

GENDER DIMENSIONS OF REGIONAL COOPERATION  
AND INTEGRATION IN SOUTH ASIA

# GENDER, TRADE AND GREEN GROWTH

VOLUME II



*October 2014*



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# Foreword

This report is the result of a year-long research project undertaken by UN Women. The main objective of the research is to collect and analyze evidence on the impact of increasing international and intra-regional trade on women in the green industries in four South Asian countries – Bangladesh, Bhutan, India and Nepal. This research, spanning four South Asian countries, includes rigorous analysis of secondary data complemented by detailed field based primary data collection from the women and organizations working in the green industries. The green industries that were pre-selected for a thorough sectoral review are: agriculture, renewable energy and ecotourism.

Volume I of the report presents the findings of the secondary data analysis and synthesis of the primary and secondary data. We find that increasing trade creates opportunities and challenges for promoting women's economic participation in the green industries. In the context of the post-Rio +20 world, the debate on economic growth – globally and nationally – now emphasizes green growth. Increasing trade, combined with a focus on green growth, presents important economic opportunities for increasing women's livelihood choices, income, employment, and as consumers, offers them access to goods and services. At the same, increasing trade and international competition also impacts women workers and entrepreneurs. Increasing global competition has the effect of driving down wages and increases the reliance on flexible, contractual work force forcing more women into the informal sector and increasing job insecurity. Greater competition also places demands on women farmers and producers for more intensive production and higher volume and turnover – often leading to an increase in women's work loads. Women small and medium business owners and entrepreneurs also face similar sets of challenges and opportunities. Limited mobility, market access, contact with buyers and access to credit are some of challenges faced by women business owners.

While the challenges and the opportunities faced by women farmers, workers and entrepreneurs are not dissimilar to those faced by men, they are different in the underlying factors that create these bottleneck and prevent women from taking advantage of the new income opportunities. Making the most of the opportunities would have tremendous forward impact on women's status and general empowerment levels. Providing women with skills that enables them to take advantage of the new opportunities in the green sectors, creating platforms for women's associations to organize and support women entrepreneurs and providing decent work conditions to women workers – has far reaching social impact on women's condition and allows them to integrate with export markets and utilize opportunities in the green sectors.

In Volume II of this report, we present detailed analysis of four industries/sectors that are regarded as green or 'close to green'. This includes an analysis of the horticulture and agro processing industry in Bangladesh; agro processing in Bhutan; renewable energy and organic horticulture in India; and ecotourism in Nepal. The focus in each study is to examine the pattern of women's employment in the relevant sector using information gathered directly from the field and from organizations – government and non-government – working on

women's economic empowerment. The case studies were undertaken at the country level but included site visits to factories and farms across the four South Asian countries, interviewing over 125 people working in the green sectors. The findings from the analysis of these interviews and sector specific analysis in the countries are presented in this volume. While the researchers were individually responsible for the contents of their case studies, the alignment of the research with the larger research project was the responsibility of UN Women.

Through the collective analysis presented in Volume I and II of this report, UN Women has identified strategies to promote women's participation and employment in the green sectors in South Asia. These recommendations are included in Volume I. The international development community and national governments are encouraged to consider this evidence as they formulate policies on intra-regional trade and green sectors, to ensure that the growth is not only green, but also gender inclusive.

**Shreyasi Jha**

Lead Author

Gender, Trade and Green Growth in South Asia Project

# Contents

Foreword	iii
<b>1 WOMEN'S PARTICIPATION IN HORTICULTURE AND AGRO PROCESSING INDUSTRIES AND EXPORTS IN BANGLADESH - <i>Maheen Sultan</i></b>	<b>3</b>
Executive Summary	3
Abbreviations	4
Introduction, Background and Objectives	6
Policies and Government Measures Concerning Regional Trade, Agriculture and Gender	10
Measures Taken to Promote Women's Entrepreneurship in Agriculture, Agricultural/Agro-processing Exports and Some of the Results Achieved	15
Assessing Patterns of Trade and Women's Participation in the Green Sector: Achievements and Constraints	25
Conclusions and Ways Forward – for the Region, Country and Sector	47
Bibliography	54
Annexes	57
Annex 1.1 Field Visits	57
Annex 1.2 Interviews Conducted	59
<b>2 GENDER, TRADE AND AGRO-PROCESSING IN BHUTAN - <i>Sonam Tobgay</i></b>	<b>65</b>
Executive Summary	65
Abbreviations	67
Background	69
Objectives and Rationale for Selection of the Green Sector	79
Methodology and Data Sources	80
Assessing Patterns of Trade and Women's Participation in the Green Sector	81
Impact of Regional Trade on Women's Participation in Green Growth Sectors	88
Integrating Gender in Regional Trade: Proposed Entry Points	91
Conclusion and Ways Forward	92
Annexes	94
Annex 2.1 Distribution of Agro-based Industries in the Top Seven Dzongkhags	94
Annex 2.2 List of People Interviewed	94

<b>3 GENDERING GREEN GROWTH: A DIALECTICAL ANALYSIS OF GENDER, TRADE, AND DEVELOPMENT IN INDIA - <i>Ritu Dewan</i></b>	<b>97</b>
Executive Summary	97
Abbreviations	99
Introduction	100
Background, Objectives and Rationale for Selection of the Green Sector	100
Selection of Study Region	104
Methodology and Data Sources	108
Assessing Patterns of Trade and Women’s Participation in the Green Sector: Macro Perspective	110
Assessing Patterns of Trade and Women’s Participation in the Green Sector: Micro Perspective Introduction	118
Ways Forward: Region, Country, Sector	128
Bibliography	135
Annexes	137
Annex 3.1 Number of Respondents Interviewed for Field Study	137
Annex 3.2 List of Sites Visited	138
<b>4 WOMEN’S PARTICIPATION IN ECOTOURISM IN THE ANNAPURNA (MUSTANG) REGION OF NEPAL - <i>Saloni Singh</i></b>	<b>141</b>
Executive Summary	141
Abbreviations	143
Introduction	145
Research Objectives and Questions	146
Literature Review	147
Gender and Trade	147
Green Growth and Ecotourism	148
Ecotourism as a Trade Sector	150
Current Scenario of Gender, Trade and Ecotourism in Nepal	152
Methodology and Data Sources	156
Research Findings	158
Summary and Ways Forward for Women in Ecotourism	165
Conclusion and Way Forward	165
Bibliography	167
Annexes	168
Annex 4.1 List of People Interviewed	168
Annex 4.2 List of Field Work Sites Visited	169

**BOXES**

Box 1.1	Creating Green Jobs	14
Box 1.2	Commerce Ministry for Export Subsidy to the Agro-processing Sector	19
Box 1.3	Strengthening Women's Entrepreneurship in South Asia Programme, Dhaka April 2014	21
Box 1.4	Shundari, Agricultural Producer	28
Box 1.5	Momtaz Begum, Ishordi, Salimpur Union, Bokthorpur Village	29
Box 1.6	Mallika, Agricultural Wage Labourer	30
Box 1.7	Selina Akhter, the Mushroom Entrepreneur	32
Box 1.8	Nurunnahar – A Nationally Renowned Entrepreneur	33
Box 1.9	Josna Begum Sub-lead Farmer with PRAN	34
Box 1.10	Parina, Factory Worker, Pran Natore	35
Box 1.11	Quality Production vs Marketing: Entrepreneur A	37
Box 1.12	Cosmetics and Herbal to Food Products: Fatama Amin	38
Box 1.13	Potato Growing and Exports: Selina Quader	39

**FIGURES**

Figure 1.1	Trends in Vegetable Production	41
Figure 1.2	Trends in Agro-processing Exports	41
Figure 1.3	Obstacles faced by Firms	42
Figure 1.4	Trade Engagement by Bangladeshi Enterprises	43
Figure 1.5	Minimal Trade to SAARC versus Other Regions	43
Figure 1.6	Constraints to Trade-Customs	44
Figure 1.7	Constraints to Trade: Theft and Spoilage	44
Figure 2.1	Basic Framework of Information	80
Figure 3.1	Horticulture Production (million metric tonnes)	114
Figure 3.2	Horticulture in India: Area and Production Over the Decades	115
Figure 3.3	India's Total Exports, 2001–2002 to 2012–2013	116
Figure 3.4	Exports of Fruits & Vegetables, and Processed Fruits & Juices, 2001–2002 to 2012–2013	117
Figure 4.1	Conceptual Framework	155
Figure 4.2	Study Area	158
Figure 4.3	Profile of Respondents by Sex	158
Figure 4.4	Gender Differential in Education	159
Figure 4.5	Gender Differential in Current Income	160
Figure 4.6	Perception about Gender Inequality in the Wage Rate	160
Figure 4.7	Gender Differential in Forms of Trade	161

Figure 4.8	Gender Differential in Ownership of Enterprise	161
Figure 4.9	Gender Differential in Position in the Value Chain	162
Figure 4.10	Participation in Ecotourism	162
Figure 4.11	Aware of Government Initiatives to Promote Ecotourism	163

### MAPS

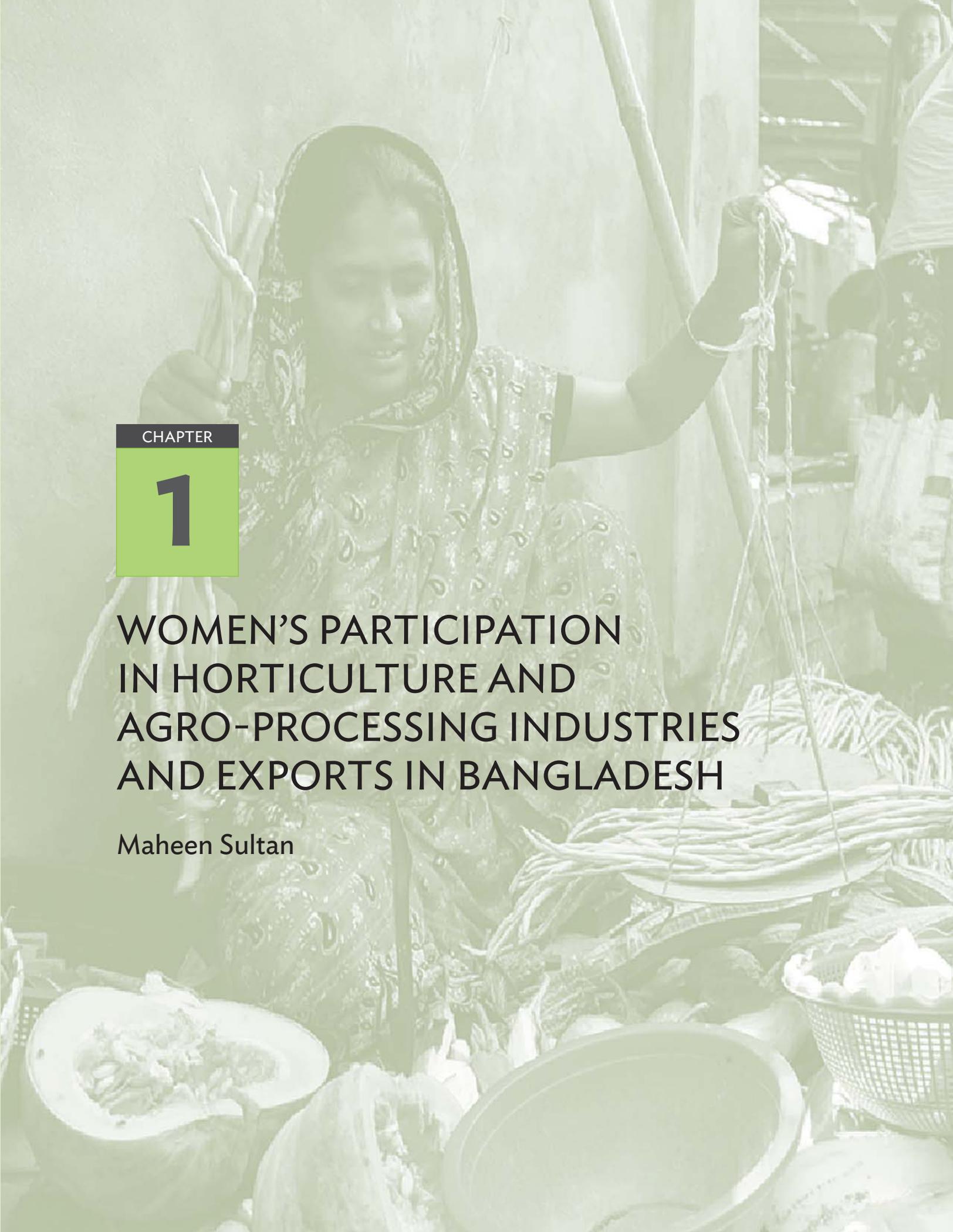
Map 3.1	Jammu and Kashmir	106
Map 3.2	Fieldwork Region: Leh-Ladakh	107
Map 3.3	Fieldwork Blocks	107
Map 3.4	Nubra Valley	108

### TABLES

Table 1.1	Labour Force Participation Rates over Time	26
Table 1.2	Employed Persons Aged 15 Years and Over by Broad Economic Sector 2010	26
Table 1.3	Persons Aged 15 Years and Over by Status in Employment	27
Table 2.1	Type of Agro-processing Industries Visited During Study Period	69
Table 2.2	Industry Classification by Employment Size and Investment and National Total of Cottage and Small Industry	70
Table 2.3	Employment by Job Type and Gender Distribution	72
Table 2.4	Total Sales in India and Bhutan, 2012 and 2013 (million Ngultrums)	73
Table 2.5	Yearly Production in Number of Units by Type of Products, 2012 and 2013	73
Table 2.6	Literacy Rate Disaggregated by Area and Gender (per cent)	76
Table 2.7	Average Gender Household Size by Area (urban or rural)	76
Table 2.8	Bhutan Compares with Neighbors on Gender Inequality Index and Sex Ratio	77
Table 2.9	SAFTA Trade Liberalization Program	81
Table 2.10	Direction of Trade Including Electricity, 2007–2011 (million Ngultrums)	82
Table 2.11	Overall Balance of Trade Including Electricity, 2005–2012	82
Table 2.12	Top Ten Country of Imports	83
Table 2.13	Top Ten Country by Exports	83
Table 2.14	Balance of Trade with Bangladesh	83
Table 2.15	Number of Women Employed in the Following Agro-processing Sectors	87
Table 2.16	Employment Category in the Surveyed Agro-processing Sectors	88
Table 2.17	Trade Flows, Fruits and Jams	89

Table 2.18	Exports and Imports Data from India for Processed Foods and Beverages, 2005–2011 (million Ngultrums)	89
Table 2.19	Exports and Imports Data Other than India for Processed Foods and Beverages, 2005–2011 (million Ngultrums)	89
Table 2.20	Urban Consumption Growth of Dairy Products, 2005–2015	90
Table 2.21	Percentage Distribution of Employment by Sex and Economic Activity	91
Table 3.1	Area Under Organic Agricultural Land (including in-conversion land), 2007–2012 (million hectares)	111
Table 3.2	Number of Organic Producers, 2007–2012 (millions)	112
Table 3.3	Distribution of All Organic Areas in SAARC, 2012 (hectares)	112
Table 3.4	Area Under Horticulture in India, 1991–1992 to 2006–2007 (million hectares)	113
Table 3.5	Decadal Growth in Horticulture: Area and Production	115
Table 3.6	India’s Total Exports, 2001–2002 to 2012–2013 (US\$ million)	115
Table 3.7	Horticulture Exports, 2000–2001 to 2011–2012 (US\$ billion)	116
Table 3.8	Exports of Fruits & Vegetables, and Processed Fruits & Juices, 2001–2002 to 2012–2013 (US\$ million)	117
Table 3.9	Workforce Participation Rates: Rural-Urban	122
Table 3.9A	Gendered Workforce Participation Rates: Rural-Urban	123
Table 3.9B	Gendered Workforce Participation Rates: Selected Villages	123
Table 4.1	Awareness About Government’s Initiatives to Promote Gender Equality	163





CHAPTER

1

# WOMEN'S PARTICIPATION IN HORTICULTURE AND AGRO-PROCESSING INDUSTRIES AND EXPORTS IN BANGLADESH

Maheen Sultan



# Women's Participation in Horticulture and Agro-Processing Industries and Exports in Bangladesh

## Executive Summary

The Bangladesh case study focuses on agro-production and agro-processing, regional trade and the involvement of women. Agriculture as a whole is an important sector for the national economy. Domestic demand is high as well as the potential and demand for exports, of both agricultural products as well as of processed goods. The emphasis on green agriculture began with the emphasis on sustainable agriculture which has been a longstanding priority with the use of organic fertiliser, integrated pest management and intercropping to increase soil fertility by natural means. Agro-processing is part of manufacturing which accounted for 17.9 per cent of the national GDP. Agro-processing accounted for 4.7 per cent of the GDP, with only leather, textile and clothing accounting for more (7.9 per cent). In terms of contribution to employment manufacturing, it accounts for 11.1 per cent of total employment of which agro-processing accounts for 1.1 per cent.<sup>1</sup> Only a small portion of the agro-processing is destined for exports (about 3 per cent<sup>2</sup> of GDP<sup>3</sup>). Women are involved at various stages of the value chain – from primary producers, to workers in the processing plants, and also as entrepreneurs. However, most women are found in the lower end jobs and the number of women entrepreneurs is limited.

The study has reviewed policy documents, programmatic and financial interventions, as well as export and production related data. Field visits to producers, entrepreneurs and agro-processing firms were carried out and various government, private sector and development related actors were interviewed.

The study found that women's involvement in agriculture has increased dramatically along with the commercialisation and intensification of agriculture. Women's involvement in agricultural marketing and enterprise is low but the efforts of various government agencies and development programmes are showing results. Also market forces along with social changes are bringing about changes in women's roles in both the social and economic spheres. Women's own expectations of themselves, their family expectations and society's expectations are changing and they are taking on more visible roles in both agricultural production and marketing, including exporting. While the marketing and entrepreneurship roles by women in the rural areas are still weak the potential is obvious. The more established agro-processing firms and agro-export businesses run by women (as also the extent of women in the workforce) based in the urban areas is an even stronger indication that agro-processing and trade can involve and benefit women. Although regional trade is much lower than trade with other regions, it is acknowledged by all that there is tremendous potential to expand this.

In conclusion, given the right conditions and support, it is possible for women to play a key role in leading and being a part of the growth of agro-processing and agro-exports that are green and which will in turn also promote the interests of women in terms of employment, earnings and substantive contribution to the national economy.

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<sup>1</sup> BBS 2005/6 data

<sup>2</sup> Source: Comtrade quoted by ILO.

