recommendations in Action Matrix Part II	MoCS, MoI, MoAC, product associations, others					Selected TA from USAID, GTZ, UNDP, ITC, AUSAID, UNCTAD, WB
	• Formulation of individual sector strategies and supportive policies for the 19 export potentials, as needed	MoCS, MoI, MoAC, product associations, others	Yes		Yes	2 years	
Trade Support Institutions	• Strengthen government-business policy dialogue through creation and effective operation of NBF	MoI, concerned Ministries, apex business organizations		Yes	Yes	Launched May 26, 2010	IFC/DFID
	• Merge the Export Promotion Forum (EPF) operated by FNCCI with NBF's Working Group on Trade and/or bring EPF under Working Group on Trade umbrella	MoI, MoCS, FNCCI		Yes		1 year	
	• Create structured network of trade support institutions (TSIs)	MoCS, selected govt agencies, apex business organizations, product associations, other business NGOs		Yes	Yes	2 years	
	• Clearly redefine mandate of TEPC, restructure TEPC and match staff and skills with clearly defined functions	MoCS, TEPC		Yes	Yes	5 years	
	• Use TSI network to develop TSI grass roots service capacity in areas of business and trade information, awareness of NTBs (especially standards), product design and development, technology, etc.	TSI Network		Yes	Yes	5 years	
	• Launch GAPs, food safety and quality management systems based on TPC for selected Nepalese agro-food exports	Cooperatives and farmers groups, specialized NGOs, product associations, specialized govt agencies	s	Yes	Yes	5 years	

Main Outcomes	Recommended Actions	National Partner(s)	Requirements			Possible Timeframe	Recent or Current TA
			Policy And Regulatory Development/ Reform	Institutional Strengthening/ Development	TA		
Objective 4: Strengthen GoN's capacity to coordinate and manage TRTA and AfT and to implement NTIS							
EIF National Implementation Arrangements	• Align priorities of *NTIS 2010* and 3-year NDP	NPC and MoCS	Yes		Yes	1 year	UNDP, DFID, Finland
	• Incorporate Trade Sector Strategic Priorities of GoN in Nepal Development Forum	NPC, MoF, and MoCS	Yes		Yes	1 year	UNDP, DFID, Finland
	• Get *NTIS 2010* approved by Council of Ministers	MoCS, GoN	Yes		Yes	1 year	UNDP, DFID, Finland
	• Establish effective NSC	MoCS, GoN		Yes	Yes	2 years	EIF Tier 1
	• Establish effective NIU located in MoCS with focal points in key Ministries, with staffing and procedures (procurement, M&E,…)	MoCS, concerned Ministries		Yes	Yes	2 years	EIF Tier 1
	• Establish effective NTIS Technical Committees. Provide strong linkages between NTIS Technical Committees and NBF Working Groups	MoCS, concerned Ministries		Yes	Yes	2 years	EIF Tier 1
	• NIU and Technical Committees to formulate and secure funding to implement *NTIS 2010* Actions	MoCS/NIU, Technical Committees		Yes	Yes	5 years	
	• NIU and Technical Committees to identify, formulate and secure funding for small, quick-win TA proposals early on after launch of *NTIS 2010* (in line with short- to medium-term priorities identified in NTIS)	MoCS/NIU, Technical Committees		Yes	Yes	1 year	
	• Institutionalize regular consultations between MoCS and development partners	MoCS, DPs		Yes	No	2 years	
	• Create a dedicated web platform to communicate and monitor progress against NTIS and NDP benchmarks and Paris Declaration	MoCS/NIU, DPs		Yes	Yes	2 years	

NEPAL TRADE INTEGRATION STRATEGY 2010
ACTION MATRIX PART II

SWOT ANALYSES OF 19 POTENTIAL EXPORT SECTORS WITH RECOMMENDED ACTIONS

1. CARDAMOM

Strengths	Weaknesses
➥ World's largest exporter of large cardamom ➥ Geo-climatic advantage in cardamom cultivation ➥ Typically planted in areas where nothing else grows; thus does not compete for land with other crops ➥ Major source of cash income for farmers despite price fluctuations ➥ Unlike many other agricultural products, dried cardamom keeps well; thus, minimal risks associated with physical loss during trade ➥ Nominal or zero tariff rates in most markets	➥ Lack of knowledge and adoption of best practice cultivation, quality improvement, and post-harvest handling ➥ Low quality of product ➥ Little or no incentive to boost quality ➥ High transportation costs ➥ Lack of collection centres at farm level ➥ Lack of storage facility at farm and trader level ➥ Illegal taxes and fees collected in districts
Opportunities	**Threats**
➥ Large scope for expanding production area and increasing productivity and quality ➥ Availability of new technologies like CO2 extraction for extracting essential oil ➥ Increasing adoption of improved processing technology; shift from traditional *bhatti* to improved *bhatti* drying system ➥ Potential for market development for large cardamom in markets where small green cardamom is consumed ➥ Branding in niche markets	➥ Farmers' indifference towards large cardamom because of *Chhirke*, *Phurke*, and *Jurjure* diseases and market volatility ➥ Farmers not organized for farming of and trading in cardamom ➥ Dominance by a single export market (India) ➥ Deteriorating transport infrastructures

Actions

- Strengthen the Cardamom Association to address the interest of all stakeholders involved in the value chain.
- Examine/implement programmes for aggregation and consolidation of the industry (cooperatives, marketing associations) so as to improve marketing efficiency and obtain third party certification (TPC).
- Work with traders/exporters to increase value addition activities within the country and reduce dependence on Siliguri (India) market.
- Promote large cardamom in markets that traditionally purchase small cardamom. Create a brand image for Nepal's large cardamom.
- Investigate possibility of creating a collective mark or a Geographical Indication (GI) for Nepal's large cardamom.
- Introduce improved farming and post-harvest practices in cardamom-growing areas.
- Widely introduce the *bhatti* drying technology to improve quality.
- Improve extension services and focus on eradication of crop diseases such as *Chhirke*, *Phurke*, and *Jurjure*.
- Ensure proper testing equipment in central and regional laboratories.
- Strengthen research and development (R&D) work and produce and distribute seed-based (opposed to sucker-based) quality planting materials on a large scale.
- Explore avenues for product diversification, catering to spice, essential oil, cardamom paper, incense, colour extraction industries.

2. GINGER

Strengths	Weaknesses
➥ Traditional crop skilfully incorporated into farming system ➥ Possibility of inter-cropping with maize, bean, and vegetables; so, a very profitable crop ➥ Very nominal labour cost for weeding ➥ Fertile red soil and hill climate of Nepal highly suitable for producing ginger with excellent aroma and other valuable chemical contents ➥ Preference for Nepalese ginger by consumers in domestic and export markets ➥ Ease of entry into ginger farming and marketing due in part to existence of established cooperatives for marketing the crop ➥ Significant contribution of this sector to farmers' income, employment, and overall rural development	➥ Perishable nature of product ➥ No permanent solution to the problem of *Gano Kuhine* (rhizome rot) and lack of technicians to deal with this problem ➥ No agro service centre for ginger ➥ Lack of good storage, including cold storage; so, high risk of post-harvest damage ➥ Lack of post-harvest technical services ➥ Intermittent listing of ginger as a restricted item by India
Opportunities	**Threats**
➥ Increasing use of crop by Ayurveda pharmaceutical industries in Nepal and India ➥ Promotion of new and diversified spices ➥ High potential for product diversification—jam, jelly, candy, sauces—and other opportunities for value addition ➥ Potential for increasing production area ➥ Government's classification of ginger as a high value crop and existence of supportive policies ➥ Introduction of Ginger and Spice Development Programme by Department of Agriculture (DoA) to provide technical support for farmers	➥ Very high price fluctuations ➥ High dependence of market price in Nepal on ginger production and pricing in India ➥ Indian government's discouragement of import of ginger from Nepal whenever Indian ginger production is high ➥ Loss of up to 30 per cent ginger in the field and during storage due to rhizome rot disease ➥ More efficient production in hilly areas of India as well as in Tibet

Actions

- Introduce higher yielding and better quality varieties of ginger. (The Government Ginger Research Farm has released a new improved variety suitable for Nepal's soil and climate that can maintain the Bose nature and quality of ginger. Multiplication of this seed can provide an excellent opportunity for improving the quality of Nepalese ginger.)
- Examine/implement programmes for aggregation and consolidation of the industry (cooperatives, marketing associations) so as to improve marketing efficiency and obtain TPC.
- Implement focused programmes to expand ginger farming areas, production, and yield in major areas/districts.
- Encourage contract farming for ginger.
- Provide training in post-harvest handling.
- Establish ginger collection centres (similar to vegetable collection centres) by involving farmers' groups, local government, DOA and traders.
- Conduct regular business meetings of entrepreneurs, investors, farmers, and technicians to address various production- and trade-related issues.
- Diversify into processing ginger extracts (oleoresin).
- Encourage processing of ginger for product diversification and value addition within the country, including simple drying.
- Resolve the unexpected and *ad hoc* import restrictions imposed by India through trade negotiations.

3. HONEY

Strengths	Weaknesses
➥ Abundance of natural flora and fauna ➥ Availability of appropriate climatic conditions ➥ Unique flavour due to climatic conditions and flora ➥ Very positive socioeconomic impact, especially income to poor landless farmers ➥ A lot of groundwork already done by different organizations in the past ➥ Involvement of a large number of entrepreneurs in the processing and marketing of honey ➥ High quality production ➥ Good relation between beekeepers and stakeholders	➥ Lack of facilities and equipment for good export quality honey ➥ Near saturation of domestic market and entrepreneurs' inability to find new markets other than India ➥ Non-inclusion of Nepal in the list of countries that are authorized to export honey to EU ➥ Absence of proper equipment and laboratory facilities to test for residue presence (MRLs)—a bottleneck for EU market and others ➥ Weak road/transportation access to pasture areas ➥ Lack of pasture management ➥ Small quantities of production
Opportunities	**Threats**
➥ Sale through tourism ➥ Organic and fair trade honey ➥ Relation with international buyers ➥ Growing consumption ➥ Growing number of commercial beekeepers	➥ Competition from both India and China in major markets ➥ Strikes and volatile political situation ➥ Use of pesticide in bee pasture area

Actions

- Provide support to growers in pesticide management and establish effective quality supervision and control systems.
- Submit a pesticide residue control plan to the EU and other honey importing countries.
- Strengthen testing laboratory capacity in the area of MRL.
- Set up internationally accredited laboratories that can certify produce for conformity with importing market standards.
- Acquire organic certification.
- Reduce import duties and VAT on packing materials and abolish other duties and charges.