<sup>3</sup> BBS 2005/6 data

## Abbreviations

ADB	Asian Development Bank
ADP	Annual Development Programme
ADR	Alternative Dispute Resolution
AIDS	Acquired Immunodeficiency Syndrome
BARI	Bangladesh Agricultural Research Institute
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BCS	Bangladesh Civil Service
BFVAPEA	Bangladesh Fruits, Vegetables and Allied Products Exporters Association
BOPMA	Bangladesh Organic Producers and Manufacturer Association
BWCCI	Bangladesh Women's Chambers of Commerce and Industry
ccGAP	Climate Change and Gender Action Plan
CFA	Clearing and Forwarding Agent
CWCCI	Chittagong Women's Chambers of Commerce and Industry
DAE	Department of Agriculture Extension
DCCI	Dhaka Chamber of Commerce and Industry
EPZ	Export Processing Zone
ETP	Effluent Treatment Plant
FBCCI	Federation of Bangladesh Chambers of Commerce and Industry
FI	Financial Institutions
FY	Fiscal Year
GAP	Gender Action Plan
GDP	Gross Domestic Product
HVC	High Value Crops
ICT	Information Communication Technology
IFAD	International Fund for Agricultural Development
IPM	Integrated Pest Management
LDC	Least Developed Countries
LFP	Labour Force Participation
LFS	Labour Force Survey
MCCI	Metropolitan Chambers of Commerce and Industry
MoC	Ministry of Commerce
MoE	Ministry of Environment
MoF	Ministry of Finance
MoI	Ministry of Industry
MoP	Ministry of Planning

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MoWCA	Ministry of Women and Children Affairs
NAP	National Action Plan
NBFI	Non-bank Financial Institution
NCDP	Northwest Crop Diversification Project
NGO	Non Government Organization
NTB	Non-Tariff Barriers
SAARC	South Asian Association for Regional Cooperation
SCDP	Second Crop Diversification Project
SFYP	Sixth Five Year Plan
SME	Small and Medium Enterprise
SPD	Special Programmes Department
UN	United Nations
UNDP	United Nations Development Programme
WTO	World Trade Organisation

## Introduction, Background and Objectives

### Background to the Study and Objectives

The study is part of a larger research project undertaken by UN Women looking at the linkages between international trade, green industries and gender equality in Bangladesh, Bhutan, India and Nepal. The Bangladesh case study focuses on agro-production and agro-processing. Agriculture as a whole is an important sector for the national economy. Domestic demand is high as well as the potential and demand for exports, of both agricultural products as well as of processed goods. The emphasis on green agriculture started with the emphasis on sustainable agriculture which has been a longstanding priority with the use of organic fertiliser, integrated pest management and intercropping to increase soil fertility by natural means.

In terms of horticulture exports it is known that the US and Europe are a strong source of demand. In terms of agro-processing it is also known that they are the primary markets but there is also trade in the region between the South Asian countries.

Agro-processing is part of manufacturing which accounted for 17.9 per cent of the national GDP. Agro-processing accounted for 4.7 per cent of the GDP, with only leather, textile and clothing accounting for more (7.9 per cent). In terms of contribution to employment manufacturing, it accounts for 11.1 per cent of total employment of which agro-processing accounts for 1.1 per cent.<sup>4</sup> Only a small portion of the agro-processing is destined for exports (about 3 per cent<sup>5</sup> of the GDP<sup>6</sup>).

Women are involved at various stages of the value chain – from primary producers, to workers in the processing plants, and also as entrepreneurs. However, most women are found in the lower end jobs and the number of women entrepreneurs is limited.

Some of the reasons for the selection of horticulture and agro-processing exports are as follows:

- It has been identified by Government and other enterprise development programmes as a strong growth sector
- It contributes to export diversification
- There is a strong potential for direct and indirect employment creation
- There is scope to build the capacity and skills of the workers
- The export oriented firms have also shown a lot of innovation in terms of technology
- The Government, in order to promote the sector, is providing various tax and cash back incentives.

### Overview of Agriculture Production, Agro-processing and Exports

#### *Trends in Agriculture*

Bangladesh has achieved remarkable progress in agriculture since independence in 1971. Within the crop sub-sector, food grain, particularly rice crop dominated the country's

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<sup>4</sup> Footnote 1

<sup>5</sup> Footnote 2

<sup>6</sup> Footnote 3

agricultural scenario in terms of both cropped area and production, claiming a share of 74 per cent and 54 per cent respectively in 1996/97. There has, however, been a shift in the composition of agriculture over the past few years as indicated by a gradual decline in the share of crop agriculture and an increase in the share of non-crop agriculture. The cropping intensity increased from 148 to 181 per cent. Domestic demand is high as well as the potential and demand for exports, of both agricultural products as well as of processed goods. The emphasis on organic agriculture dates back to the emphasis on sustainable agriculture, a long standing priority with the use of organic fertiliser, integrated pest management and intercropping to increase soil fertility by natural means.

In view of the importance of the sector it has received policy attention and support. For over a decade, a wide range of policy reforms have been implemented. A few of these are privatization of input distribution, input and food subsidy, import liberalization and a broadening of the scope of private investment in agriculture. In recent years, the coverage of policy reforms in the agriculture sector has substantially expanded to include minor irrigation equipment, agricultural machinery, seeds and agricultural trade. However various challenges remain.

The Sixth Five Year Plan identifies the following key challenges in agricultural production:

- a. Dominance of cereal food production: The National Agriculture Policy, 1999, the National Agriculture Policy Plan of Action 2004, APB and other major crop sector policy documents mainly focus on food production, especially rice production, giving limited attention to non-cereal crops i.e. vegetables, fruits and flowers. As one would expect, policy prescriptions for input distribution and input levels, extension services, credit delivery and output marketing are directed towards major cereal food crops and rice.
- b. Inadequate progress with diversification and commercialization: The policy documents mention diversification and commercialization of agriculture as a common objective, but very little understanding is accorded to relative profitability of competing crops, physical and location specific conditions for non-crop enterprise, supply chain of high value products and provision for processing, storage and marketing activities.
- c. Lack of modern form of production, contract farming and value chain: The policies being reviewed conceive agriculture as an individualistic production system, although this is becoming economically and technically unfeasible for increasingly the large number of small and marginal farmers due to the rapid decline in the average farm size. An increase in the number of farms vis-à-vis a rapid loss of cultivable land is recognized in the documents, but there are no reflections on or contemplation about the emerging new forms of farming e.g. contract farming by the private sector for high value products like poultry, vegetables, aromatic rice, milk and so on.
- d. Absence of farm and non-farm linkages: The most conspicuous shortcoming of all the policy documents is their silence over the growing non-farm sector development. Even the most recent policy documents, such as the APB, avoid any analysis of linking the growth of farm productivity with the development of non-farm activities. In addition to the above mentioned issues, some other constraints in this sector are:
  - Absence of demanding technologies to cope with climate change
  - Unstable market price of agricultural products, which is a barrier for farmers to select crops for cultivation in the following season/year

- Very little stress on agro-based industrialization
- Depletion of soil health/soil fertility
- Unusual depletion of the underground water table
- Unwise development of infrastructures (dams, roads etc) blocking drainage
- Non-zonal based cultivation and lack of development of a market chain
- Overlapping of irrigation units with less command area, causing a huge loss of underground water and resulting in the depletion of the ground water table
- Overdose of chemical fertilizer by the farmer is a threat to soil health

### *Horticulture Exports, Agro-processing and Regional Trade*

In terms of horticulture exports, it is known that the ethnic markets i.e. Bangladeshis living in the US and Europe, are a strong source of demand. In terms of agro-processing, it is also known that Europe and the US are the primary markets but there is also trade in the region between the South Asian countries.

Agro-processing is part of manufacturing which accounted for 17.9 per cent of the national GDP. Agro-processing accounted for 4.7 per cent of the GDP, with only leather, textile and clothing accounting for more (7.9 per cent). In terms of contribution to employment and manufacturing, it accounts for 11.1 per cent of the total employment of which agro-processing accounts for 1.1 per cent. Only a small portion of the agro-processing is destined for exports (about 3 per cent).<sup>7</sup>

As discussed in the Sixth Five Year Plan (SFYP), Bangladesh experiences seasonal surpluses in several agricultural commodities of a perishable nature. Development of agro-processing facilities can prevent post-harvest losses and enhance farmers' income. "The agro-processing industries are at present in their nascent stage of development. Most of the technologies and facilities for handling, storage, processing and packaging of farm products and by-products are substandard and outdated as they cater primarily to the domestic market. There exists a considerable underutilization of capacity as well. The scope for privatization of support services such as research and extension is likely to remain limited". It is envisaged that agricultural research institutes like the BARI and BRRI will carry out research on technology development for agro-processing. Meanwhile, some technologies are already available with these institutes for the development and growth of agro-processing industries in the country. The process of supporting agro-business is to be continued and strengthened during the Sixth Plan period. For example the establishment of HORTTEX, a private board for horticulture promotion, is an important institutional development in this regard.<sup>8</sup>

### **Methodology and Data Sources**

The methodology of the present study consisted of the following:

- a. Identification and collection of key policy documents
- b. Identification and collection of relevant data
- c. Identification of relevant programme initiatives and collection of information from them/on them
- d. Identification and meeting with key associations:

<sup>7</sup> Source: Comtrade quoted by ILO.

<sup>8</sup> Ministry of Planning 2011: 17

- BAPA
  - BOPMA
  - FBCCI/CWCCI
  - BWCCI
  - Bangladesh Fruits, Vegetables and Allied Products Exporters Association (BFVAPEA)
- e. FGDs with women producers (2 in the South-West and 4 in the North-West)
  - f. Interviews with women producers: 12 (4 in the South-West and 8 in the North-West)
  - g. Interviews with women entrepreneurs (4)
  - h. Meetings with government agencies (5)
  - i. Meetings with key development partners (3)
  - j. Field visits to two geographic areas to meet producers, entrepreneurs, private sector agencies and government agencies

A total of 36 interviews were undertaken with 20 organisations and 12 interviews conducted with women producers and farmers at the field level. The list of interviews can be found in Annex 1.2.

The South-West and North-West of the county were chosen because a number of recent agriculture related interventions have been undertaken there by both the Government and NGOs; these were also areas which had previously had less agricultural production and diversity.

### *Documents Collected*

There is a great deal of documentation available. Annex 1.1 contains a list of what has been collected physically and through the internet (more than 50 reports), relating to the following categories, policy/data.

### *Data Analysis*

Both quantitative and qualitative data were used to elaborate the findings according to the main research questions and the outline decided for the case study report. The notes of interviews and FGDs were written up and analysed. The policy documents have been reviewed and comments prepared. National statistics were analysed to bring out trends in production, export and employment. Government circulars and guidelines were analysed to see how far they address the needs of women, small producers/exporter and regional trade. Secondary documents were reviewed to synthesize various agency and programme experiences on the promotion of agribusiness and agro-processing, women's involvement and exports. This was compared and contrasted with the findings of field visits and interviews.

Challenges included having incomplete and inconsistent data, scattered information, multiple agencies to deal with and making the linkages between micro and macro levels. Another challenge was the fact that the subject matter of the present study is intersectoral – it concerns agriculture, environment, trade, industry, finance and gender.

## Policies and Government Measures Concerning Regional Trade, Agriculture and Gender

Regional trade, agricultural export, agro-processing and women's participation falls at the intersection of a number of government ministries, agencies and policies. Firstly there are policies that concern agriculture; agricultural production, greening of agriculture, agricultural marketing and export and involvement of women in agriculture. Secondly there are a series of policies and institutions that are related to the development of enterprises and industries, both for local production and for export, which also promote women's involvement, and which seek to provide the necessary enabling environment including finances. Here too, the policies can and do seek to facilitate growth and industry that is environmentally sustainable. Finally, there are policies that are articulated in national plans and in the National Women's Advancement Policy which seek to address gender discrimination and promote gender equity. The present section will review the key policies in each of the areas mentioned above, as they relate to the present study.

### Perspective Plan: Vision 2021

The Perspective Plan and Sixth Five Year Plan emphasize food security, improving agricultural productivity and creation of employment in agriculture. The twenty-year Perspective Plan (Vision 2021) mentions that food security is a constitutional obligation. It recognizes that modern methods of production, including water resource management, high yielding drought and submergence resistant seeds, increase in land productivity through efficient irrigation, flood control and drainage, which are among the key factors in achieving a higher level of self-sufficiency in food production to feed the ever increasing population and to save foreign exchange for food imports. It is recognized that rural development should bring about poverty eradication and equity; agricultural non-farm industrial development; employment generation through SMEs; and rural empowerment.<sup>9</sup> "With about 19.8 million people in the rural labour force by 2021, the Government will need to create a framework conducive for the development of the rural non-farm sector through (a) business development; (b) escalating women's participation; (c) improving market access and infrastructure; (d) standardization and quality assurance of marketable products; (e) targeting vulnerable rural populations and scaling up their activities; and (f) increasing budget allocation to rural areas; and (g) implementation through a strong autonomous local government".<sup>10</sup>

### Sixth Five Year Plan: Accelerating Growth and Reducing Poverty (2011–2015)

There is a thrust on the promotion of economic growth by creating more employment opportunities in the manufacturing and organized service sectors and allowing a transfer of a large number of workers engaged in low productive employment in agriculture and the informal services sector of the economy to these higher income jobs.<sup>11</sup> However it

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<sup>9</sup> Ministry of Planning 2010: 52.

<sup>10</sup> Ministry of Planning 2011: 53

<sup>11</sup> Ministry of Planning 2011: 3

realises the need for balancing the process to enhance the income-earning opportunities of workers remaining in agriculture by raising land productivity and increasing diversification of agriculture production. "A strong agriculture remains fundamental to poverty reduction as well as for food security. With land becoming a binding constraint in view of the growing population and urbanization pressures, enhancing the productivity of land is a top priority". The Plan also mentions the need for agriculture diversification in both crop and non-crop sectors to promote the commercialization of agriculture and raise farm incomes.

The Sixth Five Year Plan recognizes that "within agriculture there is substantial scope to raise the farm produce yields per hectare and to diversify agriculture from lower valued-added production to higher value-added production. These improvements will allow farm incomes to rise while also stabilizing food prices for urban consumers.<sup>12</sup> The SFYP stresses that, "a faster pace of diversification is needed to raise farm incomes. The demand for higher value-added crops like fruit, vegetables, oil seeds, and legumes is much more income elastic than rice. Additionally, these products have export potential".<sup>13</sup> It is recognized that productivity growth in agriculture will require producing to scale, focus on quality and standards for export markets, and improvement in private trade logistics such as cold storage facilities. These are relatively more capital and skill intensive endeavors and without adequate institutional finance at affordable rates, this transformation of agriculture will be heavily constrained.<sup>14</sup>

Part Two of the policy states that given a receptive market and the right policy environment, Bangladesh could have a comparative advantage in certain high-value crops, including traditional fruits and vegetables. The future of non-rice crops will depend on the removal of a number of constraints that currently inhibit their expansion, including, comparatively the reduced attention given to the development of appropriate technology for non-rice crops and inadequacies of market infrastructure and services. Food processing e.g., pineapple canning, mushroom growing and dried food production also have considerable potential, provided quality control can be imposed. To ensure that their production and export potential are fully realized, the government needs to continue its current commitment to investing in manufacturing and infrastructure. (6<sup>th</sup> FYP Part – 2, Page 5–6).

## National Agricultural Policy

The Policy approved in 2013 has a separate section on women which recognizes women's contribution to agriculture and their role in household food and nutrition security. It outlines various measures to be taken to increase women's participation in production and marketing: "The Government will encourage participation of the rural poor women in production of crops particularly in agro-processing and agri-business activities so that they can improve their economic well-being. Women's participation in agricultural production system will be facilitated through access to agricultural technologies. And the Government will take steps to encourage women's participation in various extension programmes like training, farmers' rally and workshop" (2013: 18) The Policy recognizes the need to provide women access to agricultural credit and ensure non-discrimination in agricultural wages.

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<sup>12</sup> Ministry of Planning 2011: 49

<sup>13</sup> Ministry of Planning 2011: 51

<sup>14</sup> Ministry of Planning 2011: 52

The Policy also makes provision for the promotion of the private sector in agribusiness and exports: “The Government will provide technological support to private entrepreneurs and farmers to undertake agri-business activities. Enabling conditions will be created to expand local and overseas markets for agribusiness opportunities”. (2013: 11)

The importance of environmental and resource conservation are recognized as well: “The Government will promote modern eco-friendly technology and infrastructure for a safe and sustainable future. Integrated pest management (IPM) and integrated crop management (ICM) will be promoted for conservation of biodiversity and sustainable land and water management. Measures will be taken to restrict the conversion of agricultural land for nonagricultural purposes”. (2013: 12). Under the section on fertilizers it there is recognition of the need to restrict the use of chemical fertilizers and promote the use of organic ones. However there is no explicit mention of organic or green agricultural practices.

### National Export Policy, 2012–2015

The Policy formulated by the Ministry of Commerce seeks to encourage labour-intensive (especially female labour) export-oriented production. However, it pays more attention to the RMG sector as being intensive in the use of female labour but does not explicitly acknowledge the presence of the large number of women engaged in the agricultural sectors. Agro-products and agro-processed products are among the priority sectors identified along with footwear and leather products; pharmaceutical products; ocean going ship building industries and tourism industries. Although, the agro-products and agro-processed products sector is recognized as one of the Highest Priority Sectors, it lacks an exact plan of action, unlike the RMG, Leather, Pottery, Jute, Tea, and Frozen Fish sectors, for example, which have specific action plans. Also there seems to be more focus on vegetables and fruits relative to agro-processing.

The policy provides for benefits and facilities to be provided to these sectors, such as: project loans at reduced interest rates; income tax rebates and possible financial benefits or subsidies consistent with the WTO Agreement on Agriculture, and Agreement on Subsidies and Countervailing Measures; providing export loans at lower interest rates on soft terms ; air transport facilities at concessionary rates ; duty draw-back/ bond facilities; facilities for setting up backward linkage industries, including infrastructural development for reducing the cost of production; expansion of institutional and technical facilities to improve and control quality of products; assistance in production and marketing; assistance in exploring foreign markets; and necessary initiatives to attract foreign investments. For example, it is envisaged that a reduced air fare for the export of specially privileged products, including fruits and vegetables, will be provided by the Biman Bangladesh Airlines.

Agricultural farms, of at least five acres, will be provided with venture capital facilities to encourage production and export of vegetables, fruits, fresh flowers, orchids among others. The establishment of cool chains will be encouraged to prevent quick putrefaction of the products. In this regard, import of reefer vans and reefer containers will be encouraged. For the export of agro and agro-processed products, special arrangements by the railways, roads, and water ways will be made available for domestic transportation.

The Export Policy also specifies that contract farming will be encouraged for the production of exportable vegetables. Government Khas (Government owned) land, if available, will be allotted to interested exporters for the production of vegetables and fruits. Besides, the

establishment of export villages will be encouraged; as will the production of modern and scientific packaging materials necessary for the export of vegetables, foliage and fruits. The Policy also mentions that in order to encourage female entrepreneurs in the export sector, female CIPs (Commercially Important Persons) will be selected and the best female entrepreneurs will be awarded an Export Trophy annually.

## National Environment Policy of 2013

The National Environmental Policy is of great importance while considering agro-processing and green growth. It includes a section on agriculture where it is stated that environmentally sustainable agricultural development and management is necessary to attain food security. It identifies the need to reduce agricultural pollution and promote organic farming. The use of chemical fertilisers and pesticides is to be controlled and reduced. Environmentally friendly technologies and products are to be promoted. In order to maintain the fertility of the soil and safeguard the environment, organic fertiliser is to be used and organic wastes used to produce electricity (2013; 9-10). The Policy also deals with water resources, forests, housing, hill systems, fisheries, industries and ecotourism.

The Government, recognizing the challenges of climate change, environmental degradation and the role of women in natural resource management, has developed several policies and mechanisms to deal with them, which include both adaptation and mitigation measures, keeping in mind the roles and needs of both women and men. The Bangladesh Climate Change Strategy & Action Plan, (BCCSAP) 2009, includes specific action on Strengthening of Gender Considerations in Climate Change Management. Gender equality and enhanced sustainability is included in the objectives of the Action Plan. The Draft National Environment Policy 2013 has incorporated women's roles and benefits in the relevant policies and plans.

The National Report prepared for Rio Plus 20<sup>15</sup> reviews the progress made and challenges in terms of achieving sustainable development. It highlights the challenges faced by the country due to a large population, different vulnerabilities, climate change and poverty. While it recognizes the importance and the international consensus on the need to promote sustainable development and "green growth" it also stresses the limitations of how far developing countries with population and food security challenges will be able to afford and ensure green technologies and green economies where more economically advanced countries have not done so: "LDCs like Bangladesh will be careful about committing to any global Green Economy agenda that has the slightest chance of turning into a bane for development though the imposition of tariffs and other barriers to trade and pursuit of other economic activities" (2012: 3).

The Report notes that in spite of increased awareness, the private sector does not give much attention to corporate social and environmental responsibility (2012: 21 and 34). It also analyses the environmental impact of changes in agricultural cropping patterns and technological changes, such as the increased production of high-yielding and irrigated rice resulting in increasing costs of production; and the increased use of energy in the form of nitrogenous fertilizer (mainly urea produced from domestic natural gas) as well as in terms of electricity and diesel in irrigation. Crop diversification efforts have resulted in wheat and maize becoming major crops. The production of fruits, vegetables and spices has also been intensified and expanded through the use of better seeds, fertilisers and pesticides. It

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<sup>15</sup> Ministry of Environment and Forests, Government of the People's Republic of Bangladesh 2012

recognizes that exports in agricultural goods and processed goods are growing and there is potential in that area. Equally, it acknowledges the possibility of having more “green jobs” related to these sectors.

### Box 1.1 Creating Green Jobs

“**P**rovided appropriate technologies are available, green jobs can be created in such sectors as rice, fruits, spices, flowers, high value vegetables, fishery, livestock rearing, community protected forestry, and other natural resource management activities. Growing more fruits, spices and flowers and high value crops like vegetables can create green jobs. Aqua culture, both in urban and rural areas, can also bring green self-employment for many people if they are imbued with the necessary knowledge and skills. Creation of water reservoirs to meet water shortages and fresh water fisheries can be another green economic activity. Community based social forestry schemes and biodiversity protection will also fall under green jobs. Off-farm activities like food processing, packaging, distribution, transportation and marketing has further scope for green jobs. Waste collection, sorting, recycling and reuse can also create green jobs. Compost making from bio-waste has the potential for not only green jobs for women but also the production of organic fertilizer for crops and plants as some piloting has shown. Small scale rural enterprise development, which use natural resources optimally, while reducing energy use or reducing carbon emissions, can also be considered as green enterprises.

Development of industries for food processing will not only reduce wastage of perishable crops, but will also add value to the food and open up prospects for exports. Cultivation of more jute, tea and spices will open up prospects for green jobs in the agriculture sector. Fish processing has enormous prospects both in domestic and external markets”. ✂

(Ministry of Environment and Forestry, 2012: 79)

## Policies and Programmes of the Central Bank for Green Growth and Development

Banking and the financial sector are one of the major economic agents. The Bangladesh Bank (BB) had developed a policy guideline for introducing green banking as a response to environmental degradation.<sup>16</sup> The guideline had three phases. In the first phase, it suggested that all banks develop green banking policies and establish separate green banking cells and incorporate environmental risk management strategies by June 30, 2011. In the second phase, the guideline suggested that banks adopt specific policies by June 2012 for different environmental sensitive sectors such as agriculture, poultry, dairy, farming, etc. During this period, all banks set up green branches to use maximum natural light, renewable energy, energy saving light bulbs and other equipments. According to the guidelines, banks must adopt a Green Strategic Plan, determining their target for green banking. The guideline specifies that a system of environment management should be in place in all banks before they step into the third phase of green banking, to be completed by June 2013. At this final stage, banks will focus on fine-tuning their green activities and look for more innovative products and services to expand eco-friendly business and industries. This has been extended up to 2015.

<sup>16</sup> On February 27, 2011 Bangladesh Bank issued BRPD Circular No.02, and bank also issued BRPD Circular Letter No. 07 on July 22, 2012. These two circular are the major documents background documents regarding “Green Banking” in Bangladesh.

While commercial banks have responded by financing effluent treatment plans, solar energy and also biogas plants, the integration of green banking into agricultural production or agro-processing is less clear. Also, it falls under the purview of agricultural credit within the Central Bank where the environmental measures are more complex.

## National Women's Policy and Action Plan

The National Women's Policy of 2011 does not explicitly deal with women and agro-exports or agro-processing. However, it does emphasize the importance of developing women entrepreneurs through providing capacity building and credit measures and recognizes the need to address women in the provision and development of technology. With regard to women and agriculture, it mentions the need to recognize the participation and contribution of women in agriculture and the effect that climate change has on them. It also raised the issues of unequal wages for women agricultural workers and the need to ensure equal access to agricultural inputs and services.

The National Action Plan of 2013 has various proposals against these policy measures, such as: organizing annual agricultural fairs for women farmers; organizing pre-budget consultations with female farmers; creating organizations for women agricultural labour; providing loan and technical support to women to establish agriculture based industries and providing agricultural information in the Bangla version through mobile phone for women agricultural labourers.

The policy commitments concerning environmental measures, promotion of green growth, promotion of exports, and development of entrepreneurship are all very encouraging. An earlier criticism of the various policies not being consistent with each other (DCCI 2005) has been dealt with; the agriculture policy promotes export of products and processed goods and the export policy has measures identified to facilitate such exports. However, without mechanisms and resources to implement the policy measures, these policy commitments will remain only on paper and the reality on the ground will not be touched.

## Measures Taken to Promote Women's Entrepreneurship in Agriculture, Agricultural/Agro-processing Exports and Some of the Results Achieved

Besides the policy statement and measures discussed in the last section there are a number of implementation level interventions which have sought to facilitate agro-product and agro-processing exports and women's involvement. This chapter will discuss financial measures, such as, budget allocations, credit lines, export incentives and credit for women entrepreneurs. Section 5.2 will review a few interventions taken to develop women's entrepreneurship and Section 5.3 will review the role of a few selected associations. Finally, a few projects active in the area of agricultural enterprise and exports will be discussed.

## General Interventions

### *Financial Measures*

The yearly budget speeches were analyzed for the period 2009 to 2014 as they set out the financial measures that the government takes for various sectors, including credit and tax measures. It may be noted that the agricultural credit allocations are made annually as are allocations for agricultural research. Various tax measures are taken, such as setting the VAT, export subsidies, and duty rates. These have sought to promote the growth in production and the export of agricultural products and processed goods.

The *Budget Speech for 2009–2010* declared subsidies for fertilizers and other agricultural inputs to help the farmers and proposed the allocation of Tk. 3,600 crore as subsidy. The Government took 7 programmes and 6 projects for developing high yielding variety seeds at a cost of Tk. 280 crore, to be implemented by the BADC and the Agricultural Extension Department. It allocated Tk. 185.21 crore for agricultural research and agricultural rehabilitation assistance for maintaining the growth of crop production. A target was set to increase the agricultural loan from the existing Tk. 9,379 crore to Tk. 10,000 crore. It was proposed to continue with the zero tariffs on imports of fertilizer, seeds and major food grains and withdrawal of VAT on the imports of raw materials to produce pesticides to make pesticides easily available for farmers.

The speech recognized that agro-processing, which includes fruit processing, baby corn packing, fruit juice producing and the rubber industry, was among the important sectors that need special attention. Lozenges, energy drink, juice, chaanachur and biscuits manufacturing units were brought under the compulsory VAT registration irrespective of the annual turnover.

According to the *Budget Speech for 2010–2011*, it was proposed to allocate Tk. 412 crore for agricultural research in the last budget to develop high yielding varieties of crops and improved methods of production. A target was set to distribute agricultural loans of up to Tk. 12,000 crore. An allocation of Tk. 300 crore was proposed to expand irrigation facilities in the southern part of Bangladesh. An Agriculture Insurance Scheme was undertaken to provide the small and medium farmers with crop price support in the event of crop failure due to natural disasters; and steps taken to organize 'Farmers' Marketing Group' and 'Farmers' Club' throughout the country along with developing 128 agro-markets at the Upazila level and 30 such bazaars at the district level, to facilitate marketing of agricultural produce. As proposed, it sought to maintain the 0 per cent customs duty rate on commodities like rice, wheat, onion, pulse and edible oil, seeds, fertilizer, medicine and cotton. An exemption of VAT from meal of maize (manufacturing stage) and a withdrawal of VAT exemption from handmade biscuits and cake (manufacturing stage) was proposed. To protect public health, the supplementary duty was enhanced and the price slab of juice and fruit drink was re-fixed. Coconut oil, fruit jam and jelly and juice were brought under the compulsory VAT registration, irrespective of the annual turnover.

In the *Budget Speech for 2011–2012*, it was proposed to make an allocation of Tk. 4,500 crore for agriculture subsidy in FY 2011–2012 budgets. The target of agricultural credit disbursement was set at Tk. 13,800 crore. It sought to maintain a zero rate of import duty on rice, pulse, wheat, sugar, edible oil, onion, fertilizer, seeds, life-saving medicine and cotton. Regarding cash incentives and other facilities 10, 20 and 15 per cent cash incentives were put forward to support the export of jute, agro-processed and leather goods respectively. It was decided to rationalise the rate of tax deduction at source from all export proceeds to

1.5 per cent, instead of 0.40 per cent /0.50 per cent. It was declared that the processing of locally produced fruits and vegetables would get a tax holiday support.

In the *Budget Speech for 2012–2013*, an allocation of Tk. 6,000 crore was made for agriculture subsidy in the budget for FY 2012–2013. Incentives for maize and beet cultivation were provided (agricultural credit is being provided at only 4 per cent interest rate for corn cultivation). The target of agricultural credit disbursement was set for Tk. 14,130 crore. The import duty and VAT on edible sunflower oil was reduced. In order to rationalize the existing tax bases, it was proposed to (a) increase the tariff value of goods, such as, bricks, biscuits, cake, and juice to some extent in keeping with the market prices. In order to discourage tobacco, it was decided not to provide credit for tobacco cultivation. Further, a 10 per cent duty was proposed to be realized on tobacco export. Lozenges, biscuits, chana-chur, coconut oil, jam and jelly would have to pay VAT irrespective of their annual turnover.

In the *Budget Speech for 2013–2014*, it was proposed to allocate Tk. 9,000 crore as agriculture subsidy. In terms of taxes: the customs duty was increased from 12 per cent to 25 per cent for carnations, orchids, chrysanthemums, lilies and roses. This is a reflection of the promotion and recognition of flowers as high value crops. The supplementary duty was reduced from 30 per cent to 20 per cent for betel nuts (wrapped/canned up to 2.5 kg); the supplementary duty was waived from 100 per cent to 60 per cent for waffles and wafers, rusks, toasted bread and similar toasted products and sweet biscuits; the supplementary duty was increased from 0 per cent to 60 per cent for potatoes chips. This had the result of making local potato chips more competitive.

This clearly shows that there is no mentionable incentive to import capital machineries for agro-processing industries. It also makes it evident that the budget measures taken, promote the use of chemical pesticides and fertilizers. In some cases, it is obvious that the government is promoting the import of food products while similar products could be produced locally.

### *Credit lines for Enterprise Development and Agriculture*

The Bangladesh Bank has introduced a Refinance Scheme for the Agro-processing Industry with a fund of Tk. 100.00 crore vide ICD Circular No. 01, dated 04 November 2001. The total fund disbursed till March 31, 2010 was Tk. 91.16 crore through different Scheduled Banks and Financial Institutions. As of 31 March 2010, 8 banks and 12 financial institutions had signed a Participation Agreement with the Bangladesh Bank to avail of this refinance facility. Under this fund, the Bangladesh Bank provides the refinance facility through PFIs to different agro-based industries (as mentioned in the ACSPD circular letter 04, dated: 26 June 2008) to enhance the growth of agro-based and agro-processing industries.<sup>17</sup>

There are separate credit lines for Green Schemes:

- ADB Fund – Brick Kiln Efficient Improvement Project - 400 Mio USD, interest rate 18 per cent PFIS
- BB Fund – Biogas Plant, Effluent Treatment Plant (ETP), Hybrid Hoffman Kiln (HHK), Solar PV Module Assembling Plan, at 10 per cent interest = (banker customer relationship) – 30 PFI.<sup>18</sup>

<sup>17</sup> [http://www.bangladesh-bank.org/aboutus/dept/sme/agro\\_sme](http://www.bangladesh-bank.org/aboutus/dept/sme/agro_sme).

<sup>18</sup> Liza Fahmida in International Conference on Green Enterprises and Green Parks, Hydrabad India

For the development of the SME sector, the Bangladesh Bank has taken several policy initiatives and others necessary steps. Some of the important policy statements are as follows:

1. Issuance of Guidelines for financing the SME sector through Banks and NBFIs:
  - a) ACSPD Circular No. 01, dated 02/05/04 - Introduction of Refinance Scheme for Small Enterprise Sector to provide maximum 100 per cent refinance facilities for Small Enterprises (SEs).
  - b) ACSPD Circular No. 01, dated 02/05/04 and ACSPD Circular No. 02, dated 19/07/05 - Issued to encourage and boost the SME sector availing the ADB Fund.
  - c) ACSPD Circular No. 05, dated 04/05/08 - Issued with the following important terms and conditions:
    - Banks and NBFIs to inform the BB about their annual SME loan disbursement target.
    - 40 per cent of the total SME loan, must be given to SEs.
    - Setting up a dedicated desk for SME.
  - d) SMESPD Circular No. 02, dated 15/02/10 - Lower limit for SEs fixed to Tk. 50,000.00 instead of Tk. 2.00 lakh.
2. In the ongoing Five Year Strategic Plan of Bangladesh Bank, the SME sector has been given the most priority.<sup>19</sup>

The Central Bank is making allocations for agricultural production and exports. However, whether the credit provisions are adequate and are being used and whether women in particular are able to access and use their provisions, is another matter.

### *Export Incentives*

As discussed in Section 4 on policies and government measures, the Central Bank has provisions for export cash bank incentives for a certain number of products in order to encourage exports and reduce the costs for the exporters. A government circular was issued in 2005 by the Foreign Exchange Policy Department of the Bangladesh Bank on subsidies for agricultural and agro-processed products. It specified that for agricultural products 30 per cent of the net FOB price would be subsidised. For agro-processed products if 80 per cent of the inputs were local then 30 per cent of the FOB value would be subsidised; and if 70 per cent of the inputs were local then 20 per cent of the FOB value, would be subsidised. It also specified that the exporter also had to be the producer. The circular specifies that this subsidy is to cover handling, quality control and processing costs as provided for by the WTO.

The circular spells out the process through which the producer-exporter would apply for the subsidy to the dealer bank and the documents that would need to be provided. The circular mentions that the concerned product associations would play a role in certifying the authenticity of the request made. The payment is made in local currency once the foreign exchange has been remitted to the country. The request for the subsidy has to be made within 180 days of the payment by the foreign bank. A list of 60 products eligible for subsidies was approved by the circular.

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<sup>19</sup> Footnote 17

Subsequent to this circular, different product associations and producers/exporters have been lobbying to increase the list of products and also to allow exporters who are not producers to benefit from this scheme. Box 1.2 is a newspaper report on an endeavor to increase the scope of the circular.

### **Box 1.2 Commerce Ministry for Export Subsidy to the Agro-processing Sector**

*Commerce Ministry for export subsidy to the agro-processing sector*

Report by Asif Showkat Kallol in Dhaka Tribune, April 7, 2014<sup>a</sup>

Exports of most agro-processing products have not been receiving subsidy as they were not included in a Finance Ministry circular made in 2005 regarding subsidy recipients. The Commerce Ministry wants to provide subsidy to the exporters of the agro-processing sector to help them recoup their losses during political unrest last year. Commerce Minister Tofail Ahmed last week sent a letter to Finance Minister AMA Muhith, requesting him to take necessary measures in this regard. (...) The Commerce Minister's letter said the exporters under the Bangladesh Agro-Process Association were exporting 60 different types of items to more than 90 countries. The letter said the local agro-processing sector exporters suffered losses for different reasons including political unrest. Agricultural products and agro-processed food items get 20 per cent subsidy of total export while the cash incentive for potato export is 30 per cent.

According to the Export Promotion Bureau (EPB) statistics, agriculture products producers and exporters and vegetable and fruits exporters earned a total of \$5.23 crore in 2009–2010 fiscal year, \$5.92 crore in 2010–11 and 8.69 crore in 2011–12. The government disbursed Tk 1,604 crore during the last five financial years as cash incentives to the sector. On an average, the sector received Tk 300 crore every year. ✂

<sup>a</sup> <http://www.dhakatribune.com/commerce/2014/apr/07/commerce-ministry-export-subsidy-agro-processing-sector>

### *Support for Women's Entrepreneurship Development*

The Small and Medium Enterprise Policy 2005 gives special preference for women entrepreneurs and aims to accelerate the retention and promotion of women entrepreneurs. An objective of the Industrial Policy 2009 is to mainstream women in the industrialization process. The Policy also includes a strategy to undertake special measures to develop women entrepreneurship ensuring access to land and finance for business support services. Participation and development of women entrepreneurs has been given emphasis through various incentives and support mechanisms.