4. LENTILS

Strengths	Weaknesses
➥ High quality product ➥ Good reputation of Nepali lentils in the world market. High appreciation in South Asia and the Middle East compared to bold lentils or lentils of other colours and quality. ➥ Use of modern technology (colour sensing, de-stoner) ➥ Long experience in exporting ➥ Easy availability of raw materials–80 per cent of national production concentrated in 10 districts ➥ Average yield higher than that of India ➥ Can be grown profitably even by small farmers in residual rice fallows with the existing soil moisture, thus saving on additional fertilizer, irrigation, and tillage	➥ Unavailability of expert technicians in time ➥ Labour scarcity and security issues ➥ Unavailability of quality inputs, specifically improved and suitable varieties of seeds ➥ Absence of local safety measures (police protection and security) ➥ Poor condition of roads to farming areas ➥ Containers for shipment are not easily available and are costly ➥ Lack of organized domestic markets for collection
Opportunities	**Threats**
➥ Coming up of large new markets ➥ Improving packaging ➥ Training of farmers in quality of product and crop farming ➥ Possibilities to boost yield through simple technology ➥ Huge markets in the neighbouring Bangladesh, Pakistan, and Sri Lanka	➥ Government policies such as export ban. ➥ Unstable government affecting production, procurement, marketing, and export ➥ Relatively high labour costs ➥ High susceptibility to pests and diseases ➥ Sharply increasing domestic prices due to overall food scarcity is draining exportable quantity ➥ Growing competition from Canadian and Australian exports in South Asian markets ➥ Increasing importance of SPS measures in importing markets

Actions

Export facilitation

- Under the GoN policy, classify lentils as exportable and refrain from imposing export restrictions (as was done in 2009).
- Examine/implement programmes for aggregation and consolidation of the industry (cooperatives, marketing associations) so as to improve marketing efficiency and obtain TPC.
- Develop quality certification to strengthen the image of Nepalese exports on world market.
- Strengthen quarantine treatment (fumigation) posts, with equipment and training, at the border.
- Conduct study tours of millers, exporters, and government officials to attractive overseas markets.
- Facilitate the Association of Nepalese Rice, Oil and Pulses Industries (ANROPI) to set up agents in key attractive markets.
- Improve lentil data generation and analysis at all levels. Separate lentil from 'pulses' categories at all administrative levels (MoAC, Nepal Agricultural Research Council [NARC], MoCS, Customs, TEPC, Central Bank, etc.).

Procurement facilitation

- Lower and then eliminate district taxes affecting export products.
- Establish a lentil market information system.

- Establish lentil wholesale markets in Bardia, Banke, Dang, Rupendehi, Chitwan, and Parsa, operating three months a year during and after harvest.
- Hold yearly meetings of stakeholders in Birgunj, Bhairahawa, and Nepalgunj.

Production expansion facilitation

- Strengthen monitoring and assistance from District Agriculture Development Office (DADO) to farmers, focusing on simplified technical recommendations (priming the seeds, flush irrigation, weeding).
- Strengthen the capacity of NARC Agronomy Division in charge of pulses in the area of lentils.
- The National Agriculture Research and Development Fund should pay priority attention to lentils and call for bids for conducting client-oriented research.
- Launch proactive and sustained improved seed production programmes as a major undertaking of the private sector, NARC and Nepal Seed Company.
- Strengthen private sector distribution of inputs (fertilizers and herbicide) with support from DADO and commercial banks.

5. TEA

Strengths	Weaknesses
➥ Very favourable climatic and geographical conditions for developing better quality and specialty product ➥ Code of conduct drawn up to achieve GAP/GMP and Fair Trade practices ➥ Farmers cooperatives willing to work together ➥ Contribution to poverty alleviation ➥ Environmentally friendly ➥ Growing demand in global market ➥ Institutions are in place to support the sector ➥ Private sector driven with donor support ➥ Government grants and subsidies on land lease, plant material, tools and machinery, loans at attractive interest rates ➥ Low labour cost	➥ Low yield of cultivation areas ➥ Poor quality chemicals (insecticides and pesticides), overuse, and incorrect application ➥ Lack of technical schools and weak research facilities ➥ No central auctioning system and inaccessibility of Nepalese tea to Indian auction markets ➥ Shortage of tea processing capacity with proper standards (Some factories and packing plants are unsuitable for tea processing and pose health hazards) ➥ Scarcity of skilled personnel and expertise ➥ Inconsistent quality of product to meet buyers' demand ➥ Lack of facilities and standardized quantities to prepare large consignments for export ➥ High transportation costs ➥ Irregular supply of electricity ➥ Financing difficulty ➥ Delayed VAT refunds ➥ Inadequate market information ➥ Lack of well-equipped and accredited laboratories ➥ Lack of a national organic certification system
Opportunities	**Threats**
➥ New and rapidly expanding global market for organic green tea ➥ Large areas with young tea bushes and availability of land for expansion and new planting ➥ Existence of new organically certified growing areas for bio-organic tea ➥ Good brand image, including GI, could be established, especially in view of the deteriorating image of Darjeeling (India) tea ➥ Support available for obtaining internationally recognized certification for new and existing factories ➥ World market prices are expected to rise	➥ Loss of credibility with major buyers due to poor performance by exporters, including failure to meet requirements of delivery samples ➥ Lack of human resources, especially in quality control and export marketing, contributing to loss of credibility ➥ Deteriorating infrastructure ➥ Very high dependence on Indian market

Actions

- Improve transportation of green leaf from farm to factory by: a) constructing access roads to tea plantation pockets; b) importing commercial vehicles suitable to the industry on duty-free basis; c) introducing improved plucking bags to keep the leaf intact.
- Encourage establishment of new factories to increase domestic capacity for processing green leaf.
- Improve quality control through measures such as farmers ensuring that their pluckers follow the practice of selective plucking and factories are very strict in their control of leaf intake and reject all unsuitable and damaged leaves at factory door.
- Increase vigilance on the indiscriminate use of chemicals and pesticides. Control import of inferior quality inputs (substandard and banned products).
- The NTCDB must develop a scheme to register all tea farmers and processors, however small their operation. Undertake regular inspections of premises so that inferior, substandard, and polluted products are not sent to market whether export or domestic.

- Encourage and assist medium and large export-oriented factories to obtain ISO/HACCP certification.
- Adjust processing practices to different seasons to make optimum use of the leaf quality and their inherent characters and bring out the maximum natural flavour, aroma, and strength.
- Strengthen the existing government food testing laboratories for certifying and conducting tests and analyses on residue level, heavy metal presence, and fungal infestation and issue internationally recognized reports.
- Develop a GI for orthodox tea areas similar to Darjeeling in India and Dimbula/Nuwara Eliya in Sri Lanka as a basis for branding and marketing such produce.
- Set up R&D institutional facilities (tea training centre or tea school) for further quality improvement and productivity growth.
- In order to improve transparency in marketing, quality, and prices, set up tea auctioning facilities and/or improve access to international auction centres.
- In order to tap new markets, identify product diversification opportunities-based trends in import volumes by target countries, taste preferences, tea grades demanded, etc.

6. INSTANT NOODLES

Strengths	Weaknesses
➥ Skilled manpower ➥ High investment in the latest technology ➥ Large production capacity already in place ➥ Well established domestic industry supplying raw materials and services	➥ Lack of skills in penetrating new markets ➥ India requires quality certification for each consignment and producers are not well prepared to meet this requirement ➥ Power cuts are a problem ➥ Difficulty in sourcing wheat flour, palm oil, and seasonings from countries other than India ➥ *Halal* certification not available for exporting to some Muslim and Arab countries
Opportunities	**Threats**
➥ A very good and expanding market in bordering Indian towns and world markets ➥ A large and expanding domestic market that can work as a cushion to buffer against possible export setbacks	➥ Political instability ➥ Insecurity ➥ Strikes and *bandhas* (shutdowns) ➥ Very high competition in domestic market ➥ Prevention of Food Adulteration (PFA) restrictions

Actions

- Encourage wheat flour mills to increase the utilization of their production capacity.
- Provide incentives for establishing new wheat flour mills in the country to lessen import dependency of noodle factories.
- Establish food laboratories for *Halal* certification and to meet the requirements under the PFA.

7. MEDICINAL HERBS AND ESSENTIAL OILS

Strengths	Weaknesses
➥ Availability of collectors and intermediary workers in wild herbs and organized human resources for production of essential oils ➥ Biodiversity in Nepal offers possibility to explore new and high-value products ➥ Proactive policy, directives, and regulations ➥ Production extension prospects through contract farming system and purchase assurance to farmers ➥ Cultivation and processing centres in more than 15 districts ➥ Organic certification from internationally recognized organizations of different countries having accreditation such as ECOCERT, NASSA, IFEAT, EFFEO, etc.	➥ Labour problems, in particular high wages compared to productivity ➥ High collection charges ➥ Weak knowledge of scientific agronomical practices and post-harvest technologies within the sector ➥ Inability to target attractive markets due to lack of exposure and lack of knowledge of international marketing practices ➥ High cost of suitable packaging materials ➥ Lack of technical and policy support for processing and exporting of herbal products and essential oils
Opportunities	**Threats**
➥ Increasing environment- and nature-conscious buyers ➥ Growing preference for organic and herbal-based products over synthetic products ➥ Gradual shifting from crude export to processing of herbal products and essential oils ➥ Strong government and donors	➥ Competition from India and China ➥ Low-price markets for chemical/synthetic substitutes ➥ High technical entry barriers with stringent rules for processed materials ➥ Question of sustainability of some raw materials

Actions

Product and Technology

- Support technology such as fractional distillation and steam processes for oil extraction to reduce material wastage and to lower the production costs.
- Encourage private sector investment in farming, processing, and production of forestry and herbal products for better use of resources.
- Facilitate internationally recognized product certification.
- Coordinate efforts of INGOs and NGOs in supporting production development and technological improvement. Emphasize a market-oriented approach.
- Initiate R&D efforts towards processed products such as perfumes, food flavouring elements, and fragrances.

Market Access

- Promote use of better packaging materials such as certified aluminium containers.

Institutional and Human Resource Development

- Establish specialized institutions in the Mid-Western Region to support economically deprived people from mountainous regions through development of herbs and aromatic plants and plant products. Collaboration with the Jadi Buti Entrepreneurs Association of Nepal (JABAN), Nepalgunj might be appropriate.

Business Environment

- Set up a national laboratory through public-private partnership (PPP) that issues internationally recognized product certificates. Such a laboratory should be supplemented by a branch in Nepalgunj.

- Review, simplify, and improve current procedures for collection, royalties, restrictions, EIA, IEE, processing, customs tariffs on inputs, and exporting of herbs and herb products. For example, if a laboratory is set up in Nepalgunj, the Department of Forestry should permit export on the basis of laboratory test and certification in Nepalgunj itself without visiting Kathmandu.
- Implement a policy and institutional system for issuing an internationally recognized organic certificate developed by the MoAC.
- Introduce a policy to intensify the use of raw herbs in production of essential oils and herbal products.
- Introduce collective patent rights to cover species of Nepali origin like Timur and others.
- Remove all district development taxes imposed on movement of herbs within Nepal.
- Strengthen bilateral negotiations with India and request the Government of India to (a) incorporate selected herbs in the list of importable items of Department of Plant Quarantine and (b) issue open transit movement permit to Nepalese herbs from one state to another.

8. HANDMADE PAPER AND PAPER PRODUCTS

Strengths	Weaknesses
➥ *Lokta* and *Argheli* are strong and unique raw materials ➥ Nepali *Lokta* paper is particularly strong due to its harvesting in high altitude ➥ Unique indigenous paper production technology is an important selling point ➥ Value added through unique artworks ➥ Strong and efficient cluster of artists and entrepreneurs	➥ Limited ability to meet large orders ➥ Weak design and product development capacity to meet demand of new markets ➥ Lack of training in design and product development ➥ Lack of proper marketing and promotion efforts, market information, and market contacts ➥ Lack of management skills in cottage industries
Opportunities	**Threats**
➥ High domestic market prospects for *Lokta* paper ➥ Foreign market prospects for value added paper products	➥ Price competition with similar products from China PRC, India, and Thailand ➥ Product designs not well protected from imitation by domestic and foreign producers ➥ Domestic threats stronger than international threats, in particular in terms of labour issues and strikes

Actions

Product and Technology

- Develop new nurseries and plantations for *Lokta* production through farmers' cooperatives and community forest users groups in as many districts as possible.
- Improve the paper supply capability by improving the processing system, including reducing wastage of raw material and improving the quality of paper. This could reduce wastage by 25 per cent and improve quality by 20 per cent.
- Develop use of alternative energy for processing (currently intensive use of wood-fuel).
- Support the development of new sources of raw materials such as *Ketuke*, banana, and bamboo.
- Support the development of new products that are marketable in developed countries.
- Support appropriate waste water treatment plants for paper-making factories.
- Use royalties collected from *Lokta* to finance training in *Lokta* collection, nursery management and cultivation, and for the development of a paper processing system.