The Bangladesh Bank encourages all banks and FIs to provide loans to women entrepreneurs at a 10 per cent interest rate. A Dedicated Women Entrepreneurs Desk has been established in the SME and SPD of the Bangladesh Bank and all the banks and financial institutions have been directed to do the same. They have also been instructed to reserve 15 per cent of the total SME funds exclusively for women entrepreneurs. An amount of Taka 6.43 billion has been refinanced to Women Entrepreneurs until the end of June 2013 against 8,358 enterprises. In the first six months of this year, the Central Bank has refinanced Tk 842 crore in favour of 10,000 women entrepreneurs. Banks and non-bank financial institutions disbursed Tk 3,347 crore in favour of 41,695 women entrepreneurs last year.<sup>20</sup>

<sup>20</sup> Statement by Governor Bangladesh Bank in seminar on 31 August 2013 on <http://www.thedailystar.net/business/grassroots-women-entrepreneurs-awarded-for-excellence-38859> Star Business Report

The BB provides 100 per cent refinance to loans extended to women entrepreneurs. The highest interest rate chargeable on a women entrepreneur's loan has been set at the bank rate+ 5 per cent. Collateral free loans up to Tk.25,00,000 are being given against a personal guarantee by Banks and NBFIs.<sup>21</sup> For providing assistance to women entrepreneurs, an allocation of Tk. 100 crore was made for the Women Development Fund in the Budget for FY 2012–2013. This has also been done for the year 2013–2014 and 2014–2015. Against this allocation, a two-year programme at a cost of Tk. 10 crore has been taken up in the 2014 fiscal year for imparting training to women entrepreneurs.<sup>22</sup>

Forty Banks and Non-bank Financial Institutions availed refinance facilities of Tk 626.25 crore against financing to 8228 women entrepreneurs till 30th June 2013. The number of entrepreneurs in the manufacturing concern was 2886, 4004 in trading and 1147 in the service sector. The amount was Tk.180.03 crore in industry, Tk.345.41 crore in trade and Tk.84.99 crore in the service sector. Basically, women entrepreneurs are interested in getting more loans in the trading sector as opposed to the other two sectors, related to industrial and service concern. Banks and Non-bank Financial Institutions disbursed Tk 6680.39 crore against 57615 women entrepreneurs from Jan 2010–March 2013.<sup>23</sup>

The Bangladesh Women Chamber of Commerce and Industry has three projects with the Government of Bangladesh (Ministry of Finance allocations through the Ministry of Women and Children's Affairs), which are a part of the government allocation for women entrepreneurs:

- Women Entrepreneurship Development Training Programme from January 2013 to June 2014. Its goal is to “skill the women entrepreneurs in business selection, planning and management, skill in marketing and use of ICT and skill on access to finance and business accounting.”
- Women Entrepreneurs Skill Development Centre and Hostel Facilities Programme from September 2013 to June 2015. Its goal is “To train the women entrepreneurs in business management residentially and establish the centre as a permanent learning platform for women entrepreneurs.”
- Women Entrepreneurship Development Resource Centres from February 2014 to June 2016. Its goal is to “increase economic opportunities for women entrepreneurs through marketing their products and providing business information.”<sup>24</sup>

Similarly, the Federation of Bangladesh Chambers of Commerce and Industry (FBCCI) has a project with the Government (Ministry of Finance allocations through the Ministry of Women and Children's Affairs) through which: 12 computer training centres will be set up in 12 locations; a central web portal will be set up for marketing; training will be provided to women entrepreneurs in two products (beautification and garments cutting); 12 display centres to be set up in 12 districts; and local chambers will provide services to women entrepreneurs.<sup>25</sup>

Other institutions providing support to women entrepreneurs include, the SME Foundation, BSCIC, MIDAS, BMDC, BMET, BEF (Bangladesh Employers Federation) and others.

<sup>21</sup> Footnote 18

<sup>22</sup> SME section, Bangladesh Bank

<sup>23</sup> Footnote 18

<sup>24</sup> [http://www.bwcci-bd.org/index.php?option=com\\_content&view=article&id=82&Itemid=48](http://www.bwcci-bd.org/index.php?option=com_content&view=article&id=82&Itemid=48)

<sup>25</sup> Interview with M Rayhan, Consultant CWCCI and FBCCI

## Other International Initiatives on Women's Entrepreneurship

The South Asia Women's Entrepreneurship Symposium (SAWES), with support from The Asia Foundation and the US Department of State, was held in Dhaka in December 2012. The objectives of SAWES are to foster a South Asian regional network of women business associations and leaders to advance policies and share information; to identify opportunities for cooperation within South Asia and with their counterparts in Central Asia; and to support strategic projects in South Asia that will build the capacity of women's business associations and leaders, guided by priorities and recommendations from SAWES. The Foundation, implements follow-up activities and strategies agreed upon during the December 2012 Symposium. The project advances the New Silk Road Initiative, which aims to build regional economic integration and trade across South and Central Asia through development and implementation of an effective SAWES follow-on strategy that advances priority areas, identified by the Steering Committee and Symposium participants.

As a follow-up activity, the third "Strengthening Women's Entrepreneurship in South Asia," programme was held in Dhaka in April 2014. It brought together women entrepreneurs from Afghanistan, Bangladesh, India, Maldives, Myanmar, Nepal, Pakistan, and Sri Lanka and serving as a mechanism for women entrepreneurs to create cross-border linkages among themselves. The programme focuses on women's economic empowerment, and in particular women's access to finance and marketing. The three-day visit included discussions with and exposure to the leading Bangladeshi businesswomen and some of their enterprises. The speakers noted that, "women's role and participation in regional connectivity and trade has been far less than expected. The benefit of globalization and high growth rate has not been trickled down to society, they added".<sup>26</sup>

### Box 1.3 Strengthening Women's Entrepreneurship in South Asia Programme, Dhaka April 2014

"The State Minister, Meher Afroz said that as women have a lack of market accessibility, they have to sell their products through middlemen, and thereby are deprived of profit. She stressed on need-based training for women entrepreneurs. Rokia Afzal Rahman, President of the Dhaka Metropolitan Chamber of Commerce and Industry stated that "the scenario has changed in a great way, thanks to our rural women," as access to finance is at their doorstep and they do not need to go to formal banks. She said Bangladesh has success stories in micro-finance, as 20 million women are in micro-credit programmes, supporting another 100 million, and it has transformed rural women's life in a great way. Ms Rahman emphasized using information and communication technology (ICT) and internet to expand networking.

The speakers emphasized that with the rise of Asia, it was time for the Asian countries to cooperate and become an integrated market of their own. The Asian region is full of potentials, but there is a long way to go to take full advantage of all it has to offer and that the deepest challenges for South Asia are continuing inequality and prevailing poverty. Mr Hasan Mazumdar, Country Representative of TAF felt that the benefits of globalization and a high growth rate had not trickled down to society. "There have been improvements in education, sanitation, and infant and maternal mortality. But these improvements are slow compared to the overall economic growth."<sup>a</sup> ✿

<sup>a</sup> <http://www.thefinancialexpress-bd.com/2014/04/02/26553>

<sup>26</sup> <http://www.thefinancialexpress-bd.com/2014/04/02/26553>

Organizations from the three countries involved in South Asia Women's Entrepreneurship Development Project recently launched in Sri Lanka as the follow-up to the Symposium, undertook a regional exchange visit to Dhaka in August 2014. They paid a visit to the State Minister for Women and Children Affairs, Meher Afroz Chumki on August 21, 2014, who assured women entrepreneurs of all possible assistance to promote cross border trade and entrepreneurship. This project is also supported by USAID and implemented by TAF.<sup>27</sup>

Although there are no statistics on the numbers of women entrepreneurs<sup>28</sup> in any sector, it is clear that they are making a definite contribution to the national economy and have a greater role and visibility than before. They have become actors to be taken into account by business and trade bodies as well as by the Government. The various associations they have formed such as the BWCCI and the CWCCI, and their presence in the leadership of other associations such as the FBCCI and MCCI, have contributed to this.

### Producer Associations and their Roles

The product associations, such as the Bangladesh Agro Processors' Association (BAPA); the Bangladesh Organic Products Manufacturers' Association (BOPMA); and the Bangladesh Fruits Vegetables and Allied Products Exporters' Association have a role in representing the interests of their members to the Government and negotiating for privileges; in the case of BAPA and the Potato Exporters Association, they also certify exports and process the export cash back incentives for the members, for which they get a small share. Each of these associations is also promoting recognition by external markets and the government of the value of their sector/sub-sector. They collect data on exports and destinations and also on their members.

According to the President of the Bangladesh Organic Products Manufacturers Association (BOPMA) the Bangladeshi organic food has a huge market overseas, which includes Japan, EU, UK, Germany, Singapore, South Korea etc. The major organic products are organic fertilizer, organic pesticide, linseed, black cumin, organic vegetables and fruits, soy food and various other food preparations. The main focus areas of the association are as follows:

- Bringing back the natural health of the soil
- Working to develop organic farming throughout the country

According to the President of BOPMA, he has been struggling to ensure recognition of the organic agricultural system since 2002. He has faced constraints, such as, the lack of interest of people for the organic movement both in the public and private sectors; lack of technical standards for inspection, verification, testing, certification and standardization; administrative delays and corruption; and lack of export facilities, which includes the lack of special cargo airbus for vegetable exporters.

The Bangladesh Women's Chamber of Commerce and Industry (BWCCI) and the Chittagong Women's Chamber of Commerce and Industry (CWCCI) have more promotional roles in terms of supporting women entrepreneurs. These include, providing training, linking women entrepreneurs with banks/credit lines, advocating with donors, chambers and the government, on their behalf.

<sup>27</sup> <http://www.thedailystar.net/city/meher-afroz-assures-women-entrepreneurs-of-all-out-help-38284>

<sup>28</sup> Interview with Ms Monowara Hakim Ali, First Vice President FBCCI, August 2014

The roles and impacts of BAPA, the Potato Exporters Association, the BWCCI and the CWCCI come out clearly in the case studies collected. The costs of being isolated from such associations, is also clear in the following sections.

## Programmatic Interventions in Agro-processing

In order to understand where, how and why women are involved in agro-production and agro-processing, the study also looked at some of the measures taken to promote this. The following section reviews three programmatic interventions in particular relating to the promotion of agro-processing and its marketing and exports.

### Second Crop Diversification Project (SCDP)

This is a follow-on project to the North West Crop Diversification Project (NCDP) implemented in 61 upazilas of 16 districts of the North West region with funding from the Asian Development Bank (ADB) from 2001–2009. On the basis of its success, the Second Crop Diversification Project (SCDP) was approved to work in 52 upazilas of 27 districts of the Southwest and Northwest region for the period 2010–2016 with ADB and Government funding. Its objectives include: extending the area of high value crop production to 50,000 ha in the Southwest (SW) and Northwest (NW) region of the country; increasing marginal, small, and medium farmers' incomes through improved efficiency and value addition of High Value Crop (HVC) production to approximately 240,000 HVC producing households in the said areas; improving rural income opportunities for the poor, including women, by increasing around 18,000 person years of additional employment opportunities; empowering rural women in commercial agriculture activities, roughly by involving an additional 10 per cent women in the localities; enhancing food security, safety, and nutrition through a reduction of the post-harvest loss by around 10 per cent; provision of credit to deserving farm households; and strengthening institutional capacity in the agricultural sector through training and demonstrations. Since 2003/4, the ADB and the GOB decided that these projects should target 50 per cent women, adjusting the criteria for landholding accordingly, so that instead of legal ownership, operational control was emphasized (to allow women's participation).

The project outputs include: increased sustainable HVC production and commercialization; reduction of HVCs post harvest losses, improved product quality, value addition and enhanced market efficiency; enhanced capacity of public sector institutions and participating partners in supporting farmers to increase their incomes; and increased participation of women in commercial agricultural activities to promote and realise the concept of agri-entrepreneurs. While the NCDP laid a greater emphasis on import substitution, the SCDP is also promoting export related high value crops.

### *Horticulture Export Development Foundation*

The Horticulture Export Development Foundation, in short, the Hortex Foundation (HF) was established in 1993, by the Ministry of Agriculture, as a non-profit organization. It seeks to create opportunities for direct exporter-importer linkages to facilitate the export of fresh/frozen fruits and vegetables, value added processed agro-commodities, foliage (betel leaf) and spices, honey, aromatic rice, ornamental plants, flowers, mushroom, ayurvedic, herbal and medicinal products, fresh water fish (fresh, frozen and processed), Halal meat

and different dairy products. It renders services related to quality production, quarantine pest management, proper sorting, grading, packaging, cool chain management, sanitary and phytosanitary measures, market intelligence support, trial shipment and human resource development, with its limited resources.

Hortex seeks to promote the export of different high value high quality agro-commodities in the mainstream market of Europe and North America, in addition to the ethnic market. Some requirements to enter into the mainstream market are the adoption of the Good Agricultural Practice (GAP), traceability, strict compliance of sanitary and phytosanitary measures and good packaging. Hortex has already taken the initiative to formulate the GAP principles and protocols with the Ministry of Agriculture, Government of Bangladesh.

The Hortex Foundation works in close cooperation with the Ministry of Agriculture and its Allied Agencies like the Department of Agricultural Extension (DAE), the Bangladesh Agricultural Research Council (BARC) and the Bangladesh Agricultural Research Institute (BARI), the Ministry of Commerce, the Export Promotion Bureau (EPB), different agricultural universities and research institutes, the Bangladesh Fruits, Vegetables and Allied Products Exporters' Association (BFVAPEA), the Bangladesh Agro-Processors' Association (BAPA), different Farmers' Associations, Trade Bodies and Donor Agencies.

The Hortex Foundation completed various projects to promote exports in the sector with IDA credits and EU funding to deal with the regulatory and standard requirements for accessing fresh produce markets in the EU countries; as well as, requirements for the entrance of Bangladeshi fresh horticultural produce to the upstream markets in the United Kingdom and quality support. At present, the Hortex Foundation is implementing the Supply Chain Development Component (SCDC) of the National Agricultural Technology Project (NATP) activities in twenty upazilas of Bangladesh with interventions in the farmer-market linkage, minimizing post harvest loss, improving capacity building of different stakeholders and entrepreneurship development, primarily related to the domestic market. This component is being implemented since October 2008 with financial support from the World Bank, IFAD and the Government of Bangladesh, to improve the effectiveness of the National Agricultural Technology System for increased productivity of agricultural commodities and farm income in an effort to reduce rural poverty.

### *Katalyst: Making Markets Work for the Poor (MforP)*

Katalyst is a market development project that aims to contribute to increased income for poor women and men in rural and urban areas. It is under the MoC, supported by DFID, SDC and GIZ and implemented by Swiss Contact. It seeks to do this by increasing the competitiveness of farmers and small enterprises by facilitating changes in services, inputs and product markets. Katalyst's approach is based on the premise that enhanced private and public sector business services, coupled with an improved enabling environment, lead to more competitive enterprises, sustainable economic growth, and reduced poverty. It partners with a wide range of private and public sector intermediaries, who have either long-term business interests or a mandate to work in a particular sector.

Due to deregulation in agriculture, the private sector is assuming a greater role in the supply of inputs, training, extension services and marketing. The strategy of the Katalyst programme was to facilitate the private sector forces to work for the poor and women; the third phase is seeking to bring about systemic changes in the market so that it functions

more efficiently and reaches the poor as well. It has promoted the idea of product channels being information channels (Section 6.2.1 has accounts of women getting information on seeds and fertilizers from the suppliers). In partnership with market players, Katalyst designs and implements interventions to address the underlying market constraints. A key feature of these interventions is that they harness market incentives to encourage the reaching out to large numbers of beneficiaries and to ensure sustainability.

To work better with women, Katalyst had to identify where women were the most involved, such as homestead gardening, and identify interventions that would benefit them, e.g. smaller packets of seed so that individual farmers could use them instead of having to buy a kilogram packet of seeds. Katalyst has also promoted the approach of working with contact farmers, both women and men, among private sector firms (which is a part of the GOB's policies).

## Assessing Patterns of Trade and Women's Participation in the Green Sector: Achievements and Constraints

### Pattern of Women's Participation and Employment in Agro-processing

Women are entering the workforce in increasing numbers but their labour force participation rate still stands at 36 per cent while it is 82.5 per cent for men (Bangladesh Labour Force Survey 2010). There are various studies to suggest that access to new economic opportunities has had important implications for women's lives, expanding their social networks, increasing their voice and bargaining power in household decision-making and their mobility in the public domain. There is also evidence that, as in other regions of the world, there is a strong association between women's access to economic resources, such as income and micro-credit, and increased investments in children's health and wellbeing, often closing the long-standing gender gaps in these outcomes. The effects of these new opportunities have gone beyond the actual numbers of women who took them up. They served to make the idea of women as economic actors far more acceptable than it had been at any prior stage in the country's history.

Women's labour force participation rates are increasing faster than for men, leading to economists speaking of a feminization of the labour force. While there is some increase in the formal sectors there is a larger increase in the informal sector such as home-based work. A change in women's roles in the economic sphere are apparent – not only are they home-based workers or unpaid family labour, they are also paid workers in the formal sector, producers, entrepreneurs, managers/supervisors and owners/directors of private sector companies, large and small. According to the Global Gender Gap Report of 2013, 16 per cent firms have female participation in ownership, and 35 per cent women have an account in a formal financial institution as compared to 44 per cent of men who have similar accounts. However, only 1 per cent of firms have women as top managers. It also shows that the female-male ratio of legislators, senior officials and managers is 0.31 and the female-male ratio for professional and technical workers category is 0.28.

According to the LFS, women's labour force participation rate has increased from 26.1 in 2002/3 to 29.2 per cent in 2005/6 and 36 per cent in 2010. The male LFP however has

decreased slightly from 87.4 per cent in 2002/3 to 86.8 per cent in 2005/6 to 82.5 per cent in 2010. For both women and men, their LFP rates are slightly higher in the rural areas than in the urban areas. 23.4 per cent of the labour force was found in the urban areas and 76.6 per cent in the rural areas. The figures are roughly similar for women and men.

**Table 1.1 Labour Force Participation Rates over Time**

Labour Force Participation Rate (per cent) (refined activity rate)	2002–2003	2005–2006	2010
Total	57.3	58.5	59.3
Male	87.4	86.8	82.5
Female	26.1	29.2	36.0
<b>URBAN</b>			
Total	56.8	55.7	57.3
Male	85.1	83.2	80.2
Female	27.4	27.4	34.5
<b>RURAL</b>			
Total	57.5	59.4	60.0
Male	88.1	88.0	83.3
Female	25.6	29.8	36.4

Source: Labour Force Survey 2010(BBS)

In 1983/84 women were predominantly to be found in the service sector (62 per cent) with 8.9 per cent in agriculture. Interestingly this has changed and in 99/2000, 46.3 per cent were in agriculture, and only 17.7 per cent in services. The share of the industry sector declined between 83/84 and 95/96 but remained unchanged up to 2000, when it was of 21.2 per cent. Over the same period (83/84 to 99/2000) the female share of agricultural employment expanded from 1.3 per cent to 19.5 per cent; the female share in industry employment increased from 23.4 to 33.6 per cent and the female share of service employment rose from 17.7 per cent to 19.4 per cent. In 2010, for males the highest number (41.11 per cent) were engaged in the services sector, followed by agriculture (40.18 per cent) and industry (19.60 per cent). For women the highest number (68.84 per cent) were engaged in agriculture sector followed by the service sector (21.89 per cent) and the industry sector (13.32 per cent).

**Table 1.2 Employed Persons Aged 15 Years and Over by Broad Economic Sector 2010**

Sector	Total	Male (per cent)	Female (per cent)
Total	100	100	10
Agriculture	47.56 per cent	40.18 per cent	64.84 per cent
Non-agriculture	53.07 per cent	60.71 per cent	35.21 per cent
- Manufacturing	12.44 per cent	12.73 per cent	11.77 per cent
- Other industry	5.28 per cent	6.87 per cent	1.55 per cent
- Services	35.35 per cent	41.11 per cent	21.89 per cent

New agricultural technologies have increased the demand for female labour. The adoption of high yielding varieties of crop production has increased the workload not only in the fields but also in crop processing activities. It is mainly the women from landless or near landless households, who work as wage labour. Men are also moving out of agriculture, either migrating to urban areas or taking up non-agriculture related activities, with increasing productivity and returns from involvement in non-agricultural sectors.<sup>29</sup>

**Table 1.3 Persons Aged 15 Years and Over by Status in Employment**

Status of Employment	Total	Male	Female
Total	100	100	100
Regular paid employee	14.6	17.0	8.9
Employer	0.2	0.2	0.2
Self-employed (agri)	22.8	25.8	15.7
Self-employed (non-agri)	18.0	21.7	9.4
Unpaid family worker	21.8	7.1	56.3
Irregular paid worker	2.8	3.1	1.8

Another area showing gender differences is the status of employment. As shown by Table 1.8, the highest per centage of employed persons were self-employed in agriculture (22.8 per cent) followed by unpaid family workers (21.8 per cent) and self-employed in non-agriculture (17.97 per cent). Among men, the highest 25.6 per cent were self-employed in agriculture followed by self-employed in non-agriculture (21.5 per cent) and regular and paid employed (16.8 per cent). On the other hand, among women, as high as 56.2 per cent were unpaid family workers followed by self-employed in agriculture (15.7 per cent) followed by workers (23.1 per cent) and self-employed in non-agriculture (16.8 per cent).

The rate of growth of the unpaid family worker was much higher compared to the rate of growth of total labour force during the period of 1999–2000 to 2010. The annual rate of growth for the unpaid worker at the national level was 9.64 per cent, whereas the growth of the total labour force during the same period was only 3.37 per cent. In 2010, 11.8 million unpaid family workers were active in the labour market, whereas only 4.7 million was involved in 1999–2000. The unpaid female family worker increased at a significant rate (237 per cent) compared to male (only 35.0 per cent). Furthermore, the number of unpaid female workers in the labour market increased faster than male in both areas. The annual rates of growth of unpaid female work in both the urban and rural areas were 6.17 per cent and 6.81 per cent respectively for the period of 1999–2000 to 2010 (Unnayan Onneshan, 2013).

There are also an increasing number of women agricultural scientists graduating from Bangladeshi agricultural universities as well as increasing numbers of women joining extension services. This is an opportunity to provide enhanced support to women in agriculture. They also serve as role models to women undertaking production, business and trading in agriculture.

<sup>29</sup> As documented in the DFID supported study on “Hands Not Land” edited by Towfique and Turton.

## Women's Journey: Moving from Unpaid Family Workers to Producers and Entrepreneurs

Section 6.1 gave the overview of women's labour force participation from the national statistics. The following sections will present the findings of the field study as collected through interviews, focus group discussions, case studies and observations during field visits.

### Women as Producers and Contact Farmers

The FGDs and interviews held with women farmers and producers at the field level showed that they are fully involved in the family farm activities, and in some cases, they are the principal actors and decision-makers. They see themselves as farmers and others see them as farmers too. The various programmes are working with them directly, providing them training and credit. They have access to the DAE and NGO extension staff and also to the suppliers of inputs such as seeds, fertilisers and insecticides. The women involved are more educated than earlier generations, they have a greater role in decision-making and in some cases, the men in the family are absent (migrants) or busy with other livelihood activities. As a result of NGO and project credit being targeted to women, they are the entry points through which the families are able to increase their investments in agriculture. Most HVCs are "women friendly" and post-harvest activities are easily managed from home. Therefore, there is full family support for women to be engaged in these activities.<sup>30</sup> This is

#### Box 1.4 Shundari, Agricultural Producer



**S**hundari has three sons. In 2011, an NGO, Grameen Shakti, constructed a bio gas plant which cost Shundari and her family about 27,000 Taka. Shundari and her family use the plant for their personal consumption including cooking. Earlier, they had to use dung cakes and dry leaves for cooking. The family makes bio gas out of cow dung every day. Shundari feels that using bio gas is a much cleaner and cheaper option as there is less smoke while cooking. There is no accumulation of tar as well. She feels that although every household in the village should opt for a bio gas plant, not everyone has the means to buy one. ✂

*Participant of SCDP, Khulna, (Village)*

<sup>30</sup> Rokeya Khatun, 2009: 7.

used for working capital, setting up of bio-gas plans, or even larger scale investments, such as setting up nurseries or dairy farms (see Box 1.4, photo of Shundari). Section 6.1 has given the national statistics concerning women's involvement in agriculture and the increase of women's involvement along with a concomitant decline of men's participation in agriculture.

### Box 1.5 Momtaz Begum, Ishordi, Salimpur Union, Bokthorpur Village

**Momtaz Begum** is one of the beneficiaries of the Northwest Crop Diversification Project. When she first joined she had only 66 decimals of land where she used to cultivate Aaush and Aamon. But harvesting them was not profitable. Then she joined this cooperative, started getting loans from this organization and undertaking new high yielding crop cultivation – turmeric, cole, carrot, coriander and pumpkin. She received training at Chakmohor, Ishordi and worked with her husband in the field to save money. Now her husband is sick so she has to deal with all the family activities. Her son helps her in agricultural activities. Now she has an irrigation pump, a power tiller and a grain grinding machine. She is now running in loss because of the political unrest and the strikes the year before. Due to this, she failed to sell her product in Dhaka's market. When she loses she tries to make these up by producing another product. According to her, she is now in an economically better position but the losses of the previous year have made her weak. However, this year she is trying to overcome those losses. ✂

*Participant of Northwest Crop Diversification Project Pabna, Ishordi, Salimpur Union, Bokthorpur Village.*

### Opportunities for Paid Work

As a result of the increased intensity of cultivation there are periods of very heavy workload where women and men have to work long hours and families who have cultivated various crops cannot cope with their own family labour. They hire agricultural labour – women and men, and also are willing to hire neighbours to help with picking lentils or shelling peanuts by the kilo.<sup>31</sup> Therefore there is enough work as paid agricultural labour for women, although their wage rates are still lower than for men.<sup>32</sup> (see Box 1.6 and photo of Mallika)

### Increased Workloads: Time Poverty

Some crops need to be picked at certain times, e.g. the mung daal and coriander leaves before it gets too hot. So women get up at 5:00 am to finish the household work and then go to the fields for a few hours of picking at 8:00 am.<sup>33</sup> When asked whether children are kept out of school to help during peak seasons the women farmers responded that the children would help during their off days and after school hours.

In some product areas, such as, cut flowers, women's work starts in the late afternoons with cutting, continuing into the evening and night with sorting and packaging. The men then take the bundles to be sold in the early morning to the collection points from where the flowers are taken to the cities.

<sup>31</sup> Rates were of 2 taka per kilo of peanuts shelled and 10 taka per kilo of Mung daal picked, in Natore in May 2014

<sup>32</sup> A study in 2009 by Rokeya Khatun found that employment generation was not as much as expected. (2009:6)

<sup>33</sup> Interview with SCDP participants in Ishordi

### Box 1.6 Mallika, Agricultural Wage Labourer



**M**allika does not own any land. She works as a labourer and gets about 200 Taka a day depending on the season. She says that there is enough work for her during harvesting and she makes more money. On an average, she works for about 20 days in a month. ✂

The 2009, the Gender Study of NCDP also found that women's increased workloads were leading to time-poverty, although the family members are happily performing the various activities as they feel they are productively employed and earning more money.

### Marketing

Various projects have been able to set up sorting and storing facilities in central points where goods such as flowers and vegetables can be brought and sorted, before they are transported.<sup>34</sup> The study also found that with improved roads and transport facilities traders were able to come closer to the villages and fields to be able to collect the produce from nearer the homes. In the villages visited in Ishordi the SCDP participants explained that with the improvement in roads from herring bone roads to pucca roads, traders were able to come to the villages to pick up produce, which was easier for them and they got better prices than before. Better roads as enabling better (easier and quicker) marketing, was also mentioned by the SCDP participants in the South East.

However fewer women were found to be involved in the marketing of the produce. The reluctance to be involved in marketing was explained by the lack of security, the fact that it is a mainly male domain and also that it needs travel away from home. A NCDP study in 2009 had found that although more than 90 per cent of women respondents know about the various marketing mechanisms, most of them were dependent on male family members for sales or they would sell to traders and middle-men who would come to their homes or communities. Exceptions included some markets such as the "Boi Bazar" in Khulna, where the sellers and buyers are mainly women and where the women traders do collect the produce they sell from various places. (see Photo 3). Women however, are aware of

<sup>34</sup> For example the research found a flower packing and marketing centre set up by HORTEX, GOB; World Bank/IFAD for the Gothakhali Ful Chachi o Ful Baiboshahi Committee, at Jhirkorgacha Upazila in Jessore

the prices being paid locally and also in the larger markets. They are informed of the prices through the mobile phones or by male relatives who are traders.<sup>35</sup>

In the case of fruit cultivation visited in Magura, wholesale buyers would come and buy the fruits from entire gardens in advance. They would be informed by a phone call when the fruits were ready for picking.

### *Cash Incomes*

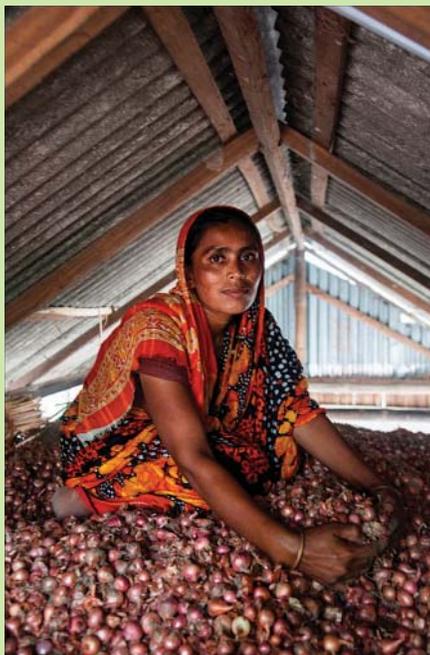
As a result of the commercialization of agriculture and the increased intensity of cropping, both women and men have more access to cash incomes. “Before, even middle class families would not have cash at home. They would have to sell land or crops to get cash. Now people have cash at home” (Mabia Begum, woman farmer, NCDP participant Ishordi). They also have to make greater expenditures for seeds, fertilizer, water, labour etc. Most of the women farmers knew the costs and rates for these inputs.

### *Dissemination of Information on New Techniques and Products*

Women and men are being familiarized with new seeds, new technologies, new processes and new cropping patterns. They are learning about these through the training provided by NGOs, the DAE, through TV programmes such as the famous “Mati o Manush” and also by agents of seed producers and fertilizer companies. A SCDP participant in Ishordi mentioned that the dealers of seeds also advertize their seeds through “miking”. While there is increased access



Gher Cultivation



Storing Onions

<sup>35</sup> Interview with SCDP participants in Ishordi

to technical information for those who are project participants, others who are no longer members of such programmes, continue to seek information and advice from others as well as from the TV, because as one of the participants said, “we are part of digital Bangladesh!”

An example of a new technique taught by the DAE and taken on by farmers was of ‘Gher cultivation’ in Jessore, which combines fish and fish cultivation with vegetable cultivation on the banks of the fields, which needs less space and fewer fertilizers and pesticides (See Photo 4). Another example involved the sorting and storage of onions in Khulna, where they were stored in the open air, in sheds with enough ventilation, enabling them to be preserved for longer periods without fear of spoiling, and which could then be sold later when the prices were higher (See Photo 5). Both these examples promote “green agricultural practices”.

While in general there seemed to be a high reliance on chemicals fertilizers and pesticides, women and men farmers as well as producers in all the locations visited knew about IPM (integrated pest management), preparation and use of compost, crop rotation and inter-cropping. Therefore, their practices are neither fully chemical-free nor fully green.

## Women as Entrepreneurs

Programmes with the Secondary Crop Development Programme of the DAE supported by ADB have been able to promote and support entrepreneurship development among women producers. The two case studies given below illustrate the difficulties in developing and sustaining such enterprises and the importance of follow-up and support by NGOs, govern-

### Box 1.7 Selina Akhter, the Mushroom Entrepreneur

**Selina Akhter**, the mushroom entrepreneur with the SCDP of Telegati Village, Jogipur Union, Khulna Metro.

She is a young unmarried woman, who set up a factory for the production of mushrooms and mushroom spores including the processing of the mushrooms into dried mushrooms. Other women in her village were also given training in mushroom growing and still grow it at home. She however decided to take it to another level with the encouragement of the DAE. She hired a factory nearer town with electricity, bought an air conditioner, an autoclave machine for sterilizing the packets of spores and set herself up in the business of supplying mushroom spores for people who were starting mushroom production. She also grew different varieties of mushrooms that she would sell to different shops and restaurants. However, keeping up a constant demand for the mushroom spores was difficult and she had to remind the DAE to give her orders. When her factory was working well she had 4 paid staff and took on another male partner (since, as a woman, she found it difficult dealing with the external aspects of the business). Selina’s factory is now in disarray. She will be moving her factory to a new location and production has stopped for the time being. ✂



ment agencies as also the value of personal initiative and drive of the entrepreneurs. In the case of Selina Akhter, the mushroom entrepreneur (Box 1.7), the DAE project found her to be a potential producer of mushroom spores and tried to give her a steady supply of orders for spores, following-up with her on a regular basis. In spite of being single, she was able to mobilize enough social support for her enterprise so that she was able to function for a while at least.

In the case of Nurunnahar (Box 1.8), she was able to go from strength to strength and mobilize social support to get loans, set up new enterprises and also be included in other ventures by others. Her husband was supportive and the two of them were able to work as a team to manage the various enterprises.

### Box 1.8 Nurunnahar – A Nationally Renowned Entrepreneur

**Nurunnahar** – a nationally renowned entrepreneur, of Boktarpur Village, Selimpur Union, Ishordi Upazila has won numerous awards for her entrepreneurship. She is about 36 years old. She now owns a dairy farm with 25 high bred cows, land, a concrete house, her son is going to study in Australia and she is on talking terms with the Governor of the Central Bank. She started 12 years ago with nothing. She was the person in the village who most needed agricultural loans and support – to get this she had to form an association in the village for BRAC so that she could join the NCDP programme (ADB). Her husband was educated but poor and would trade in vegetables. They were hard up and they could not afford any milk for their sons. She started with a loan of 200 takas and 10 kathas of land that she leased from relatives. She sold her bangles for 40,000 takas and has not looked back since. She started investing in companies, set up a biogas plant and used the compost and biogas. She is now an agent of various companies to promote and provide biogas plants. She employs 5 full-time staff and she and her husband work as managers. They own a rice mill and now have 6 acres of land and sharecrop another 5 acres, where they grow vegetables and grass for their cows.

Nurunnahar is in the process of applying for a loan of 150 million Takas to set up a mini-chilling plant for milk. They also want to set up another dairy farm for 50 cows. The major problems they face are related to the lack of electricity and political disruptions when the roads get blocked and they cannot send their produce to the market. ✂

## Women as Sub-leads for Contract Farming

Another role that women farmers have been able to take on in agricultural production and marketing is working as intermediaries between contact farmers and the lead farmers. PRAN is the largest agro-producer company and exporter from Bangladesh. It has 45 PRAN Krishi Hubs all over Bangladesh with 111 lead farmers, reaching 76,000 contact farmers.<sup>36</sup> The purpose of the hubs is to maintain a sufficient supply chain of the raw materials for the agro-processing plant and serve as an information centre on how to cultivate the crops, deal with problems, and also sell seeds and promote fertilizers. Each Krishi Hub has lead farmers who have various contact farmers from whom they collect products and to whom they supply inputs and provide advice on techniques. Farmers are given training in pre and post-harvest processing.

In order to help them with the outreach and collection, the lead farmers appoint sub-leads. At the time of the interview and field visit (May 2014) there were no women lead farmers

<sup>36</sup> Information as of 15 May 2014

but several women sub-leads. The women interviewed for the study were farmers but also socially and politically active. Not only were they supplying the product to PRAN through the lead farmer they were also helping him collect the product from other contact farmers and getting a commission in exchange. Box 1.9 on Josna Begum, gives the example of one such woman. The male sub-leads do their collection/dissemination work in addition to their other activities. The woman sub-leads are more dependent on the contracting work. They go from door to door among the farmers they know and disseminate information on seeds, fertilizers and pesticides.

### Box 1.9 Josna Begum Sub-lead Farmer with PRAN

Josna Begum is a sub-lead farmer with PRAN. Since 2004 (after her husband's death) she has been working as sub-lead farmer as well as she is the head of the household of her family. She has 660 decimals of land (she cultivates 132 decimals and leases the rest). She has bank accounts at the local Krishi Bank and Agrani Bank. For last 9 years, she has been one of the members of the Union Parishad and is also the President of the union level Women's League, a part of Natore Awami League (AL). She is from a locally prominent political family. Her late husband was the local AL leader and her father is secretary of the Natore Zila Awami League.