Market Access

- Develop the trade promotion capacity of enterprises in the sector, including possibly support the costs of participation in international trade fairs, buyer-seller meetings, production of brochures, etc.

9. SILVER JEWELRY

Strengths	Weaknesses
➥ Good access to imported quality of sterling silver, gems, and semi-precious stones ➥ Skilled and efficient artists and craftspersons ➥ Unique arts, design, and product development expertise ➥ High value added (40 to 50 per cent of export value) ➥ Registered trademarks in markets ➥ Extensive exposure to international markets ➥ Joint efforts to develop designs with buyers ➥ Well-established markets, e.g. in Japan ➥ Product specialization and regular design development	➥ Lack of sophisticated new technology such as (a) laser machine for soldering, (b) casting equipment set, (c) modern software for design, (d) other innovative technical support for product development ➥ Lack of support for design and product development ➥ High costs of imported raw materials and packaging materials ➥ High cost in developing market linkages ➥ Difficulty in identifying matching partners ➥ Risks of single buyer to some exporters ➥ Lack of policy and institutional support to strengthen competitiveness ➥ No institution to certify genuine products
Opportunities	**Threats**
➥ Industry sources see the EU as the most promising market for newly created designs ➥ Many new and potential markets such as Russia, South Korea, and South Africa ➥ Japanese market is promising with new customers and demand for new items ➥ Niche products for Japanese market such as wedding rings ➥ Availability of trainable labour all over the country	➥ Difficulty in competing on price as overall economic environment has increased the costs of various components ➥ Threat from competitors in India, Thailand, Indonesia, and Mexico. ➥ Foreign competitors have imitated original Nepali designs ➥ Trade volumes do not support high costs of market penetration ➥ Mixing of cadmium has affected Nepal's reputation in market

Actions

Product and Technology

- Encourage establishment of internationally accredited testing laboratories for precious metal and gem stones.
- Encourage improvement of jewelry production through (a) creation of a jewelry school responsible for R&D and training, (b) matching fund to support investment in modern tools, equipment, etc. to upgrade quality, (c) dissemination of information technology, production process, raw materials, modern tools, equipment, market, designs, etc.
- Private firms and companies should dialogue and cooperate with government on urgent need to improve product.
- Reduce duties and taxes on import of equipment and tools.
- Develop gold, platinum, white gold, and titanium jewelry.

Market Access

- Facilitate Nepal's participation in specialized international trade fairs and exhibitions.
- Undertake market research periodically and disseminate findings to manufacturers and exporters.
- Organize buyer-seller meetings in Kathmandu and major markets abroad.
- Promote export of jewelry to India by including a special provision under the bilateral trade treaty.

10. IRON AND STEEL PRODUCTS

Strengths	Weaknesses
➥ Substantial investment from the private sector ➥ Up-to-date technology for producing quality products that meet market requirements ➥ Long experience in production and export management ➥ Strategic location for trade with India, Bhutan, Bangladesh, and Pakistan ➥ Several factories certified by the Indian Institute of Standards (ISI) and permitted to use the ISI mark ➥ Several factories approved for quality standards by Power Grid Corporation of India ➥ Cooperation by Hindustan Zinc Ltd in supplying zinc to Nepal ➥ Ability of Nepalese factories to deliver in time and in quantities requested ➥ Product costs slightly lower than those of Indian origin	➥ High dependency on transport provided by Indian companies ➥ High cost of pre-shipment financing ➥ Poor labour relations ➥ Low labour productivity
Opportunities	**Threats**
➥ Nepal-India Trade Treaty provides duty-free access to Indian market ➥ Tariffs are gradually being reduced in the regional markets, particularly Bhutan and Bangladesh ➥ Recent speedy development of infrastructure in Nepal, India, and Bhutan has increased market prospects ➥ Huge unmet demand in India, Bhutan, and other regional markets ➥ Possibility to improve labour productivity and workers' attitude if appropriate labour regulatory provisions are introduced	➥ High cost, unreliable, and inadequate electricity supply ➥ Frequent changes in Indian trade policies and frequent changes in the provisions of Nepal-India Trade and Transit Treaty ➥ Competition from Indian suppliers likely to get stiffer now that Bihar State Government has come up with a package of industrial incentives, including 20 per cent subsidies on plant and machinery purchases and tax holidays ➥ Political instability leading to insecurity, demand for bribes, labour strikes, civil unrest, etc.

Actions

- Streamline the duty drawback system.
- Streamline customs clearance procedures, including customs post open 16 hours/day and closed only on Sundays to match Indian schedule.
- Open additional customs transit points for land route to Bhutan (currently, only one border post allowed).
- Allow free transit of trucks on selected routes linking Nepal, India, and Bhutan.
- Provide adequate electricity supply. Give priority access (16 hours/day, 6-day-a-week) to export-oriented sectors.
- Streamline and lower the cost of pre-shipment financing. The current cost of L/Cs is too high.
- Revisit foreign exchange systems. Forward exchange contracts are too expensive.
- Review and update Nepal Export Promotion Act and Regulations.

11. CHYANGRA PASHMINA PRODUCTS

Strengths	Weaknesses
➥ Favourable climatic and geophysical conditions for *pashmina* production ➥ Well-developed skills and expertise ➥ Workers available on reasonable wages ➥ Established and reliable suppliers of raw materials ➥ Quality commitment and consistency ➥ Availability of large numbers of looms and equipment ➥ Capacity to meet the orders of fashion boutiques in assorted designs and quantities ➥ Innovative and new products supported by foreign designers and buyers ➥ Excellent, long-term relationship with buyers ➥ Good upstream linkages and product image	➥ High cost of new product development ➥ Difficulty in producing large volumes to serve big buyers ➥ Lack of high-skilled technicians in knitting plants ➥ Weak capacity for luxury packaging ➥ Lack of market networks and limited market information ➥ Absence of national infrastructure to support the sector ➥ Limited capacity to develop market-oriented designs and colour combinations
Opportunities	**Threats**
➥ New markets can be identified as there is always good demand for textile fashion products in world markets ➥ USA and Middle East are the most promising high-end markets ➥ EU has niche market for adapted new and quality products such as blankets and pullovers	➥ Strong price competition from India and China ➥ Lack of guaranteed and genuine raw materials ➥ Possibility of market resistance for low-priced imitation fibre products, in spite of the mechanism for the introduction of collective trademark being in place

Actions

Product and Technology

- Initiate *Chyangra* farming development activities on a pilot project basis at suitable locations to meet at least 20 per cent of the total *Pashmina* yarn requirement.
- Set up *Pashmina* processing plants on cooperative basis at appropriate locations (e.g. Upper Mustang, Mugu, Dolpa or Humla) to encourage poor livestock farmers in remote areas to enter into production.
- Implement a long-term sericulture project for the development of a silk sector in Nepal (*Pashmina* shawls usually contain 30 per cent silk), based on the findings of a recent feasibility study.
- Set up a national institute with appropriate laboratory testing capacity and research and training facilities to provide quality assurance for *Pashmina* and silk materials.
- Undertake a feasibility study to set up a *Pashmina* yarn spinning plant in Nepal.
- Undertake a feasibility study to set up a *Pashmina* knitting sector in Nepal.

Market Access

- Support marketing of a *'Chyangra Pashmina'* trademark in the most promising markets with support from the Chamber of Commerce and Nepalese diplomatic missions.
- Develop proper market research capacity to assist the sector in product design and development, as well as market promotion strategies and programmes. *Pashmina* is a fashion item that requires continuous market watch.
- Strengthen market linkages by organizing Nepal's participation in the most relevant international trade fairs and exhibitions in existing and promising new markets.

12. WOOL PRODUCTS

Strengths	Weaknesses
➥ Good infrastructure and sufficient investment ➥ Qualified designers and quality products ➥ Timely delivery ➥ Well-established relationships with buyers ➥ Good prospects in world market, particularly in the USA	➥ Lack of information on modern technology ➥ Seasonal business ➥ High dependence on wool importers on quality and grade assurance ➥ Weak knowledge of marketing techniques, weak business networking, and lack of information on modern technology ➥ High transportation costs ➥ No improved breed sheep farming initiative
Opportunities	**Threats**
➥ Prospective new buyers identified in the USA and the Netherlands ➥ Additional opportunities in Japan ➥ Different types of products, such as blankets and pullovers, in high demand in different markets ➥ Promising market for natural fibre products	➥ Continuously changing fashion products requiring continuous investment in product development and design ➥ Competition from Ecuador, Colombia, and Peru in the US market ➥ Increasing competition from China PRC ➥ Lack of protection of designs

Actions

Product and Technology

- Strengthen provision of reliable wool quality.
- Enhance grade testing laboratory facilities and certification capacity.
- Conduct a feasibility study for technology upgrading in felt products, including the possibility of introducing new stamping machines and other new technology.
- Launch improved-breed sheep (e.g. *Vyanglung*) farming projects as pilot projects with provision for wool collection, cleaning, scouring, and carding centres on regional basis.
- Establish high-tech yarn spinning plants through PPP of woolen knitting industries and exporters with government support and coordination.
- Establish a training and R&D institute to train workers in production, market-oriented design and colour combination, and use of machines and quality standards.
- Support introduction of computerized design and knitting technology.
- Improve the wool spinning system to supply colour blended and high quality yarns in assorted varieties and colours.
- Make provision for additional modern plants to provide dying services to small knitting factories.

Market Access

- Encourage strategic alliances between exporters and knitters in villages to increase outsourcing of knitting through collectors or institutions located in districts outside Kathmandu valley.

13. TOURISM

Strengths	Weaknesses
➥ Natural endowments ➥ Attractive trekking areas ➥ Rich in religious and cultural tourism ➥ Service-oriented and courteous people ➥ Innovative services and long experience of some travel operators	➥ Poor infrastructure, including electricity supply ➥ Insufficient and substandard airport infrastructure ➥ Weak national flag carrier ➥ Insufficient air capacity, both international and domestic (domestic mainly for trekkers) ➥ Shortage of professional and skilled human resources
Opportunities	**Threats**
➥ Expansion of air links due to liberalization and better infrastructure ➥ Discovery and launching of new trekking routes, especially in western Nepal ➥ Attracting Indian and Chinese tourists in other tourism activities as well	➥ Political instability and unfavourable travel advisories ➥ Internal disturbances such as strikes, bandhas, etc. ➥ Banks reluctant to invest in tourism sector due to political instability ➥ Deteriorating infrastructure ➥ Brain drain of qualified human resources

Actions

Infrastructure and Core Services

- Reinstate peace and security in the country. This is the number one requirement, especially in view of the forthcoming Nepal 2011 Tourism Year (eight 4-star hotels shut down during the conflict).
- Improve roads linking Kathmandu, Chitwan, Lumbini and Pokhara, the four main tourist destinations in the country.
- Improve airport infrastructure, including at TIA in Kathmandu and at airports in Pokhara and Bhairahawa.
- Improve communication infrastructure and provide 24-hour banking and medical services in Chitwan and Pokhara.
- Introduce an open sky policy to invite larger number of domestic and international airlines.
- Promote community-based rural tourism.