Josna felt that her agricultural activities have become easier because of Sultanpur Agro Hub. She produces and collects Mung bean, corn and peanuts for her lead farmer. Unable to cultivate her whole land, she leases land to other farmers and to destitute women farmers. Because of her political background everyone of this village knows her, as a women leader, and she is popular with the women. She uses this popularity for her business purposes, especially collecting grains. Every year her net profit remains between 50,000tk to 100,000tk including situations of crop ruin due to calamities or insects. She doesn't face any sort of stigma from society because of trading in agricultural goods. ✂

## Women as Workers in Agro-processing Industries

The agro-processing companies have been able to set up large factories with a workforce where women are the majority at the floor level. In the case of the successful firms such as PRAN and SQUARE the workers are able to benefit from steady jobs and a regular income. They have various benefits, such as health care, food, clothes, bonuses, and are able to work in clean, safe and secure environments. There is scope for workers to graduate up from the floor level to the supervisor and quality control levels. Women in management have yearly increments and yearly evaluations, and every 2–3 years they may have a designation change. There is a regular programme of capacity development of staff and they have a group deposit pension scheme, among other benefits. The larger firms are able to maintain a good working environment and labour standards.

The Pran Agro-limited industry in Natore, which was visited as part of the study, has about 5,000 staff, of which about 3,000 are women. This is one of PRAN's many industries and complexes. The supervisors are all women. Among the production workers 70 per cent are women and among the management 30 per cent are women.<sup>37</sup> Two of the 14 Production Managers are also women. While management has deliberately promoted more women in production and at the worker level, the increased availability of qualified women has

<sup>37</sup> FGD with Women in Management in Pran Agro-limited industry in Natore, 15 May 2014

resulted in their increased presence at management levels. There is also the perception that women at the worker level are more sincere, less corrupt and also better at handling food items. There are strict rules in order to ensure that there is no sexual harassment and officers have a code of conduct to follow.<sup>38</sup> The benefits as a worker in the Pran Agro-limited industry in Natore, was discussed in an FGD.<sup>39</sup> Box 1.10 presents the case of Parina a factory worker in PRAN Natore.

#### Box 1.10 Parina, Factory Worker, Pran Natore

**P**arina, Pran Factory Worker: She is from Jamalpur and the elder daughter of her family. She stopped studying during the 2nd year of HSC in 2008 due to her father illness and inability to earn for their family. That year she left Jamalpur for Dhaka to get a job. After few months, she joined a garments company as a sewing worker. After 6 months she left Dhaka because it was expensive, and she could only send about 500 Takas to her family with her income. Then in 2009, she joined this industry as a general worker. In the last 5 years, her hard work and dedication led to her being made a supervisor in the noodles line a few months ago. According to her, Natore's living costs are less expensive than Dhaka. Here she can save money for her family and send it to them easily (about 3000 per month). She can visit Jamalpur any time and meet them. She wants to complete her HSC and go in for higher education (Degree Pass Course). ✨

Other factories where the firms are struggling to meet loan repayments and cover running costs may not be able to ensure such favourable working conditions.

## Women as Entrepreneurs in Agro-processing and Export

This section will discuss the examples of three women entrepreneurs who have been able to set up agro-processing or agro-export industries, two of whom have managed to reach export markets and one of whom was not able to do so. The cases are summarized at the end of the section.

The three cases show how the concerned women entrepreneurs showed a lot of initiative and commitment to start up the enterprises and have remained committed to making their enterprises work over a long period of time. While Fatama Amin (Box 1.12) was influenced

<sup>38</sup> Interview with DMD Pran, April 2014

<sup>39</sup> The benefits as a worker in the Pran Ago-limited industry in Natore were listed as follows:

- i. They get their salary by the first of the month.
- ii. During working hours they get nutritious food at a very low price in the industry canteen
- iii. If they fulfil production targets they get incentive from company.
- iv. The factory is women friendly, safe and secured. Every plant has changing room for women workers with a woman security guard.
- v. They get transport support from company (only in Natore).
- vi. They have Labour Welfare Cooperative where they can save their money and take loans in necessary. They can take loans dabble against their savings. Labour Welfare Cooperative has canteen and it shares profits with the workers.
- vii. Yearly they can take 36 days vacation excluding government holidays.
- viii. At the first of every year the company provides soap, work clothes and shoes.
- ix. If they have to do night shift they can take one hour sleeping break.
- x. If anyone has education up to SSC as well as hard worker then it is easy to get promotion as a supervisor.

FGD with women workers in Pran Ago-limited industry in Natore, 15 May 2014

by her father's involvement in business, the other two had been involved in other activities and had other professions before becoming entrepreneurs.

The importance of technical knowledge and management skills is shown by the three cases. Entrepreneur A (Box 1.11) was a pharmacist by profession. The husband of Selina Quader, an entrepreneur, was an agricultural scientist. Fatama Amin and her husband were both homeopaths and she later did a series of courses and degrees and now has an MBA.

Finances and bank loans are both important for growth but can also be the cause of much trouble. Fatama Amin was able to self-finance her industry and owned her own land. Their original company had made good profits, which they had invested in land and other companies. She had taken a loan from a commercial bank but quickly found that that repayments and fines for delayed repayment were such that she was better off without the loan. Various banks are now approaching her to give her loans under favourable terms and conditions as a woman entrepreneur and an SME. She is exploring the option of an Equity and Entrepreneurship Fund loan which she felt was more business-friendly.

In the case of Selina Quader, she was able to tap into various special credit schemes such as with MIDAS. She then took an SME loan which was collateral free for 10 per cent. However the limit for this was 25 lakh Taka. BWCCI was able to refer her to a leasing company and now she has loans with three commercial banks. She felt that dealing with banks and loans was equally difficult for women and men but on the whole she was successful in managing her loans.

In the case of entrepreneur A, she lost the surplus she generated early on because of bad investments in agricultural production. She later took a 3 crore Taka loan from a commercial bank at 11 per cent interest without a thorough analysis of whether she needed the full amount for her business and whether the business would have generated enough funds to repay the loan and cover other costs. At one point the bank rescheduled the interest rate to 18 per cent. She has paid almost 4.5 crore Taka interest against a 3 crore Taka loan. Due to lower sales, high marketing costs and the drain of the bank interest payments, the business has a financial deficit every month.

In the three cases, the importance of balancing production with marketing is very clear. While product development, quality control and maintaining production schedules and volumes are important, without the necessary market linkages and management, the business enterprise will fail. In the agro-processing sector, the items being produced are similar to each other with fierce competition from larger companies such as PRAN and Square. Entrepreneur A was able to be successful as long as she was able to use the marketing networks of her husband's business. However when she had to take on the costs of maintaining that network (vans, drivers and operating costs) with her volume of production, the costs became very high.

Developing and maintaining export linkages is challenging, as all three women found. Although, opportunities are sometimes provided by associations and the government to participate in trade fairs, and sometimes the entrepreneurs are willing and able to go on their own, making the right connections, identifying marketing agents or importers and offering them conditions, attractive enough to import the goods, these are some of the more complicated matters. Fatama Amin was able to use the export connections she and her husband had developed earlier for their cosmetics exports, to build on and find new importers and agents. She is exporting to North-East India through the land ports. She used

### Box 1.11 Quality Production vs Marketing: Entrepreneur A

According to the founder, the products are produced as per international standards maintaining the highest level of quality at every stage of the production process. The company is producing 50 food products under different categories and has adopted ISO 22000 as a guiding principle of its management system. The company is compliant with HACCP and certified with ISO22000:2005, which ensures that only the best quality products are produced.

The founder started her new business venture in 2000. She managed her primary investment from her savings and family sources, especially from her husband (he was a food product importer). First, she set up a factory in Dhaka, and then after some time transferred her factory to Narayongang on her own land with some imported capital machineries and local machineries, due to government rules and restrictions. At the beginning it was like a family business: she dealt with the production and her husband dealt with sales and marketing

In 2003-04, she started another new agri-business venture. She leased 30 to 40 bigha cultivable land in Thakurgaon to cultivate potatoes and bananas. Here she reinvested the profit that she had earned from the agro venture. After 3 years she had to fold it up due to huge losses. She faced competition from other big farms and it was hard for small farms to make a profit.

The entrepreneur has invested her own time and money for product research and development. According to her, "I never compromised with quality and standards. In terms of both, I have the ability to fight with other brands such as Best and Ahamed". That's why her production cost was higher than those of other producers. Because of high production costs her profit margin was very low. "I am not a business person, I am a producer. Production is much easier than marketing and sales," she said.

In 2011, due to losses her husband stopped his food import and trading business. This affected her business because she had never had to deal with marketing and sales. The entrepreneur has 35 permanent staff. Every month her running costs (factory management, utility and staff salary including factory workers) ranges between Tk 22 lakh to Tk 28 lakh, excluding the production cost. Thus, every month her financial deficit is Tk 6 lakh to Tk 7 lakh. To make up this deficit she brings in money from her husband but this is making his business weaker too.

In 2009, she took a Tk 3 core loan from a commercial bank at 11 per cent interest. After a few years the interest rate had been rescheduled and set at 18 per cent. This investment was a very poor one. She is bearing the burden of this interest and has almost paid Tk 4.5 core as interest for a Tk 3 core loan. She did not try for an SME loan or go to a leasing company or even to MIDAS. When asked whether she really needed the whole Tk 3 crore, she said that they had not really done an economic analysis of the size of loan that was required and neither had they taken into account on how it could be repaid.

The company failed to reach foreign markets. According to her, the reasons for her failure were her lack of business knowledge and experience as well as insufficient support from her surroundings, especially from her family and the Bangladesh Agro Processors' Association (BAPA). She does not have enough knowledge and skills in using the internet which is why she is not able to communicate with foreign buyers through email or other modern communication methods.

The entrepreneur now wants to shut down her business. She is trying to sell her factory but she hasn't done her asset valuation yet. She is also looking for other business partners who are not agro-processors. She is not willing to be a subcontractor of the big agro-processor companies because she would have to compromise either on quality or on prices. ✨

### Box 1.12 Cosmetics and Herbal to Food Products: Fatama Amin

**F**atama Amin has been in business since 1990. She began her career as a homeopathic doctor along with her husband. “From my childhood I was engaged with business activities. My father had a grocery store in front of my school in Narsindi. After school I used to sit there with my father and sell goods. I developed an entrepreneurial spirit” she said.

Her husband developed a homeopathic spot-removing cream which he used to prescribe. Seeing the popularity of this product, they decided to sell it commercially. They established a new joint stock company in 1992, which right through 1996-1999, led the local cosmetic industries – Henolux was the largest producer of fairness creams before Fair and Lovely came on the market.

They started their new venture “Amin Food Processing Industries Ltd.” in 2004 since they felt that agro-products were items of everyday consumption and they would cater for children. She produces instant drink, ice-pop, litchi jell, litchi drink, chocolate, lollipop, ready tea, lacha semai, noodles etc, and she exports these products to India, Nepal and Bhutan. Within India, she exports to West Bengal, Assam, Tripura and Meghalaya. She basically uses various land ports to export her products.

The enterprise was self-financed and the land was their own. She and her husband own equal shares in the company. She had borrowed Tk 2.5 core at 18 per cent compound interest from a commercial bank. Very soon she realized that with this rate of interest, the undertaking was not viable and paid the loan back to the bank. Most of the lands of her factory and office were bought in 1990s at cheap rates. Only PRAN and her company have composite technology for production. She has own land for product development and quality management of products. She has her own export import license, which she has used to import several capital machineries from Taiwan; experts from Taiwan came and trained the operators. The CFA agents deal with the import of machineries.

To develop her managerial skills she did a Masters in Business Administration (MBA) in 2002 from Northern University. Besides this, she took 32-33 trainings from various government and non-government institutes, notably, the Bangladesh Small and Cottage Industries Corporation (BSCIC), the Export Promotion Bureau, the Bangladesh Institute of Management and the Bangladesh Agro-processors’ Association (BAPA).

Fatama Amin acknowledges that the Bangladesh Agro-processors’ Association (BAPA) has trained her on production, export and marketing. BAPA produces a directory for the members and encourages them to use it for business purposes, especially exports. Besides, BAPA has also organized several workshops on production, quality control, product development and developing marketing strategies; where it brought experts from abroad. BAPA also helps her to get the 20 per cent government export cash back incentive.

She is thinking of taking an SME loan or an Equity and Entrepreneurship Fund (EEF) loan to make new financial investments. She is aware that she can qualify for an SME loan and several banks have approached her to give it to her. IDLC is giving loans to women entrepreneurs at 10 per cent interest. According to her, she qualifies for both the SME and the EEF loan. The EEF fund loan is more business-friendly than SME loans, as with it, if she repays her debt within the next 8 years, the loan will become interest free.

Most of the factory workers are women. According to her, female worker are much more regular and hardworking than male workers. However, she needs to employ a few men for heavy work. But there is wage discrimination in her factory. A male worker gets Tk 8000 - Tk 12000 per month, whereas a female worker gets Tk 3500- Tk 4000.

Fatama has good relations with the local government body in her areas (the UP) and she regularly pays her taxes. She has invested money in the community (e.g. paying 50 per cent of the costs of constructing a drain) and the community leaders ensure that her factory is safe and protected. ✂

### Box 1.13 Potato Growing and Exports: Selina Quader

The company is the largest potato exporter of Bangladesh (they export 60 per cent of all potatoes exported by BD). She is also the Vice-President of the Bangladesh Women's Chamber of Commerce and Industry (BWCCI); an Executive Member of the Potato Exporters' Association; and a recipient of the Bangladesh Business Awards in 2004 in the Outstanding Woman in Business category. She has been working since 1984 in agriculture and in exports since the last 12–13 years.

"I first started my agri-business venture in the year 1984 in Chuadanga. Before that I was a social worker and formed an organization named Nari Nirjatan Protirodh Committee. As a social worker, I found that women are oppressed because of their limited participation in economic activities." She started working with grass-roots level farming communities, where most of them were women especially female farmers. During that period she used to work in planting, sorting and packaging potatoes along with other female farmers and labourers.

"Garabaria is a village in Chuadanga from where I started my journey. At that time, this place was very risky due to criminal activities related to black marketing, drug business and gambling. Now the social structure of this village is totally changed. Those who were normal labourers before have now become farmers. Now they earn well and live well." She now owns 4 farms but also purchases potatoes and vegetables from contract farmers. She trained her contact farmers and labourers about potato harvesting with the help of her agricultural scientist husband. She is the only SGS certified potato exporter in Bangladesh. She encourages good agricultural practices and proper sanitation.

"At the beginning of this business, it was very tough to find the variety of potato that has demand in foreign markets. I did a market survey to find this out and it helped me a lot. I also had to do foreign market research to understand the demand of the markets. Quality control is very crucial - that is why we train contact farmers so that they can produce quality products." She said.

At present, she has 60 permanent staff including 2 women agronomists. Her company has 10000 contact farmers. In the last year, her export reached 40,000 metric tonnes, which is about 60 per cent of the total potato exports of the country. Her major export destinations are Singapore, Malaysia, Korea, India, Pakistan, Nepal, Kuwait, Sri Lanka, Vietnam, Indonesia, Russia and Brunei. The business also exports potato seeds to various other countries.

She acknowledged the support received from the BWCCI. By the year 2003, the BWCCI had helped her to obtain a loan from leasing companies when she badly needed loans to expand her business. The president of the BWCCI was always cooperative. Now she is dealing with three commercial banks. She has previously also taken a loan from MIDAS and an SME loan which was collateral free with 16 per cent interest (this is for loans up to Tk.25 lakhs).

According to her, it is hard to manage loans from banks or financial institutions for both women and men. The bank interest rate is too high which sometimes discourages her for further investment. Though, the Bangladesh Bank has made various policies to support entrepreneurs and exporters, in reality the implementation of these schemes is very poor. She felt that the Commercial Banks' unwillingness is the main reason. She suggested that collateral free bank loan ceilings should increase from Tk. 25 lakhs to Tk. 50 lakhs. Now, the government provides a 20 per cent cash back incentive on exports but she has to pay 5 per cent income tax on this, which is not investment friendly for her business. The Potato Exporters' Association has to certify who are the genuine exporters and who will qualify for the cash back incentives. Before, the Dhaka Chamber would do the certification of origin.

She, along with other women business leaders from the BWCCI, are now collectively asking the government to give 25 per cent cash incentive. Due to competition in the international market, she sometimes has to go for a price compromise with the buyers, which reduces her profit margins, sometimes even affecting her capital. If governments provides 25 per cent subsidy, that will not only help her to make a profit in the foreign competitive markets but also help other women entrepreneurs. ✨

the BAPA membership list to explore who was exporting what products where and followed up with her own contacts.

Entrepreneur A participated in a few trade fairs with her husband but later her family discouraged her from going and she sent staff. She felt that they did not explore the export linkages as seriously as she would have done and nothing came of the efforts. She was unhappy that although she had joined BAPA hoping to be able to export, the association had done nothing to help her.

Selina Quader carried out a market survey to see what kind of potatoes were in demand in various foreign markets. She chose her varieties accordingly. She did research on the foreign markets. She decided to use shipping to send her goods as this reduces costs. She has developed working relations with various CFAs (clearing and forwarding agents). She is exporting to Singapore, Malaysia, Korea, India, Pakistan, Nepal, Sri Lanka, Vietnam, Russia and Brunei.

All the three cases highlight the importance of family support. Entrepreneur A (Box 1.11) was able to collaborate with her husband who had a marketing network as an importer of food products. Her husband is able to help her cover her losses due to bank repayments. In the case of Fatama Amin, she and her husband were in the same profession and jointly set up a series of industries which are jointly owned and managed. In the case of Selina Quader, her husband, an agricultural scientist had the necessary technical knowledge with which to provide training and advice.

The three cases also draw attention to the role various associations can play and the support they can provide. Selina Quader was very positive about the support received from BWCCI, in terms of getting loans and also in being able to negotiate with the Government for various kinds of support and changes in terms and conditions. She is a member of the BWCCI Executive Committee and is also an executive member of the Potato Exporters' Association through which she receives export cash back incentives.