Market Access and Market Development

- Provide necessary incentives for the establishment of educational and training institutes for the sector.
- Improve branding and marketing of Nepal as a tourist destination, including by involving Nepalese missions abroad in promotion campaigns.
- Encourage cross-border tourism, including improvement in border immigration for increased inflow of tourists from India and China (strengthened negotiations with the Chinese authorities might be required). Chinese tourists face problems at Kodari border now and then. Open additional entry points in Jhulaghat and Baitadi.
- Reduce bureaucratic requirements for tourism entrepreneurs and tourists.
- Review the very high mountaineering royalties instituted by the GoN to climb Himalayan peaks. For instance, the US$50,000 fee per party to climb Mt. Everest has encouraged parties to climb from the Chinese side.
- Amend the now-defunct Hotel and Restaurant Act 2036 (1980).

14. LABOUR SERVICES

Strengths	Weaknesses
➥ Temporary overseas employment has helped generate domestic employment and foreign exchange earnings and has been a major contributor to poverty reduction in Nepal ➥ Good quality of services provided by temporary migrant Nepalese workers ➥ Availability of training centres to prepare migrant workers before assignment	➥ Most temporary migrant workers are low-skilled ➥ Remittance are rarely invested in productive enterprises in Nepal ➥ Migration causes brain drain ➥ Lack of a clear government policy on manpower companies
Opportunities	**Threats**
➥ Improve skills of migrant workers to increase their potential salaries ➥ Channel more remittances into productive investments in Nepal ➥ Improve assistance to migrant workers through labour attachés in overseas diplomatic missions and bilateral agreements with host countries ➥ Migration can help build skills of workers (brain gain)	➥ High dependency on economic situation and immigration policies of receiving countries

Actions

- Improve consular services to assist Nepalese workers abroad, e.g. through increased number of relevant officers in Nepalese embassies in major host countries.
- Launch training programmes in various districts with the involvement of manpower companies, i.e. on PPP. Establish additional training centres, if necessary.
- Monitor and supervise existing training institutes for quality.
- Strengthen skill development programmes.
- Launch basic awareness and information programmes in the districts at the time of issuing passports.
- Increase awareness of the Foreign Employment Act 2007.
- Assess the need for a separate labour bureau for migrant workers and take necessary steps for the establishment of such a bureau.
- Put in place a mechanism to look at the complaints made by the workers returning before their contract period.
- Simplify bureaucratic procedures at government departments prior to departure and introduce one-stop payment of fees.
- Encourage and enable Nepalese manpower companies to visit the foreign companies concerned when problems arise.
- Improve channels for remitting earnings.
- Increase access of Nepalese women temporary migrants to overseas employment markets.
- Strengthen GoN's ability to negotiate bilateral agreements with receiving countries and use this as an opportunity to diversify destination markets.

15. IT AND BPO SERVICES

Strengths	Weaknesses
➥ Low labour costs ➥ Steady improvement in human resources and communication infrastructure ➥ Less affected by political disturbances, strikes, *bandhas*, etc. compared to other sectors ➥ Reduced income tax for IT services (20 per cent instead of 25 per cent) ➥ Located between two large outsourcing markets, viz. India and China ➥ Skilled and qualified manpower ➥ Proficiency in English (call centres)	➥ Limited and expensive bandwidth (five times more expensive than in India) due to lack of competition ➥ Poor infrastructure, i.e. electricity supply, availability of fuel for generators ➥ Cumbersome VAT refund process ➥ No facilitating regulation for outsourcing and call centres as export-based industry ➥ Lack of data on the sector ➥ Lack of double taxation agreements with exporting countries
Opportunities	**Threats**
➥ Global IT/BPO market is growing fast ➥ Opportunity to enter Indian and Chinese markets because of Nepal's location advantage and knowledge of languages (Hindi, English for Indian market) ➥ Opportunity for learning from joint venture partners (exposure in production, sales, and management)	➥ Political instability and security challenges ➥ Brain drain of skilled people

Actions

- Create conditions for a truly competitive telecommunications market. (The absence of a clear regulatory environment is an issue. The overlapping mandates of the Ministry of Information and Communications and the Ministry of Science and Technology are a problem.)
- Create a larger IT park with good infrastructural facilities (electricity and telecom in particular) and attractive to private investors. (The IT park outside Kathmandu is too small and can accommodate only up to 300 people.)
- Review tax structure and fiscal incentives for the sector.
- Reduce taxes on IT equipment (hardware and software) and facilitate VAT refund.
- Amend foreign exchange restrictions (The limit of US$2,000 per person going abroad is a hindrance to proper development of overseas business opportunities.)
- Collect data on the sector, e.g. through an extensive survey of IT/BPO companies with regular follow-up. Regularly monitor export values to increase public awareness of the economic importance and dynamism of the sector.
- Identify bottlenecks and possible government/donor interventions and strategies.
- Promote Nepal in India and elsewhere as an offshore destination for IT and BPO services.
- Encourage CMMI certification of enterprises in the sector. (CMMI is the international benchmark for quality and delivery. Only one Nepalese firm is currently certified.)

16. HEALTH SERVICES

Strengths	Weaknesses
➥ Enjoyable and suitable climatic conditions ➥ Low costs in some areas ➥ Availability of unique traditional Ayurvedic medicines ➥ Well-equipped operating rooms and laboratories in some hospitals, some of which are ISO 9001 certified ➥ Significant FDI from Indian healthcare providers	➥ Overall health system is underdeveloped ➥ Lack of a clear strategy supported by a clear policy ➥ Shortage of doctors and nurses in the country, also due to out-migration ➥ Unreliable energy supply and other infrastructural constraints ➥ Lack of air ambulance ➥ No international recognition of healthcare facilities as assurance of quality healthcare
Opportunities	**Threats**
➥ Establishment of more medical colleges, including for foreign students ➥ Linking tourism to health tourism ➥ Potential to attract patients towards Ayurvedic medicines	➥ Political instability ➥ Brain drain of skilled human resources

Actions

- Improve statistical data through surveys, including surveys of foreigners that received, or are receiving, medical services in the country.
- Undertake detailed study of export potentials and attractive markets.
- Revise existing health-related laws and introduce new ones required to promote health services in Nepal, including the export of this service.
- Strengthen training of medical personnel in Nepal, including easing entry of foreign medical practitioners to support improved medical education.
- Encourage procurement of new technology, equipment and medicines for Ayurvedic medical services.

17. EDUCATION SERVICES

Strengths	Weaknesses
➥ Good climatic conditions ➥ Low cost of living for students ➥ Some cost advantages for support staff ➥ Degrees can be recognized abroad (although with some difficulty) ➥ Collaboration with and investment by Indian colleges ➥ Nepalese students also benefiting from foreign schools set up in Nepal ➥ Positive side-effects for the health sector due to teaching hospitals	➥ Quality of education is only average ➥ High dependency on Indian students ➥ No worldwide recognition as an exporter of education ➥ Main reason for (Indian) students to study in Nepal is lack of seats in the home country, which could change
Opportunities	**Threats**
➥ Possibility of attracting more students from countries other than India, e.g. SAARC countries, especially Sri Lanka ➥ Potential for students from Middle East and Gulf countries ➥ Better and more stable recognition policies by India could be a major incentive for more Indian students and colleges to move to Nepal	➥ High dependency on diploma recognition policies and general education policies in India ➥ Political instability

Actions

- Seek improved international recognition of Nepal's degrees, in particular in India. Education exports stand or fall on international recognition of education.
- Improve quality of education through improved teaching. Facilitate access of foreign teaching staff.
- Enforce use of English language in education as prescribed under the relevant amendment of Nepal Education Act.
- Publicize educational opportunities available in Nepal in foreign markets.
- Improve statistical measurement of the sector through regular surveys across universities (number, country of origin of foreign students, fees paid, degree obtained, etc.).
- Discourage political interference in the education sector.
- Improve infrastructure in educational institutes, including public ones, especially at university level.

18. ENGINEERING SERVICES

Strengths	Weaknesses
➥ Availability of well-trained manpower ➥ Some expertise in development of engineering software and geo-technical services ➥ Good English language skills among professionals ➥ Expertise in rural engineering, land development, and road design and construction	➥ General lack of experience in large-scale projects for participation in international tenders ➥ Weak expertise in proposal preparation ➥ Lack of expertise in hydropower, irrigation, and water supply sectors
Opportunities	**Threats**
➥ Possibility of penetrating new markets (i.e. Japan for outsourcing of engineering designs) ➥ Collaboration with foreign companies ➥ Massive development of infrastructure and hydropower within the country ➥ Booming construction sectors in India, other SAARC countries, China PRC, Gulf countries, and others that rely on foreign manpower	➥ Brain drain of qualified and experienced manpower ➥ Political instability ➥ High level of corruption in construction sector

Actions

- Formulate a sector policy supportive of export of engineering and consulting services and supportive Act, as necessary.
- Inform professionals about outsourcing opportunities from Nepal (For example, ADF is completing an outsourcing job for a Dutch company and WELINK is exporting engineering software and carrying out consultancy for foreign companies from Nepal).
- Establish a consultancy development centre. (At present, Nepal has only a small desk at the Ministry of Physical Planning & Works to support this sector.)

19. HYDRO-ELECTRICITY

Strengths	Weaknesses
➥ Huge production potential, estimated at between 43 and 83 GW (some estimates are even significantly higher) ➥ Possible positive side-effects on irrigation and flood control ➥ In addition to exports, potential for improving local power supply with little trade-off (current demand in Nepal is less than 1 GW) ➥ Could improve navigation on major rivers such as the Kosi and the Ganga by raising dry season water level and help mitigate risks of flooding, including in India	➥ Possible negative impact on environment and on rural population (resettlements) ➥ Weak regulatory body in Nepal ➥ Long lead time of 10 or more years for large-scale projects ➥ Limited willingness of Indian investors to pay above-cost prices (though this apparently works in Bhutan) ➥ Policy, Acts, and Regulations currently in force are not investment-friendly.
Opportunities	**Threats**
➥ High demand in India, with current peak load deficit in northern India estimated at 5,500 MW ➥ Exports to Bangladesh, where the peak load deficit is also significant, is technically possible ➥ Potential for export to China PRC, but long distance to urban areas ➥ High potential for fiscal revenue generation if royalties or other forms of taxation are set properly ➥ Additional revenue could be generated through storage (e.g. combined with mainly coal-powered generation in India) ➥ Opportunities for export-oriented backward linkages through supply to energy-intensive industries	➥ Initial likely dependence on a single buyer (namely India) might create high financial risks for investors (whether foreign or Nepalese/private or public) ➥ Political instability could deter foreign investors ➥ Welfare gains may be small. They are only assured if buyers are willing to pay above-cost prices.

Actions

- Formulate a proper legal framework. New Draft Act before parliament needs improvements (e.g. requirement that at least 10 per cent investment in project be Nepali does not work for large projects due to lack of investment resources). Simplify the system of taxation and royalties to assure transparency for investors and also significant tax revenues.
- Overhaul the system of licence issuance for hydropower projects.
- Set up a planning body and develop a master plan (with focus not only on generation but also on transmission).
- Set up a regulatory body to facilitate negotiations with potential public or private foreign investors. Make available a single-window system for potential investors.
- Undertake studies that analyse the different financing and pricing options for some potential projects and their costs and benefits, including an assessment of how hydropower projects could be rewarded for positive externalities (such as irrigation and flood control). Also include an analysis of Bhutan's approach and why this approach has so far not been successful in Nepal.
- Accelerate negotiations with India to update the existing power trade agreement and other necessary arrangements.

Appendices

A. Methodology

1. Export Potential and Socio-economic Impact

The term 'export potential' is used here broadly to reflect the capacity to expand exports. For several of the 19 sectors, Nepal has yet to establish significant export value or export growth rates, but potentials to do so are there.

A detailed assessment of each sector, from both demand and supply side perspectives, is presented in Chapter 2. In addition, the study uses an ITC methodology to compare sectors along four main indexes:

- Nepal's export performance (Index 1) combines two indicators: the 2008 export value and annual export growth rates between 2004 and 2008. Each indicator is weighted equally (50 per cent each). Some adjustments were made in the case of some services for which detailed data is unavailable.
- The index world market conditions (Index 2) combines three indicators: the size of the world market for a particular good or service (30 per cent weight), the dynamism of international demand (growth of world imports between 2004 and 2008) (30 per cent weight) and Nepal's market access conditions (tariff advantage) to international markets (40 per cent weight). The latter indicator applies only to goods. Accordingly, for services, Index 2 combines only the first two indicators, which are weighted equally (50 per cent each).
- The index domestic supply conditions (Index 3) is based on a qualitative assessment using the information obtained by the team that carried out the detailed analyses and field work presented in Chapter 2. The index combines indicators such as the quality of products, the productivity and cost of production factors, and the efficiency of domestic supporting industries.
- The index socio-economic impact (Index 4) reflects whether industries have a favourable socio-economic impact. The index combines indicators based on the estimated full-time employment generated by the sector, estimated participation of women, together with qualitative assessments of other criteria, such as the impact on skill development, on disadvantaged areas, on water and energy resources, and more broadly on the environment.

The first three indexes are combined to assess overall export potential (see table 1.7).

For indexes 1 and 2, composite indicators from 0 (worst performance) to 100 (best performance) were developed to compare the 19 sectors along each indicator (such as export value). This allowed computing an overall index based on the weighted average of the indices for individual indicators (see Box A.1.1. for discussion). Once ranked according to the two indexes, the 19 sectors were then classified as high, medium or low for each of the two indexes.

For indexes 3 and 4, qualitative dimensions were used to also rank the 19 sectors as high, medium and low. See table 1.6.

Box A1.1. Composite Indicators

In order to build a composite index, variables used for each component indicator need to be put on a common basis to compare different measurement units (e.g. dollar value, percentage growth rate). Several techniques can be used to standardize or normalize variables, with each method having its advantages and disadvantages.

The method used here transforms each indicator into a range of 0 (weak performance) and 100 (best performance). It gives 0 (100) points to sectors with values below (above) a certain threshold value and points between 0 and 100, depending on the distance between these two thresholds. The values of the thresholds (i.e. the lower and upper limits) are defined through an analysis of the dispersion of the product groups. The following formula is then applied:

$$100^{*}\ \frac{\text{Value} - \text{Lower Limit}}{\text{Upper Limit} - \text{Lower Limit}}$$

It must be noted that indicators and composite indexes can only give a partial view of the real situation: by definition, they can only include data that can be quantified and for which sources are available. For example, in order to assess market access conditions for goods sectors, it would have been useful to incorporate not only tariff barriers but also non-tariff measures, but it does not lend itself easily to strict quantitative comparisons. In addition, the component indicators are backward looking, as prospects are based on recent trend growth. Composite indicators are also sensitive to the choice and weight of the underlying indicators.

2. Market Attractiveness Index

In addition to the four indexes discussed previously, a **market attractiveness index** (MAI) is available. The MAI is not used to compare sectors with each other, but rather to identify promising export markets for each sector independently.

Using ITC's database of trade flows and tariffs (more below on data sources), all import markets for each product are ranked separately using three indicators:

- The **size of the import market,** measured by imports for the particular goods or services.
- The **dynamism of the market,** as measured by growth rates, specifically the difference between growth rate for a particular market and world average.
- The **market access conditions (openness),** as measured by the ad valorem equivalent tariff applied to imports from Nepal and the difference between the tariffs applied to Nepal and to its five largest competitors in the particular market.*

Detailed results for each sector are presented in the individual sector profiles presented in Chapter 2. For goods exports, rankings of attractive markets (importing markets) are shown both according to individual indicators (size, dynamism, openness) and based on a ranking based on a weighting of the three indicators (using 30 per cent weight for size of importing markets, 50 per cent for dynamism, and 20 per cent for openness).

In the case of service exports, mostly size of importing markets and dynamism were used as indicators wherever data could be found. Rankings shown in Chapter 2 are based on the individual indicators. Detailed findings are included in the detailed sector profiles presented in Chapter 2.

* It should be noted that the index can be higher for a country A than for a country B, even though both apply the same tariffs to imports (e.g. because A and B are members of a customs union). This is the case because A and B may import from different countries, to which the customs union applies different tariffs. If, for example, Spain imports mostly from China (high tariff), and France mostly from Italy (zero tariff), then the resulting index for Spain and France will be different, even though both belong to a customs union.

B. Data Sources

The analysis of the export potential sectors combines desk research with fieldwork and is based on quantitative and qualitative information.

Quantitative information includes mainly trade statistics and market access data.

- For market access conditions, the tariff data is taken from ITC's Market Access Map database (www.macmap.org). Market Access Map is a comprehensive source of tariffs and market access measures for over 170 importing countries. It includes MFN tariffs as well as multilateral, regional, and bilateral preferential tariff rates. Though not used for this study, the database also contains bound tariffs, multilateral and bilateral tariff quotas, anti-dumping duties and detailed information on rules of origin. Manual adjustments were made in cases where more detailed data was required.
- Trade data comes primarily from ITC's Trade Map (www.trademap.org), which provides detailed export and import profiles and trends for over 5,000 products in 200 countries and territories. Based on the world's largest trade database COMTRADE, Trade Map presents import/export values and quantities, growth rates, market shares and market access information. It allows users to analyse markets, review the performance of competing countries and assess opportunities for product diversification by identifying existing and potential trade between countries.
- Due to a lack of data from Nepal, 'mirror data' was also used, i.e. data from importing countries rather than Nepalese export data. Nepal has not reported trade data to the United Nations' Statistical Division (UNSD) for the years 2004 to 2008. Therefore, no export data is available from the COMTRADE database for those years. However, data is available for practically all countries that are current or potential export destinations for Nepal. There are also a number of good reasons to use import data instead of export data because they are often more accurate. Export data is often less reliable because customs administrations tend to be more concerned about the accuracy of import data (for fiscal reasons). Also, export data does not give reliable information on the final export destination. For example, many Nepalese products are transshipped through India before they reach their final destinations. These transactions might appear as exports to India in the Nepalese data, even though the final destination might be, for example, Pakistan. Using Pakistan import data could be a better solution. However, Pakistan import data could show India as the source of import and not Nepal if the product was not trans-shipped "directly" through India, but first exported to India.

  In many cases, we also used estimates from a range of other sources, including some data available from Nepal's authorities.

- Qualitative information includes a review of relevant literature and information collected from companies and business associations through fieldwork. The latter is used to validate the results and to gain first-hand insights into the domestic business and policy environment that affects enterprises in the various product sectors.

It should be noted that sector rankings should be interpreted with caution, especially when absolute differences are small, since many indicators lack precision.

C. Selection of 19 Goods and Services Export Potential Sectors

The 19 export potential sectors selected for the study were identified through intensive discussions between the team involved in the preparation of Chapter 2 and representatives from the MoCS, from TEPC, and from Nepalese business associations. This was done through two consecutive workshops organized in late 2009. The previous Export Potential Assessment (EPA) prepared by ITC in 2007 served as an initial basis for selecting sectors, but some sectors were removed and others added. It was decided to include major agricultural and manufacturing products, as well as several service sectors which were not covered in the previous EPA.

Some major export products are explicitly not covered. One reason for not selecting some sectors might have been that these were already very mature and sufficient knowledge about them already exist (e.g. carpet). Another reason might have been that they are declining export sectors or sectors that benefited from tariff preferences that are eroding, undermining Nepal's earlier comparative advantage (e.g. most garment except *Chyangra pashmina* and wool products covered here).

The twelve goods sectors together represent around 31 per cent of Nepal's goods exports in 2008. This may seem small, but most agricultural exports are covered and some of the covered products are hardly exported at the moment but have potential for significant export growth in the future.

For services, currently the two major export sectors are clearly labour services and tourism. Labour services provided by Nepalese temporary migrant workers in India, the Middle East and elsewhere are the main source of foreign exchange earnings for the country. Estimates for annual remittances go as high as US$3 billion, which is three times higher than the total goods exports in 2008.

Several **other sectors** were proposed by stakeholders in Nepal. However, it was not possible to cover all proposed sectors in this study. Nevertheless, short assessments of a small number of other sectors are presented in Chapter 2.

Table A1.1
2008 Export Values of the 19 Export Potentials

S.N.	Sector	Nepal's exports to world (2008,US$ 1,000)	Share of goods exports in 2008	Source
	All goods exports	953,658	100.0%	TradeMap (mirror data)
	All goods sectors covered	291,849	30.6%	
	Agro-Food			
1	Large cardamom	21,329	2.2%	TradeMap (mirror data)
2	Ginger	8,130	0.9%	TradeMap (mirror data)
3	Honey	500	0.1%	ITC estimate
4	Lentils	22,258	2.3%	Nepal customs (03/04 to 07/08)
5	Tea	16,805	1.8%	TradeMap (mirror data)
6	Instant Noodles	10,390	1.1%	TradeMap (mirror data)
7	Medicinal herbs / oils	11,000	1.2%	ITC estimate
	Craft and Industrial Goods			
8	Handmade paper	4,000	0.4%	ITC estimate
9	Silver jewellery	9,519	1.0%	TradeMap (mirror data)
10	Iron and steel products	149,394	15.7%	TradeMap (mirror data)
11	Pashmina products	22,074	2.3%	TradeMap (mirror data)
12	Wool products	16,450	1.7%	TradeMap and ITC estimate
	Services			
13	Tourism	352,000	36.9%	MOTCA & NRB
14	Labour services	2,448,000	256.7%	World Bank
15	IT services	10,000	1.0%	HLCIT estimate
16	Health services	n/a	n/a	n/a
17	Education services	>10,000	>1.0%	ITC estimate
18	Engineering services	n/a	n/a	n/a
19	Hydropower	0	0.0%	n/a

Appendix 2
Market Attractiveness Index

Using ITC's database of trade flows and tariffs for practically all countries around the world, we rank all export markets for each product separately along the following criteria:

- The **size of the market,** measured by imports for the particular product (weight 30 per cent)
- The **dynamism of the market,** as measured by growth rates, difference between growth rates for the particular market and world average and absolute growth (weight 50 per cent).
- The **market access conditions (openness),** as measured by the *ad valorem* equivalent tariff applied to imports from Nepal and the difference between the tariffs applied to Nepal and to its five largest competitors in the particular market (weight 20 per cent).*

Even though a lot of other, more specific factors play an important role in identifying potential export markets, which is something that has to be done primarily by the individual exporter or supporting agencies, the index can give an idea about whether there exist promising markets to which Nepal does not export yet. There are also several markets to which Nepal exports indirectly via India and to which more direct exports could be a promising option for Nepalese exporters. This is for example the case for cardamom.