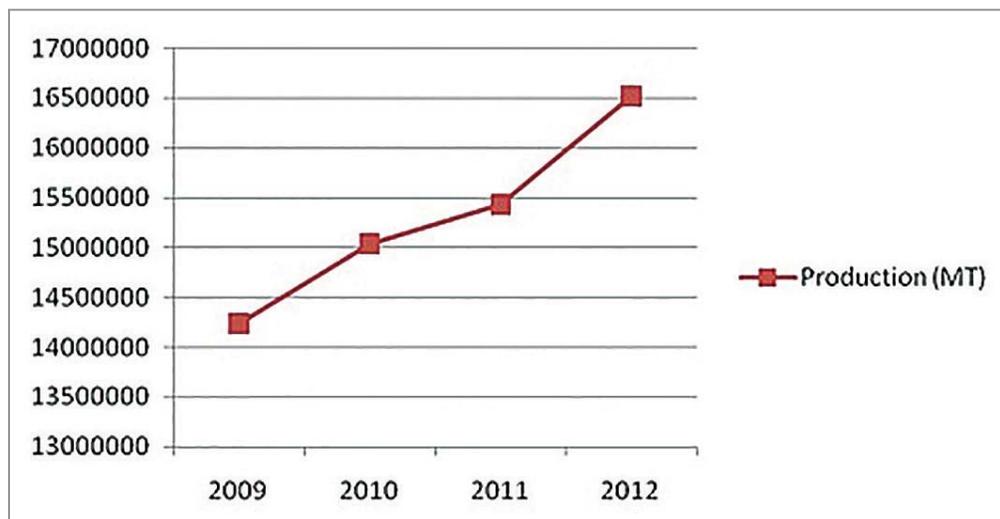
Fatama Amin was very positive about the role played by BAPA in helping her develop her capacity, networks and exports. She participated actively in BAPA AGMs, meetings and trainings. She receives the export cash back payments through BAPA and is also appreciative of their dealing with the necessary processes. But in the case of entrepreneur A, she was disappointed that BAPA did not take a more active role in developing export markets for its members.

## Trends in Production and Export in Agricultural Sector within and Outside the Region

The following section focuses on the trends of growing agricultural production which is accompanied by increasing commercialization of agriculture. It will show that there is an upward trend in the exports of the agro-processing exports. However, regional trade is limited except for big companies like PRAN. Although exports are on the rise, the SAARC regional trade remains inadequate. The chapter section discusses the opportunities and barriers to regional trade.

Figure 1.1 shows the upward trend in vegetable production, which is sometimes affected by floods and drought. This is the aggregate reflection of increased intensity of cropping, multiple crops per year and increased production due to new technologies, seeds and improved care.

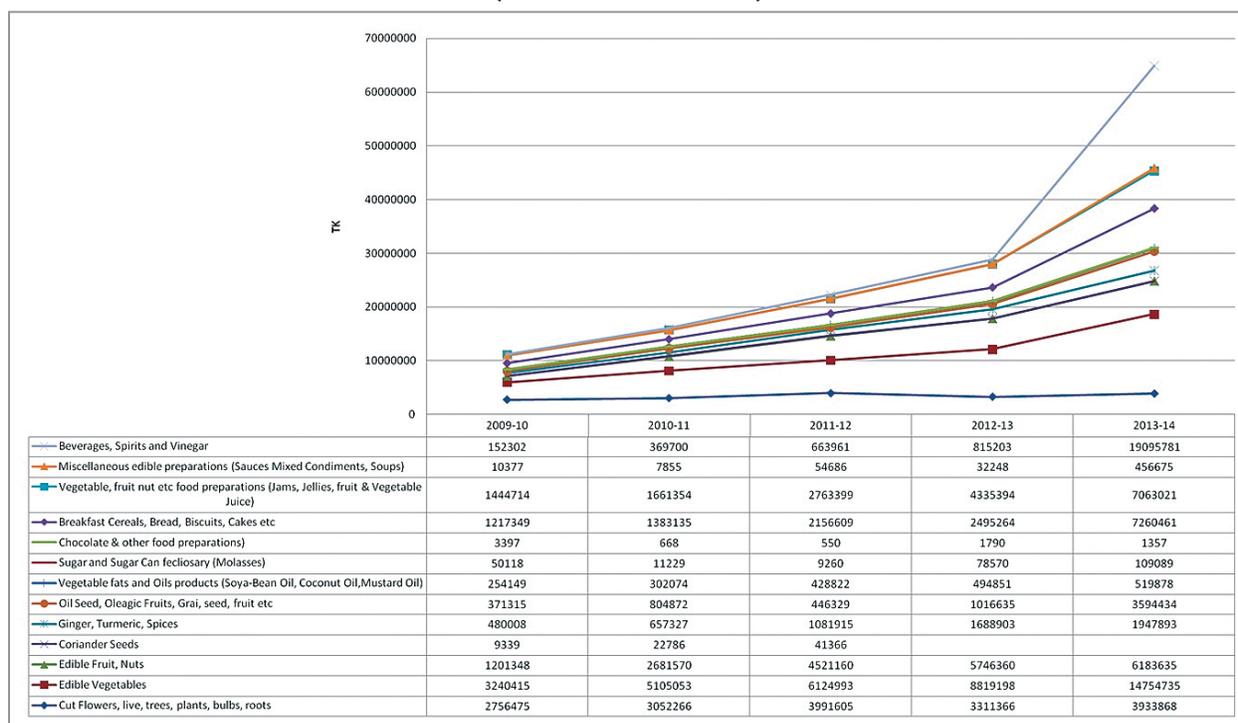
Figure 1.1 Trends in Vegetable Production



Source: FAO <http://faostat.fao.org/site/339/default.aspx>

Trends in agro-processed exports of various types are also increasing as shown in Figure 1.2. However, along with the growing trend of exports, there are also some constraints and barriers to the functioning of firms and industries.

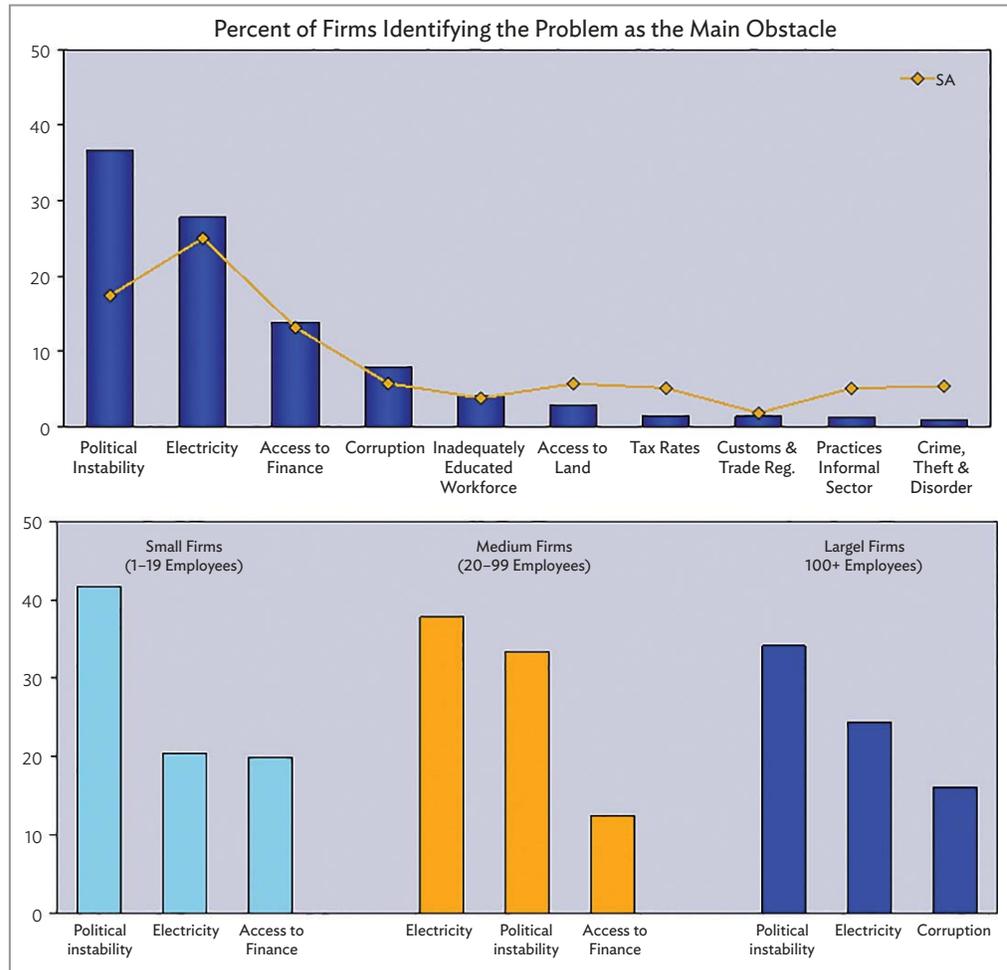
Figure 1.2 Trends in Agro-processing Exports (value in thousand Taka)



Source: Export Promotion Bureau (EPB).

Figure 1.3 depicts the major obstacles identified by firms in the World Bank Enterprise Survey of 2013. These include political instability, inadequate electricity, difficulties in access to finance, corruption (which is interestingly only 4th in order of importance), inadequately educated workforce; access to land, tax rates, etc. Political instability not only affects firms and big businesses, its impact is also felt by small producers and traders, whose goods will rot or the prices will fall.

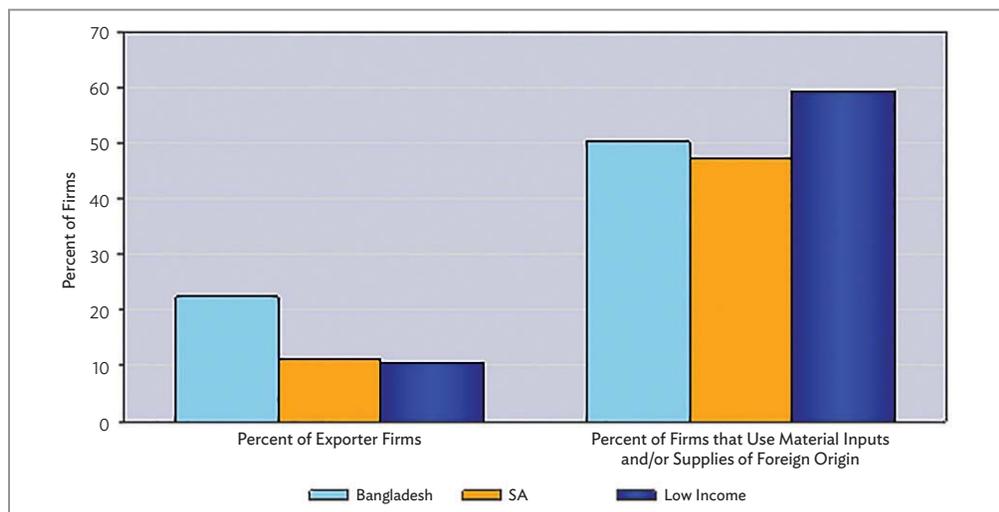
Figure 1.3 Obstacles Faced by Firms



Source: World Bank Enterprise Survey 2013

Another important piece of information provided by the World Bank Enterprise Survey of 2013 is that about 20 per cent of Bangladesh firms have trade engagement compared to about 10 per cent in South Asia and about 9 per cent in other low income countries. Therefore, the trade engagement of firms in Bangladesh is relatively higher. Also about 50 per cent of firms use materials or inputs of foreign origin. Hence, it would seem that the integration of the national economy with the global economy is increasing and a significant share of the national firms have trade relations.

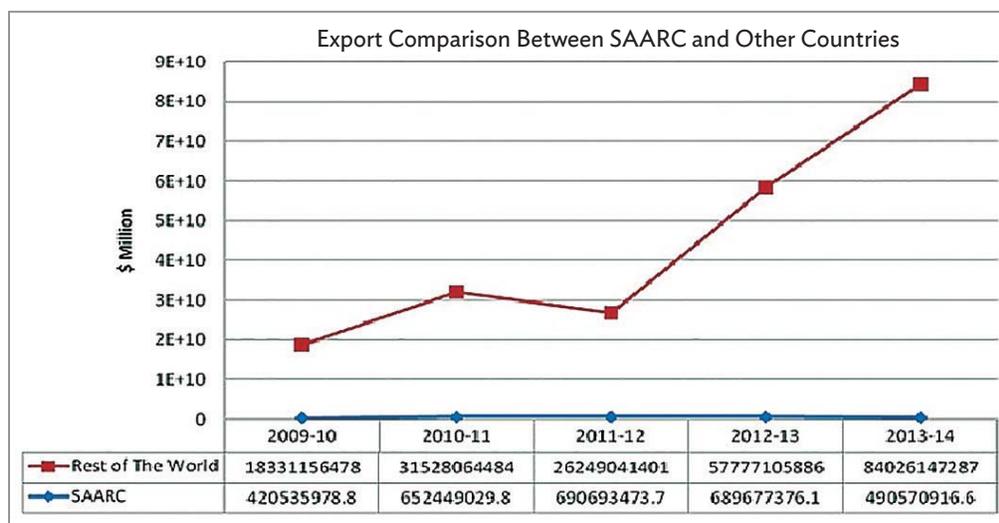
**Figure 1.4 Trade Engagement by Bangladeshi Enterprises**



Source: World Bank Enterprise Survey 2013

However, Figure 1.5 shows that while other exports have increased the exports to the SAARC region have barely increased.

**Figure 1.5 Minimal Trade to SAARC versus Other Regions**

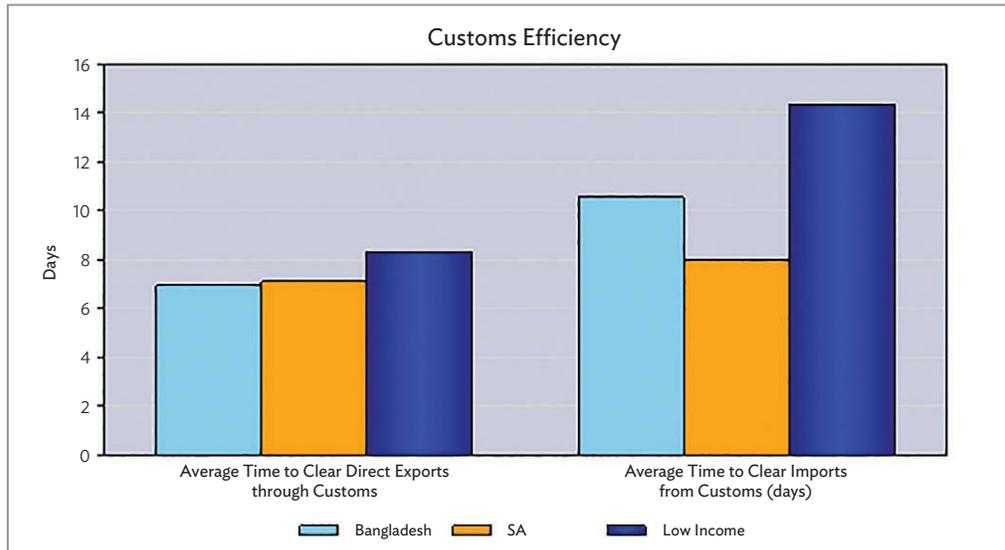


### Achievements and Barriers to Regional Trade at the Individual and Country Level

This section will discuss the successes and constraints for regional trade. It will begin with findings and figures from the World Bank Enterprise Survey and continue with insights from the interviews conducted. The efficiency of customs and the delays encountered there are among the most important barriers to trade. Although the average time required for clear-

ance of direct exports through customs is slightly shorter in Bangladesh than in other South Asian and low income countries, it is still about 7 days, which is quite long for food products. (see Figure 1.6)

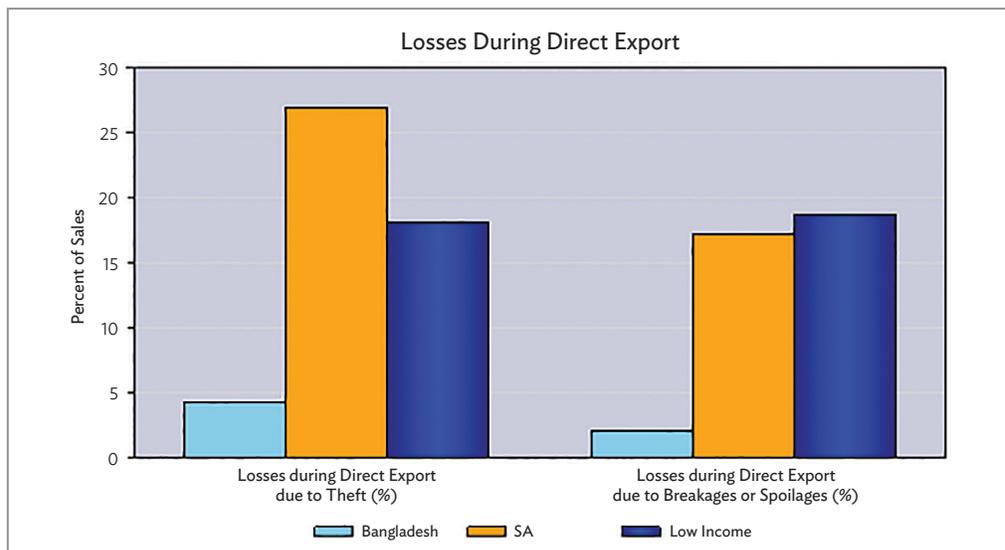
**Figure 1.6 Constraints to Trade-Customs**



Source: World Bank Enterprise Survey 2013

Another constraint to trade is the lack of safety and security of goods being exported and whether they risk being spoilt. However, the average percentage loss due to theft (about 5 per cent) and losses due to breakage or spoilage (about 2–3 per cent) is lower in Bangladesh than compared to other South Asian countries.

**Figure 1.7 Constraints to Trade: Theft and Spoilage**



Source: World Bank Enterprise Survey 2013

The opportunities for regional trade identified through various interviews, include the following:

Japan and America are interested in importing Mangoes and Litchis.

1. The Government is promoting the diversification of export markets beyond Europe and the USA and is interested in developing regional trade as well as trade to South-east Asia and South America.
2. There is a huge demand for fresh vegetables and fruits in Europe, Middle East, North America and Russia.
3. A special air cargo for exporting horticultural products will increase the vegetable export of Bangladesh. There are policy provisions for this which have not yet materialized.
4. Border Markets ("Shimanto Haats") have been set up but they are mainly non-functional.
5. Road networks and connections with India (especially North-East India), Nepal, Bhutan and Burma are good.
6. The land border posts are now being modernized with electricity, storage and warehouses.
7. The land corridor with Nepal could be optimally used by both sides.
8. The Indian Government is providing facilities to companies like Pran, which is building a factory in Tripura.

The constraints for regional trade identified through various interviews, include the following:

1. Air transportation is limited. Biman Bangladesh cannot provide the cargo space promised in the policies, either on time or in the volume needed.
2. There is a lack of information about the export markets in the region. A few firms have been able to explore these markets and establish themselves in them. For the majority of would-be exporters these markets are unknown and closed to them.
3. Often Bangladesh Biman and other Air Buses offload vegetables when they have extra weight or in hot season, which adversely affects the business.
4. Nepal and Bhutan find it easier to trade with India as they use the same currency. With Bangladesh they have to use the USD.
5. There are no central and regional post-harvest centres and packaging centres for high value fruits and vegetables, like there are in Thailand, India and Pakistan.
6. Facilities for washing, grading, storing, electronic, and weighing, quality testing, international standard packaging etc are inadequate. For example, even Dhaka, the capital city does not have a central facility for collecting, sorting, packaging and exporting flowers.
7. Standards for imported items are higher than for local items (specifications for food items exported to India have to measure up to higher standards than for Indian local products).
8. India as a larger country has a steady and constant supply of raw materials which Bangladesh agro-processing firms do not have.
9. Although corruption was not mentioned as critical a problem as others (Figure 1.3), the research confirmed a well known reality, that goods moving within the country have to pay numerous tolls at different places, which raises the cost of the goods at the final point of sale.
10. Having a steady supply of electricity is a constraint for all manufacturers.
11. Regional trade also needs the regional country governments and political parties

to be on good terms. However, political considerations sometimes outweigh the economic interests of trade and cooperation.