Detailed results for each sector are presented in the individual industry factsheets (see next section). Both a weighted ranking is shown and rankings according to individual indicators (size, dynamism, openness) and the current export markets.

World trade data, on which the identification of attractive markets is essentially based, does not always allow us to identify the actual trade flows of the underlying product which Nepal exports. For two products (large cardamom and instant noodles) other sources were used that allow distinguishing between different products (large versus small cardamom or instant noodles versus other pasta products). This is explained in detail in the industry factsheets. For **services,** different approaches were used depending on the available data. The main competitors (only defined for goods sectors) are the main other exporters to the markets defined as the most attractive ones, or the main exporters on the world market, where such information was not available.

No attractive markets were identified for IT services, health services and hydropower. The following table shows a summary for all sectors except these three.

* It should be noted that the index can be higher for a country A than for a country B, even though both apply the same tariffs to imports (e.g. because A and B are members of a customs union). This is the case because A and B may import from different countries, to which the customs union applies different tariffs. If, for example, Spain imports mostly from China (high tariff), and France mostly from Italy (zero tariff), then the resulting index for Spain and France will be different, even though both belong to a customs union.

Table A2.1

Overview Table Attractive Markets

Attractive markets for Agro-Food							
Rank	1) Cardamom	2) Ginger	3) Honey	4) Lentils	5) Tea	**6) Instant noodles**	**7) Handmade Paper**
1	Pakistan	India	UK	Turkey	Egypt	China	Denmark
2	Saudi Arabia	Pakistan	France	UAE	UAE	Indonesia	Canada
3	UAE	Bangladesh	Japan	Sri Lanka	Russia	Japan	Netherlands
4	UK	USA	USA	Algeria	USA	USA	Saudi Arabia
5	USA	Netherlands	Germany	Iran	UK	Vietnam	Nigeria
6	Malaysia	UK	Belgium	Egypt	Iran	Korea (South)	India
7	Japan	Malaysia	Poland	Saudi Arabia	Pakistan	Philippines	Qatar
8	South Africa	Germany	Australia	Spain	Germany	Thailand	Egypt
9	Kuwait	Yemen	Saudi Arabia	UK	Kazakhstan	Russia	Japan
10	Oman	Viet Nam	Slovakia	Pakistan	Australia	India	Malta
Main competitors for Agro-Food							
1	India	China	Argentina	Canada	Kenya	n/a (products are too heterogenous to allow identifying main competitors)	
2		Thailand	China	Australia	India		
3		Indonesia	Germany	Turkey	Sri Lanka		

Attractive markets for Craft and Industrial Goods						
Rank	8-1) MPEO - Medical herbs	8-2) MPEO - Essential oils	9) Silver jewellery	10) Iron and steel products	11) Pashmina	12) Wool products
1	USA	Singapore	Hong Kong (S.)	Germany	UK	Germany
2	France	Switzerland	USA	Belgium	Germany	France
3	Germany	India	Germany	Poland	Spain	UK
4	Viet Nam	France	UK	India	France	Italy
5	Singapore	Germany	France	UAE	Hong Kong (S.)	Spain
6	Japan	USA	Denmark	UK	USA	Japan
7	Italy	UK	Australia	Thailand	Italy	Canada
8	Russia	Japan	Spain	France	Japan	Belgium
9	Belgium	China	Netherlands	Italy	China	USA
10	Korea (South)	Mexico	Canada	Sweden	Switzerland	Hong Kong (S.)
Main competitors for Agro-Food						
1	India	Indonesia	China	EU	Italy	China
2	China	China	Thailand	China	China	Italy
3		France	Italy	Korea	India	France

Attractive markets for Services							
Rank	13) Tourism	14) Labor services	15) IT services	16) Health services	17) Education services	18) Engineering services	19) Hydropowers
1	Germany	USA	n/a	n/a	China	UAE	n/a
2	Saudi Arabia	Russia			India	China	
3	USA	Switzerland			Korea (South)	India	
4	UK	Saudi Arabia			Uzbekistan	Brazil	
5	France	Spain			Germany	Quatar	
6	Iran	Germany			Bolivia	USA	
7	China	Italy			Viet Nam	Nigeria	
8	Russia	Luxembourg			Nepal	UK	
9	Italy	Netherlands			Lao PDR	Turkey	
10	Ukraine	Malaysia			Belarus	Saudi Arabia	
Main competitors for Services							
1	not available for services sectors						
2							
3							
Source: See section on attractive markets in detailed analysis of each export potential sector							

Table A2.2

HS-6 for Individual Goods Export Potentials

#	Industry	HS 2002	Product description	Exports Nepal 2008 (US$ 1,000)	Remarks
1	Cardamom	090830	Cardamoms	21,329	
2	Ginger	091010	Ginger	8,130	
3	Honey	040900	Honey, natural	14	
4	Lentils	071340	Lentils dried, shelled, whether or not skinned or split	27,665	
5	Tea	090210	Green tea (not fermented) in packages not exceeding 3 kg	115	
		090220	Green tea (not fermented) in packages exceeding 3 kg	92	
		090230	Black tea (fermented) & partly fermentd tea in packages not exceedg 3	1,056	
		090240	Black tea (fermented) & partly fermented tea in packages exceedg 3	15,530	
6	Instant noodles	190211	Uncooked pasta not stuffed or otherwise prepared, containing eggs	1,114	
		190219	Uncooked pasta, not stuffed or otherwise prepared, nes	9,276	
7	Handmade Paper	480210	Paper, hand-made, uncoated, in rolls or sheets	561	Other handmade-paper products are not listed here as they can not be distinguished from products made from “normal” paper (e.g. “envelopes”).
8	Medicinal herbs / Essential oils	121190	Plants & pts of plants (incl sed & fruit) usd in pharm, perf, insect, etc	2,991	
		330119	Essential oils of citrus fruits, nes	36	
		330125	Essential oils of other mints	16	
		330129	Essential oils, nes	874	
		330130	Resinoids	3	
		330190	(other essential oils)	34	
9	Silver jewelry	711311	Articles of jewelry & pts therof of silver w/n platd/clad w/o prec	6,336	
		711319	Articles of jewelry & pt therof of/o prec met w/n platd/clad w prec	800	
		711719	Imitation jewelry nes of base metal whether o not platd w prec	1,438	
		711790	Imitation jewelry nes	931	
10	Iron and steel products	72	Iron and steel	111,017	
		73	Articles of iron and steel	38,413	
11	Pashmina products	621410	Shawls, scarves,veils and the like,of silk or silk waste, not knitted	2,943	
		621420	Shawls, scarves,veils & the like,of wool or fine animal hair, not knitted	16,670	
		621490	Shawls, scarves,veils & the like,of other textile materials,not knitted	974	
		630120	Blankets (o/t electric) & travelling rugs, of wool or fine animal hair	1,479	
12	Wool products	610210	Women/girls overcoats,anoraks etc, of wool or fine animal	543	
		610431	Women/girls jackets, of wool or fine animal hair, knitted	554	
		611011	Jerseys, pullovers, cardigans, waistcoats and similar articles, of	2,891	
		611012	Jerseys, pullovers, cardigans, waistcoats and similar articles, of hai	2,930	
		611691	Gloves, mittens and mitts, nes, of wool or fine animal hair, knitted	1,455	
		611710	Shawls, scarves, veils and the like, of textile materials, knitted	1,561	
		620111	Men/boys overcoats & similar articles of wool/fine animal hair, not	33	
		620211	Women/girls overcoats & sim articles of wool/fine animal hair nt	389	
		620331	Men/boys jackets and blazers, of wool or fine animal hair,not	365	
		620411	Women/girls suits, of wool or fine animal hair, not knitted	1	
		620421	Women/girls ensembles, of wool or fine animal hair, not knitted	11	
		620431	Women/girls jackets, of wool or fine animal hair, not knitted	338	
		620620	Women/girls blouses & shirts,of wool or fine animal hair,not	51	
		650590	Hats & other headgear, knitted or made up from lace, or other textile mat	5,331	

Source: Export data from TradeMap (mirror data). For selected sectors, exports estimated from a variety of sources.

Appendix 3
Updated Legislative Action Plan for SPS, January 2010

Table A3.1

Updated Legislative Action Plan for SPS, January 2010

No.	Laws/Regulations/ Administrative Decisions	WTO Agreement	Status of Draft/Intended Actions	Expected Approval Date	Present status till December 2009
15.	Plant Protection Act 1972 (Amendment)	Agreement on the Application of Sanitary and Phyto-Sanitary Measures	Preparation of draft amendment by June 2004 Endorsement by Council of Ministers by January 2005	April 2005	New Plant Protection Act enacted on September 13, 2007
16.	Plant Protection Regulation 1975 (Amendment)	Agreement on the Application of Sanitary and Phyto-Sanitary Measures	Preparation of draft amendment by September 2005 Adoption by Council of Ministers by December 2005	Enacted December 2005	Final Stage in the MoLJCAA
16 a	Regulations under the new Plant Protection Act of 13 September 2007	Agreement on the Application of Sanitary and Phyto-Sanitary Measures	Preparation of regulations completed and still awaiting adoption by Council of Ministers as of January 2010	Not known	Under consideration by Council of Ministers
17.	Instrument of International Plant Protection Convention (IPPC)	Agreement on the Application of Sanitary and Phyto-Sanitary Measures	Endorsed by Council of Ministers in August 2002	December 2005	Approved membership since May 8, 2006.
18.	Seed Act 1998 (First Amendment)	Agreement on the Application of Sanitary and Phyto-Sanitary Measures	Endorsed by Council of Ministers in August 2002	August 2004	Amended on January 24, 2008
19.	Decision on the establishment of Enquiry Points	Agreement on Sanitary and Phyto-Sanitary Measures General Agreement on Tariffs and Trade 1994	Submission of proposal by WTO Division, MoICSby April 2003 Adoptionby MoICS by June 2003	June 2003	MoAC maintains all the SPS contact points DFTQ control has been designated as an enquiry point for SPS and CODEX (January 1, 2004) DLS is the OIE contact point DoA is the IPPC contact point
20.	Environment Act 1997 (Amendment)	General	Preparation of draft amendment by MoPE by December 2004 Endorsement by Council of Ministers by July 2005	September 2005	Under consideration in MoEST
24.	Plant Resources Act*	Agreement on Trade-Related Aspects of Intellectual Property Rights	Endorsed by Council of Ministers in 2002	December 2003	MoFSC is going to initiate the task
43.	Food Act 1966 – new replacement law	Agreement on the Application of Sanitary and Phyto-Sanitary Measures	Preparation of Draft Law/Amendment with Technical Assistance from FAO in 2004. The current Food Act has been amended four times since 1966 and there are 105 regulations attached to it	Not known	There have been several revisions to the new draft Food Act since 2004, which have delayed its submission to the legislative process
44.	Animal Health and Livestock Act 1998	Agreement on the Application of Sanitary and Phyto-Sanitary Measures	Preparation of amendments by the MoAC, DLS	Not known	Preliminary draft prepared and still under discussion internally at the MoAC/DLS
	Nepal Veterinary Council Act 2055 (2000)	Agreement on the Application of Sanitary and Phyto-Sanitary Measures	Preparation of amendments by the MoAC, DLS	Not known	Preliminary draft prepared and still under discussion internally at the MoAC/DLS

Appendix 4
Good Agricultural Practices, Food Safety and Quality Management Systems in the Context of Third Party Certification of Nepalese Food Exports

A. Introduction

The most significant issue facing export of the potential agro-food exports identified in Chapter 2, namely cardamom, ginger, honey, lentils, tea (green and black), and uncooked pasta, is pesticide residue limits. Although a number of studies refer to a 'problem' of pesticide residues in Nepalese crops, there is reasonable evidence that, for the listed crops, the actual pesticide practice in Nepal is not necessarily a significant issue. However, demonstration of compliance with an internationally accepted standard is difficult at present, which currently requires consignment testing of tea, honey, and lentil exports.

A visit was made to smallholders in the Kathmandu Valley to identify quality, food safety, and other standards-related challenges and recommend the most appropriate practices and recommend a programme of technical assistance (TA) for developing third party certification for agro-food exports from Nepal.

B. Problem Statement

Introducing GAPs (such as GLOBALGAP) and Hazard Analysis and Critical Control Point (HACCP)-based systems and certification into Nepal's exports, so as to provide demonstration of compliance with importing country standards, requires trained staff, and come at a significant cost. Therefore, there must be both necessary human resources and business case to obtain necessary certification. A further problem is the highly fragmented nature of Nepalese agriculture. Quite simply it is not practical to individually certify large numbers of small farmers – a problem exacerbated when the traded product is aggregated and marketed without clear traceability/provenance.

Solutions to the SPS problem go beyond the technical issues and move into the realm of farmer organization, motivation, knowledge extension, and finance. These are socioeconomic rather than technical issues and in the Nepalese context significantly lag behind technical knowledge and solutions. An important point that cannot be made too often is that implementation of GAPs needs an economic driver. This can come in the form of a business and/or economic case, e.g. through better market access and thus potentially higher prices and/or the delivery of a public good such as safer food. In the context of this study, it has not been possible to look at a cost-benefit case for delivery of either improved marketing of safe food and/or higher prices. However, it is necessary for Nepal to look at the future in which compliance with world standards for food safety is merely a matter of when and not if. This appendix outlines a possible road map for attaining the final objectives through the phased introduction of a combination of public and market-driven GAPs. However, implementation of full GAPs is not all cost, as is discussed briefly in **Appendix 7**.

C. Technical Best Practice in Food Safety: Quality Management Systems (QMS) in the Farming of Fresh Produce

The risk of microbiological, pesticide, and gross contamination of agricultural produce is the major driver behind the development of Quality Management Systems (QMS) for agro-food companies. A QMS sets out the necessary policies, procedures, and recording systems in place to meet the requirements that a produce is safe and meets legal requirements for trade. Legal and technical requirements are identified in the QMS and the necessary management information is provided. Controls of operations are through the application of a

specified management systems. The QMS usually consists of a HACCP, a prerequisite programme up to the farm gate in the form of GAPs and an exit programme after the farm gate in the form of Good Manufacturing Practices (GMPs). The QMS covers a range of issues, including product hygiene, reduction of foreign body contamination, minimizing pesticide residues, environmental pollution, and traceability.

D. Farm-level Accreditation Schemes as Models

No such scheme operates formally in Nepal other than the tea Code of Conduct (CoC). GLOBALGAP is a private standard for GAP that is increasingly being recognized by many retailers in Europe and beyond. While GAP certification is generally not a requirement of Nepalese smallholder customers, this is likely to be a future requirement. However, in the short term, credible GAP certification will likely reduce or even eliminate the need for pesticide testing of produce entering Nepal's trading partners. In view of the high requirements of GLOBALGAP, the cost of implementation and the current status of smallholder farms in Nepal, priority should be given to establishing a system similar to GLOBALGAP that is credible to Nepal's trading partners. However, this standard should be adopted on a needs basis and should be targeted at export sectors of Nepal's agro-food exports.

There is a form of simplified GAPs system operating in Malaysia (*Skim Amalam Ladang Baik Malaysia* [SALM]). SALM is a simplified form of GLOBALGAP and it would be worthwhile investigating to see if it might be adapted for introduction into Nepal (Appendix 5). Given the difficulties in certifying large numbers of smallholders individually, it is important to note that the GLOBALGAP standard, though not SALM, also has a specific standard for smallholders that are aggregated into formal producer groups (summarized in Appendix 6).

If a version of SALM is adopted in Nepal, it should incorporate the GLOBALGAP procedure for certification of farmer groups. This option requires a farmer group to comply with certain extra requirements, including a QMS for running the group (outlined in Appendix 6). In the future, if Nepal adopts an equivalent of SALM, then, given the nature of farming in the country, it would be necessary to incorporate a form of farmer group certification. However, experience from Kenya has shown that this option is difficult to implement in practice.

D. Proposed Approach

The approach proposed in the context of Nepal is to prioritize the application of key elements of GAPs. At enterprise level it should be recognized that prioritization might differ. In purely trade terms the following priorities are suggested (Table 1).

Table A4.1:
Prioritization of Food Hazard Compliance for Trade Facilitation in Nepal

Priority	Risk	Justification
1	Pesticide	The potential for pesticide residues is the most significant issue currently affecting Nepal's agro-food exports. There are significant current investments in this sector in terms of laboratory testing capability. However, there needs to be more significant moves towards demonstrated compliance.
2	Microbiology	All agro-food exports under review (excepting honey) involve a 'kill step' before consumption. Therefore, the potential for transmission of human pathogens is low. However, there are significant public health issues in production and processing that need to be addressed. Mycotoxins are a potential future issue.
3	Gross contamination by foreign bodies	With the exception of soil on ginger roots exported to India, there have been no trade issues involving gross contamination. This is relatively easily solved. However, in the future, the issue of gross contamination will need to be addressed.

Priority 1: Pesticides

Nepal already has some provision under The Pesticides Rules 2050 (1994) for the partial implementation of the requirements for the control of agrochemical residues. Rule 10 requires that:

'Any person, institution or body intending to carry out the business of selling, formulating or spraying the pesticides shall have to obtain a licence from the committee.'

Rule 13 deals with the granting of licences to pesticide-spraying entrepreneurs:

'if any person, institution or body submits to the committee an application pursuant to Rule 11 (application for a licence) above, for obtaining a licence to spray the pesticides for the commercial purpose, the committee may, subject to the standards fixed by it in regard to the use of pesticides, if it deems fit to grant a licence after making necessary inquiries in this regard, grant a licence of the pesticide spraying entrepreneur, in such a form as prescribed by the committee.'

It is necessary for these rules to be extended so that all crop protection advisors and applicators within farms/ smallholdings are also required to be licensed through appropriate certificates obtained by demonstrating the necessary knowledge (i.e. via a formal examination against a defined curriculum).

The curriculum should include crop protection information such as:

- Scouting and monitoring crops for pest and diseases;
- Knowledge of beneficial organisms and of integrated pest management (IPM);
- The correct application of only approved crop protection measures to avoid harmful side effects such as destruction of beneficial organisms and pesticide residues above the maximum residue limit;
- How to store and dispose of pesticides correctly.

An example of a basic curriculum is that of the Smallholder Guide for GLOBALGAP.* This document is only a guideline and one more specific to Nepal needs to be drawn up to include national laws, principal national crops as well as the specific complex of pests and beneficial organisms that exist in the country. However, the GLOBALGAP standard should be adopted, if possible.

In addition to the requirement for training and certification, the Rules under the Pesticide Act need to be strengthened as follows:

- Introduction of set requirements for on farm storage of pesticides as well as proper recording of usage;
- A requirement that companies with pesticides currently registered in Nepal demonstrate through scientifically obtained data that they *currently* comply with importing country requirements. Note that these may not equate with CODEX maximum residue limits (MRLs). India as an exporter to the EU may well, for example, be complying with the United Kingdom Pesticide Safety Directorate MRLs, which are set quite a bit lower than those of CODEX, often at the limit of detection (LoD).

Priority 2: Microbiology

Generally speaking, food-borne human pathogens are more serious that pesticide residues in terms of their potential for illness and morbidity. However, with the possible exception of honey, in trade terms certified freedom from food-borne diseases and microbiological toxins appear to have a lower certification priority

* Smallholder Guide for GLOBALG.A.P., Plant Protection Module, DRAFT version - Nov09, Based on "GLOBALGAP Control Points and Compliance Criteria Integrated Farm Assurance" (V3.0-2_Sep07, English Version)

than pesticide residues given that most agro-food exports are cooked (kill step) before consumption. It is important to understand that food-borne human pathogens and toxins originate from three main sources: (1) humans (through ignorance and inadequate provision of amenities such as toilets and hand-washing facilities); (2) domestic animals where there are opportunities for cross-contamination; and (3) toxin producing plant pathogens such as *Aspergillus* and *Fusarium spp.* It is important to note that mycotoxins are not destroyed by cooking.

Nevertheless, the current microbiological situation in Nepalese agriculture is unacceptable not only from a GAPs perspective, but also as a matter of public health. To address these three issues from a GAPs perspective, the following is necessary:

1. Faecal contamination: It is vitally necessary to segregate animal production and accompanying animal waste from the harvest and post-harvest treatment of food crops. Granted that smallholder farmers have highly limited resources; in fact, what is mostly needed is awareness. In a rather typical instance illustrated (Figure 1), the use of simple drying racks on the other side of the dwelling would reduce the potential cross contamination considerably. Backed up by proper hand washing facilities and toilets,* this simple change would go a long way towards GAPs compliance;
2. Provision of clean water: It is critical to develop a culture of neighbourliness backed up by legislation and technology in respect of water. Farmers go to some trouble to provide themselves with clean water (Figure 2), but then generally let it run down to ultimately heavily pollute the valley bottoms. The technology to provide soak-aways to return waste water into the water table in an environmentally sustainable way is cheap and simple and requires little in the way of inputs that is not already readily available locally.

Animal feeding (right) with dried coles destined for human consumption (bottom left)

Typical provision of drinking water in the Kathmandu valley with significant down hill/stream pollution

* It was not possible to look at toilets during the field work that accompanied the preparation of this chapter, but these need not be complex or expensive, e.g. the 'Blair' toilet in Zimbabwe.

In terms of post-harvest microbiological risks (farm gate to consumer), there are currently two possible standards for application to pack-house situations in Nepal. These are the introduction of a compulsory:

- QMS (Quality Management System) (ISO 9001:2000). This could be regarded as a first stage certification in preparation for full HACCP certification;
- HACCP Standard as adopted by the NSC (ISO 22000:2005), which can be certified by a third party certification body.

Currently, no pack-house in Nepal has been through a QMS/HACCP audit. All certification processes have a business cost and the need for developing more advanced certification schemes for pack-houses should be adopted on the basis of clearly defined business need or properly enforced legislative requirements (as is the case, for example, in Thailand). Business needs may include customer requirements and/or market access.

Priority 3: Control of Gross Contamination of Agricultural Products

This is a function of the full implementation of GAPs and need not be considered further,

E. Recommendations

- Nepal should seek advice on developing a national GAP standard with a modified form of group- GAPs certification, as outlined in **Appendix 5**. The outset goal should be that the standards can be 'ratcheted' up in stages over a period so as to meet full international standards. The immediate objective would be to avoid batch testing of agro-food exports for pesticide residues at the Indian border. Accordingly, it would be necessary to consult with the relevant Indian authorities about an acceptable form of certification to avoid batch testing;
- This certification should be closely coordinated with the socio-economic programmes, particularly those that are working with institution building in the form of cooperatives, marketing associations and commodity associations;
- A forward plan of a phased GAPs system (a developed GAP standard and system of auditing and certification) should be prepared to enable prioritization in terms of chemical>microbiological>foreign body certification/compliance;
- The DoA MoHP should have a wide remit to provide necessary ongoing training to many groups (farmers, marketers, processors, handlers) on the implementation of GAPs, GMPs, and subsequent certification;
- Nepal's pesticide registration and approval procedures need review to ensure compliance with the United Kingdom Pesticide Safety Directorate permitted levels;
- Farmers receive advice on pesticides from many different sources. This includes pesticide company sales staff and the DoA. The quality of this advice may vary and in some cases may not be safe, legal or appropriate, and must be addressed by a certificate of competence in crop protection as a mandatory requirement for all advisors and sellers of pesticides;
- Suitable training and certification of pesticide advisors and applicators is necessary to re-assure customers that they operate under the same standards of pesticide knowledge as those companies in target markets;
- The development of a training similar scheme for the advisors and sellers of pesticides in Nepal.

Appendix 5
Malaysia GAP (Skim Amalam Ladang Baik Malaysia): A Possible Option for Nepal?

Malaysia operates the Malaysian Farm Certification Scheme for Good Agricultural Practice (*Skim Amalam Ladang Baik Malaysia*). This is a Department of Agriculture (DoA) initiative and is a simplified version of GLOBALGAP. The cost of SALM accreditation is limited as the certification process is free, the inputs of the DoA staff as advisors are free and the requirement for an annual residue test on the crop is also free. At present, the scheme is voluntary and as yet there is little request by customers for growers to implement this standard. Thus far, there are approximately 1,000 growers who have requested for SALM certification, but only 200 have been certified (2008 data).

In order to speed up the uptake of SALM it was recommended that:

- To train all of extension field staff to have a full understanding of the requirements of SALM, as they should be the major vehicle for training and maintaining GAP standards on the ground;
- To include in the extension officers' job description a function of monitoring growers to ensure that the growers maintain the SALM certification requirements (checks on spray records, etc);
- To consider providing standard pesticide store designs, for adoption by growers. These designs should specify the layout, design features, and materials to enable growers to understand the requirement of an acceptable pesticide store that meets the SALM standard.

There is significant discussion in the Malaysian DoA about the ways of getting more farmers to adopt SALM. The discussion ranges from making the SALM a legal requirement, promoting the scheme more widely through advertising and promotion, to offering financial incentives such as a premium price and/or supply contract.

Appendix 6
GAP Requirements for Smallholder Farmers Organized in Producer Groups

In the context of agricultural product in Nepal, GAP certification of individual smallholders can be feasible only in the context of producer groups that carry out crop production and marketing cooperatively. For such groups the following structure and systems need to be in place in order to achieve GAP certification.

A. Quality Management

The producer group must have a structure that enables the application of a robust Quality Management System (QMS) across the whole group. This must demonstrably ensure through audits that the group's registered producer members/production locations comply in a uniform manner with the required GAPs and are each separately legally responsible for their respective production locations. The entire crop must be registered for certification.

The producer group or cooperative must be a documented legal entity with the legal right to carry out agricultural production and/or trading, and be able to legally contract with and represent the group members. There should be direct responsibility over the production, handling and ownership of the products, thus being responsible for the compliance with the GAPs as well as holding the contractual relationship with the certification entity. The producer group must have a documented relationship between the producers and the legal entity (signed contracts identifying the producer, production locations, commitment to comply with GAPs and the group's documented procedures, policies, and, where provided, technical advice).

A register has to be maintained of all member producers and of all the applicable sites used for GAPs production. This must include names, contact details, registered products, growing/ production area and/or quantity for each registered product.

B. Management and Organization

The producer group must have a documented management structure and sufficient suitably trained resources to effectively ensure that the registered producers meet the required GAPs. This must include documentation of those in the management structure responsible for technical compliance.

C. Competency and Staff Training

All personnel with responsibility for compliance with GAPs have to be adequately trained and meet defined competency requirements. These competency requirements, training, and qualifications should meet the defined competency requirements and records of qualifications and training have to be maintained for all key staff (managers, auditors, inspectors, etc) involved in GAPs compliance. Internal auditors and inspectors need to undergo training and evaluation, e.g. by documented shadow audits, to ensure consistency in their approach and interpretation of the standards. A system must be in place to demonstrate that key staff is informed and aware of the developments, issues, and legislative changes relevant to the compliance with GAPs.

D. Quality Manual

The operating and Quality Management Systems (QMS) related to GAPs need to be standard documents and contained in a quality manual. Policies and procedures must be sufficiently detailed to demonstrate the group's control of the principal requirements of GAPs and must be available to the registered members of the producer group as well as key staff. The contents of the quality manual must be reviewed periodically to ensure that they continue GAPs standards and those of the producer group.

E. Document Control

QMS documents must be relevant to the operation and adequately controlled. These include internal documents relating to compliance, operating procedures, work instructions, and recording forms. Relevant external standards must also be controlled documents. The document control system is based on ISO 9000 and includes the necessity for review and approval of new and altered documents by authorized persons before issue and distribution and must have issue number, issue date/review date, and be appropriately paged. A copy of all relevant documentation must be available where the QMS is being controlled. Obsolete documents must be effectively rescinded.

F. Records

Group records must demonstrate effective control of the GAPs QMS requirements and compliance and kept for a minimum period (often three years). Such records must be genuine, legible, stored and maintained in suitable conditions, and accessible for inspection.

G. Complaint Handling

A system for effectively managing customer complaints is essential. This must be through a documented procedure that describes how complaints are received, registered, identified, investigated, followed up and reviewed. The procedure must be available to customers, as required.

H. Internal Audits and Inspections

The internal audit system in place must both assess the adequacy and compliance of the documented QMS and inspect the producers and farms against the GAP standards. Internal auditors must comply with the GAP requirements set for an internal group auditor, be suitably trained and independent of the area being audited. The GAP QMS must be audited at least annually. Records of the internal audit plan, audit findings, and follow-up on corrective actions resulting from an audit must be maintained and available.

I. Producer and Production Location Inspections

An internal inspection system must be in place to inspect the producers and farms against the GAP standards. Internal inspectors need to comply with the GAP requirements set for an internal group inspector and inspections carried out at each registered producer and production location at least once a year. Review of inspection reports and producer status must take place. New members of the group must always be internally inspected before admitting them into the GAPs registered producers list.

J. Non-Compliances and Corrective Action Systems

A procedure to identify and handle non-compliances and corrective actions which may result from internal or external audits and/or inspections, customer complaints or failures of the QMS must be in place.

K. Product Traceability and Segregation

Products meeting the requirements of GAPs standard and marketed as such must be traceable and handled in a manner that prevents mixing with non-GAPs approved products. This must be a documented procedure for the identification of registered products to enable traceability of all products, both conforming and non-conforming to the applicable production sites. A mass balance exercise needs to be carried out to demonstrate compliance with the legal entity.

L. Sanctions and Non-Conformance

The group must operate a system of sanctions and non-conformance with their producers that meets GAP requirements in individual contracts. Records must be maintained of all sanctions, including evidence of subsequent corrective actions and decision-making processes.

M. Withdrawal of Certified Product

There must be documented procedures in place to effectively manage the withdrawal of registered products as well as procedures that identify the types of event which may result in a withdrawal, persons responsible for taking decisions on the possible withdrawal of product, the mechanism for notifying customers and the GAP's approved certification body and methods of reconciling stock.

N. Subcontractors

Any services subcontracted to third parties must be carried out in accordance with the requirements of the GAPs standards.

O. Internal Producer Group Inspector/Auditor: Formal Qualifications

Internal inspectors' qualifications and experience must be verified for each sub-scope by the producer group, e.g. at least a post-high school diploma in a discipline related to the scope of certification (crops and/or livestock and/or aquaculture) or an agricultural high school qualification with a determined number of years of experience in the relevant sub-scope after qualification.

P. Technical Skills and Qualifications

The internal inspector needs to have taken a practical inspection course setting out basic principles of inspection (internally carried out by the group) and follow two inspections (accompanying an audit or shadow audits by the certifying body). Where there is more than one internal inspector there should be records of shadow audits between them. The internal inspector should comply with the following requirements:

- Training in QMS/HACCP principles either as part of formal qualifications or by the successful completion of a formal course based on the principles of Codex Alimentarius;
- Food hygiene training either as part of formal qualifications or by the successful completion of a formal course;
- For crop audits: plant protection, fertilizer and IPM training either as part of formal qualifications or by the successful completion of a formal course;
- For livestock and aquaculture audits: basic veterinary medicine and animal production training, including animal health and welfare issues.

While it has been emphasized earlier that the implementation of GAPs is a business cost, the fact remains that implementation of the full standard more often than not improves business efficiency and crop yields reduces input costs and most certainly improves long-term sustainability.

Many farmers have introduced versions of conservation tillage into horticultural crops (the practice is well established in field crops). The aim of these farmers has been to restore soil microbiology and from a bacterially dominated one under conventional tillage (Figure 3) to a fungal/animal-based forest soil (Figure 4).

Terraces in Kathmandu valley showing typical soil profile and evidence of gulley erosion (background)

Forest soil in the Kathmandu valley showing typical organic matter in upper profile and well structured upper horizon

The techniques were originally developed in temperate farming systems in Europe and North America, but the system has been successfully introduced into tropical and subtropical soils and farming systems in South Africa and Mozambique.

The results are that soil carbon and accompanying biodiversity have increased, together with other benefits such as increased soil water infiltration, reduced soil-borne diseases (fungal, bacterial, and nematode), reduced need for agrochemicals and fertilizers, and increased crop yield.

NTIS 2010

Appendix 8
NTIS Technical Committees

Thus far, five NTIS TCs have been established under the National Steering Committee to facilitate its work and the implementation of the NTIS. The focus and composition of the TCs may need to be revisited and amended in light of the priorities identified in NTIS 2010.

TC 1: Agriculture, Agro-industry, NTFP, and SPS

Chair/Lead Ministry: Ministry of Agriculture and Co-operatives

Members:
- Ministry of Forests and Soil Conservation
- Ministry of Industry (MoI)
- Ministry of Commerce and Supplies (MoCS)
- Private Sector (AEC, FNCCI)

TC 2: Private Sector Development (Manufacturing, SMEs, SEZ/EPZ and TBT)

Chair/Lead Ministry: Ministry of Industry

Members:
- Ministry of Finance (MoF)
- MoCS
- FNCCI
- CNI
- Federation of Nepal Cottage And Small Industries FNCSI

TC 3: Legislation and Intellectual Property Rights (IPRs)

Chair/Lead Ministry: Ministry of Law

Members:
- MoI
- Ministry of Culture
- MoCS
- Nepal Bar Association

TC 4: Services and Taxation

Chair/Lead Ministry: Ministry of Finance

Members:
MoI
MoCS
- Ministry of Tourism and Civil Aviation
- Ministry of Education
- Ministry of Health and Population
- Nepal Rastra Bank
- Nepal Bar Council
- Nepal Medical Council
- Nepal Telecommunications Authority
- Insurance Authority
- Chartered Accountant
- Computer Association of Nepal

TC 5: Cross-Cutting Issues and Trade-related Infrastructure Development

Chair/Lead Ministry: MoCS

Members: Chairs of other TCs

Government of Nepal
Ministry of Commerce and Supplies

Kathmandu
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