#### 12. Trade Facilitation Issues

- Infrastructure related bottlenecks
- Inadequate Customs and Port facilities
- Non-Tariff Barriers
- Cumbersome export procedure and documentation

#### 13. Major Non-Tariff Barriers (NTB's)

- Packaging and Labeling requirements: The Legal Metrology (Packaged Commodities) Rule 2011 has been implemented on imported goods only, but local industries are not following own country rule
- Registration and Licensing requirements for different imported commodities.
- Port Restrictions: For example, Square was able to use 4 LCS, i.e. Petrapole (Pashchimbanga), Sutarkandi (Assam), Agartala (Tripura) and Old Raghna (Tripura) land ports only to export toiletries and cosmetic products into India.
- High speed money, although export/import documents and goods are genuine.<sup>40</sup>

## Impact of expanding trade on women's jobs and quality of life in the selected sector

South Asian regional trade affects women's job opportunities and quality of life insofar as they are employed by the large and medium agro-processing industries that export within the region. As discussed in Section 6.2.2 the working conditions and job security in the large firms are positive. However, the agro-processing sector is in no way as big an employer as the garment sector.

Increasing commercialization of agriculture seems to have both positive and negative impacts on women as discussed in Section 6.7 below, with increasing workloads and hours of work along with increased income, savings and expenditures. However, all of these changes are not due to or related to regional trade. The domestic demand and its increase, is substantial enough to absorb most of the additional production.

## Impact of Increasing Trade in Green Industries on Women Participation and Employment

Is international trade a significant factor in determining women's participation and employment in the selected green sector? This question is hard to answer. It is perhaps more relevant to discuss whether agricultural growth, increased production, increased intensity of production, and increased commercialization of agriculture has affected women and how.

The study has found that women's involvement in agriculture – pre, post and during the cultivation phases, is increasingly recognized and visibilized. Women are seen as farmers (krishani) and husbands also need their participation and contribution. Production has become more intensive– growing more on less land. This is as much due to the increased pressure on the land and the decreasing volume of land available for cultivation. Another parallel trend is that men moving out of agriculture because of its low productivity and women are moving in.

<sup>40</sup> Interview with Square official and member of BAPA

Production and sales of agricultural products and agro-processing products are growing across the country. Although there are exceptions, women do not seem to be interested in the marketing of agro products. They prefer to sell from the land. However, women and men are more conscious of the demands of the market, local and international, in terms of quality control, packaging and processing. Women's involvement in exports seems limited, except as a part of large companies.

Farmers, women and men, are more open to innovation and use of technology. There is greater use of information technology to check prices and production technology like pesticide dosages. Watching TV shows on agriculture provides the opportunity to learn new techniques.

However, there are some possible channels and mechanisms through which an expansion in trade in the green sector impacts women: increasing women's time-poverty; greater integration of women into the market economy; reduced self sufficiency in food grown on their own farms; women have a greater amount of cash to handle – to invest, save, spend; there is greater access to mobile phones and information on prices.

The question then arises: what can be done to encourage the positive impacts and mitigate the negative ones. This will be shared in Section 7, when some of these ways will be put forward.

## Conclusions and Ways Forward – for the Region, Country and Sector

### Promoting Women's Entrepreneurship

Entrepreneurship is the key to the creation of new enterprises that energize and revitalize the economy. It serves as the catalyst in the process of industrialization and economic growth. Women entrepreneurs can play a vital role in combating rural poverty. The emergence and development of women entrepreneurship largely depends on different factors such as economic, social, cultural, and psychological. Therefore, the following recommendations may be considered:

#### *Better integration of women entrepreneurs into the economy:*

- Greater recognition of the role of women in enterprise development in the modern economy.
- Provision of training to women entrepreneurs for better market linkages and trade.

Recommendation by Rokeya Khatun, NCDP, 2009, Page 11

“The DAE and the Ministry of Agriculture and the DAM should have concrete discussions with the Women Chamber of Commerce and Industries, Women Entrepreneurs' Association of Bangladesh, and the large scale fruit processing plants, to explore possible forward and backward linkages with the NCDP producers. The potential high performing female farmers should be groomed by the entrepreneurs to become suppliers of standard raw materials; pulp etc. for further processing and grab export markets gradually”. ✂

### *Increasing access to markets and trade:*

- Either the registration procedure for import and export business should be simplified and made women friendly or completely dismantled.
- All anomalies in the custom procedures must be removed and the procedures made women friendly.
- The government should reduce the regulatory barriers related to establishing and operating of a new enterprise.

### *Counselling and support services:*

- Credit programmes need to be linked with entrepreneurship development training programmes.
- A one-stop service, exclusively for women entrepreneurs should be created in the Commerce Ministry for facilitating investment and business.
- Women entrepreneurs need counselling on which are the most potential sectors to invest in and develop.
- Pre and post investment counselling for women entrepreneurs for credit: Women need orientation on the requirement of banks (papers, accounts, business proposals etc.) for credit disbursement.
- The constraints and opportunities for women in urban and rural areas are different and need to be addressed differently. Therefore they need different kinds of support and advice.
- Women's business associations such as the BWCCI and CWCCI have a crucial role to play in providing counseling and support services to women entrepreneurs. They can also play a role in building solidarity, support and cooperation among members; and facilitate partnerships and collaboration between women entrepreneurs in urban and rural areas.

### *Developing self-confidence and capacity*

Selina Quadir, Director, Agriconcern Limited, felt that women should not restrict themselves to traditional women related business ventures such as handicrafts, parlour business, etc. but they should increase their participation and economic activity in diverse business arenas like men. She also felt that there is a need to develop women's self-confidence and skills. ✂

### *Financial policies and strategies:*

In respect of the policy, strategy and functions of the Bangladesh Bank and Commercial Banks, the following recommendations may be considered:

- Ensure easier and better banking services to women producers and entrepreneurs.
- Improve access to finance by women owned enterprises and ensure that the loans are taken on the basis of business plans, market appraisals, making certain that the financial management aspects are fully understood and appreciated.
- Banks should play a greater role in client monitoring and provide services/information as needed.
- Banks and the Central Bank should monitor the amount of credit being disbursed to

women entrepreneurs in general and against the special credit allocations made by the Government.

Recommendations by Fatema Amin, MD, Amin Food Processing Industries Ltd:

- There should be lower interest rates on bank loans – a one digit figure
  - Women should be helped to qualify for the EFA equity fund loans by the Bangladesh Bank given to the agro-sector
  - All companies, whatever their size, must pay VAT and tax to make the competition fair
- 
- Establishing credit guarantee scheme for women entrepreneurs.
  - Lowering interest rates for loans for women entrepreneurs.
  - Setting up a special window for financing women entrepreneurs.
  - Lending procedures must be simplified, with minimum documentation formalities.
  - Allocation of a specific share for women in equity development funds.
  - Preferential treatment of women entrepreneurs by providing credit in thrust sectors.
  - Maintaining gender-based data on credit disbursement and dissemination of information on credit opportunities.

## 1.7.2 Encouraging Women's Participation in Agro-enterprises

### *Necessary knowledge and skills:*

- Women entrepreneurs interested in the agro-processing and agro-products sector need counselling on which products have the most potential for investing in and developing/producing. This should be based on an assessment of demand, taking into consideration the prevailing competition at the local, national and international levels, and on an estimation of future trends.
- Women entrepreneurs interested in the agro-processing and agro-products sector need counselling on which geographical areas would be the most suitable to invest in and develop agro-processing industries. This should be based on an assessment of demand, on the existing competition at the local, national and international levels, and on an estimation of future trends. It should take into account the supply of raw materials, infrastructure, connectivity, and supply of electricity.
- Women entrepreneurs need to develop technical skills in order to develop agro-processing industries. This is needed for product development, quality control and also to be able to innovate. This need to be complemented by management and financial skills.
- Women's easy access to technologies and innovations should be ensured by using the dissemination channels that are the most appropriate for them. Television, tele-centres and also e-centres seem to have great potential. The union and upazila parishad information centres can also be developed for this.
- Women as paid employees in agro-processing firms, at both worker and management levels, should be recognized and promoted with special attention to ensure that their working conditions and benefits follow both the national and international standards.

### *General constraints to agro-processing and agro-business:*

- In order to develop profitable and sustainable enterprises both women and men entering and working in the sector need to deal with general constraints in the agro-processing and agro-business exports. Some measures may be taken individually or by the private sector while others will need support and interventions by the government. These include the following:
  - **Packaging:** In order to preserve products, make them more attractive to consumers and ensure quality, packaging has an important role. Smaller producers find it difficult to invest in design and production of packaging.
  - **Standards (pesticides, disease):** Both producers of agricultural products and agro-processed products need greater education and orientation on health and safety standards regarding the use of fertilizers and pesticides on one hand, and on additives and preservatives on the other. The controlling authorities for these are weak and standards (to the extent they exist) are very loosely enforced, leaving a great scope for corruption. However, in order to enter the higher end markets and especially the export markets, there is a need to understand the various standards, safety measures and ensure enforcement and certification that the standards have been followed. Various export oriented programmes of institutions such as HORTEX have started to create awareness of such standards and the importance of maintaining them.
  - **Storage:** The availability of storage, both at the production level and at the market level, can ensure better condition of products and better prices as well as reducing the need for harmful additives to artificially preserve products. While a few projects such as those implemented by HORTEX and the DAE are building such storage facilities, with the private sector already having cold storage facilities for potatoes, carrots, etc., the quantity and location of such storages is limited. The private sector should be encouraged to set up such facilities and provide the necessary finance for it.
  - **Temperature Control:** The availability of refrigerated vans and storages can also increase the quality and value of products and ensure that they can be preserved without harmful chemicals. The private sector should be encouraged to set up such facilities and provide the necessary finance for it.
  - **Transportation:** Faster and better transportation to allow products to be sent to the markets without tolls and hassles would allow producers to earn more profit and enable greater sales and exports.
  - **Insurance:** The lack of insurance for agricultural producers makes them very vulnerable to seasonal variations, losses due to pest attacks, droughts, storms, etc. While this affects both women and men, it would be an important factor to encourage women to enter the sector.

### *Market development:*

- For marketing HVC, a location point in their village could be identified where the middle person will come to purchase their products as and when asked by them. They need price information from their local government officials on a weekly basis, so that the middle person cannot cheat them. Also, the local Government offices can identify a few such middle people for them. Alternatively, NGOs can do this (Khatun, 2009: 12).

- As marketing has been identified as an area where women are relatively less present and more reluctant to participate in, they need to have the appropriate marketing channels that respond to their needs. Improved infrastructure has allowed them to sell their products close to home. However they need greater facilitation and support to be effective members in marketing groups and cooperatives, as well as gain greater exposure to markets beyond their villages. They may be supported in groups for this.
- Greater and easier access to means of transportation may enable women to have a greater role in marketing.
- The size and potential of the Bangladeshi domestic market is enormous because of the size of its population. Women can be assisted to tap into this market while developing regional markets.
- Product associations should have a role in developing of markets for their members and in helping the weaker or newer members to access and develop various markets.

### Integrating Gender in Regional Trade: Proposed Entry Points

- There are on-going measures to support women to participate in trade fairs – nationally and internationally. These should be continued and further strengthened by giving pre and post counseling and advice on how to best make use of these opportunities.
- Orientation and training to women entrepreneurs on export marketing, developing contacts, negotiations and follow-up should be provided.
- Support by associations such as the BAPA the BWCCI, the CWCCI and the chambers to help establish linkages with international buyers and carry out international market assessments, should be made available.
- Ensure that provisions for support with shipping and freight as mentioned in various policy documents are provided in practice.
- Associations to explore potential for regional trade and support women exporters to engage in it through mentoring and counseling.
- International agencies such as the ADB, the World Bank, the IFIC and regional agencies such as the SAARC and the BIMSTEC to include the issue of women's participation in regional trade in their agenda of work.

### Greening of Agricultural Exports and Agro-processing: Proposed Entry Points

#### *Innovation and research:*

- Green growth means the promotion and institutionalization of green practices. It is important to identify measures that will reduce carbon emissions.
- Green agricultural practices have to be cost effective and green products have to be profitable enough for women and men farmers to produce them. The same goes for agro-processed products. For this to happen, both the private sector and the government have to innovate and invest in research and extension that will make the development cost effective and sustainable, promoting replicable farming practices. Can composting meet the needs of commercial farming? At what scale? Is the IPM effective on a large enough scale? Which are the traditional agricultural

practices that can be retained and adapted to meet the needs of current times? All these questions and more need to be answered through increased research, testing and extension.

#### *Financial support for greening of agriculture and agro-processing:*

- CSR funds could be used by banks to support the private sector to develop green agricultural practices. Companies that do so would receive other benefits. Strict criteria would have to be set and enforced to ensure that the private companies do meet the environmental standards set.
- A fixed per centage of the government budget for agricultural research should be allocated for the greening of agricultural processes, including the preservation of agricultural products without the use of harmful preservatives and additives.
- There already are financial incentives for ETPs (Effluent Treatment Plants) from the Central Bank and punitive measures by the Ministry of Environment in cases of infringement. These however need stronger enforcement. Such measures should also be introduced for other processes in agro-processing that would reduce pollution and carbon emissions.

#### *Standard setting and enforcement:*

- Defining of standards and criteria for organic production and also developing certification procedures.
- Providing exporters, producers and processors orientation on maintaining quality and ensuring traceability.
- While government needs to incentivize the private sector, it also needs to play a stewardship/oversight role to ensure that environmental standards, as well as food safety and security standards, are being respected. The coordination between the ministries of Environment, Agriculture, Industries and Commerce, needs to be strengthened so that they can work together towards this end.
- Strengthening of coordination measures between ministries so that environmental standards can be enforced in different sectors and incentives can be provided to support “greening processes/techniques” in the various sectors, such as industry, agriculture and exports. Though this has started under a project with the MoC and supported by the GLZ, it is only applicable to textiles and garments. Such projects are needed in the agro-processing sector.
- Greater education and awareness is needed among producers, traders and consumers of the harmful effects of additives, excessive use of pesticides and chemical fertilizers, highlighting the importance of sustainable agricultural practices for human health and the environment.

#### *Fiscal measures:*

- The government should discourage the import of chemical fertilizers and pesticides by making them more expensive through tariffs.
- The government should encourage the production and use of organic fertilizers through standard- setting, creating awareness of its value and promoting its production, possibly through tax measures.
- The government and private agencies should undertake a detailed analysis of the agricultural exports/agro-processing exports and production value chains to iden-

tify at what stages and how “greening” can be done, such as considering storage with natural ventilation; these could also be explored in terms of packaging and the freight (sea versus air) used.

- Packaging can be made sustainable - e.g. instead of using disposable materials using materials that can be recycled.

#### *Trade facilitation and negotiations:*

- Bangladesh has to be proactive in all international trade negotiations to protect its legitimate claims and interests. It should first identify the products of export interest in each to the destinations, and pursue the concerned government bilaterally to include them in the duty-free list. The country will also exert pressure along with other LDCs on the same. All possible ways and means, either bilateral or multilateral must be utilized to achieve this goal.<sup>41</sup>
- Considering the recent growth of exports of agro-based products from Bangladesh, the MOC may earmark an appropriate desk in the Export Promotion Bureau, preferably headed by a director, to take charge of this sector/sub-sector.
- The vast hinterland for agricultural products in North-East India should be properly exploited for ensuring the supply line of agricultural commodities and re-export of agro-processed products to the North-East and elsewhere. An FTA with India may be drafted.
- Export agencies and associations can work together to establish a niche market for the export of organic and exotic products, such as the near extinct varieties of rice like biroi.
- The government can provide preferential treatment for green product exports, such as simpler export licensing, smaller container space etc

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<sup>41</sup> DCCI, 2005: 35

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## Annexes

### Annex 1.1 Field Visits

Two field visits were made. The programmes are given below along with the outputs.

a) Visit to the South-West to visit SCDP activities, 26–28 April 2014

Date	Place	Activity	Outputs
26 April		Travel to Moksedpur	
26 April	Boalia Purbo Para, Bhabrasur Union, Moksedpur Upazila  Purbo Kanonipur Village, Union Gobindopur	Visit to Women's Samity – onion growing and processing  Facilitated by BRAC  accompanied by Upazila Agricultural Officer	Field observations  Group discussion House visits
27 April	Khulna, Metropolitan:  Telegati Village, Jogipur Union	Visit to village – vegetable and mushroom cultivation  Interview of Upazila Agricultural Officer  Visit to Bow Bazaar  Visit to vegetable cultivation on 'Gher"  Visit to mushroom entrepreneur	Field observations  Group discussion House visits  Discussion with DAE field staff  Interview and video of 1 woman entrepreneur
27 April	Jessore – Jhikorgacha Upazila, Patuapara Dakkhin village	Visit to market for flower selling  Visit to flower growing village  Accompanied by Upazila Agricultural Officer	Group discussion  Field observations
28 April	Magura  Abalpur Village, Magura Poursava  Kashinathpur Village	Meeting with Samity  Visit to banana and papaya gardens	Group discussion  Field observations  Discussions with DAE field staff
28 April		BRAC office – video interview of Mr. Rafiq	
28 April	Return to Dhaka		

## b) Visit to the North-West to visit NWCP and PRAN activities, 14–16 May, 2014

15 May 2014	9:00–11:00	Natore	Factory visit of PRAN agro-processing	
	11:00–2:30	Natore – Halsa Union	Visit to agricultural hub and interviews with women agricultural entrepreneurs	1 FGD with hub members (mixed group) 2 Interviews with lead farmers (men) 2 Interviews with sub-leads (women)
	4:00–5:00	Natore	Meeting with Head of Agricultural Extension	1 Interview with senior staff
	5:00–6:00	Natore	Group discussion with women factory workers	1 FGD with women factory workers
	6:00–7:00	Natore	Group discussion with women management staff	1 FGD women management staff
	7:00–8:30	Natore	Interview with AGM, PRAN, Natore	1 Interview with senior staff
16 May		Natore – Ahmedpur	Visit to agro-hub, discussion with hub members and individual interviews with sub-leads	2 Interviews with sub-leads (women)

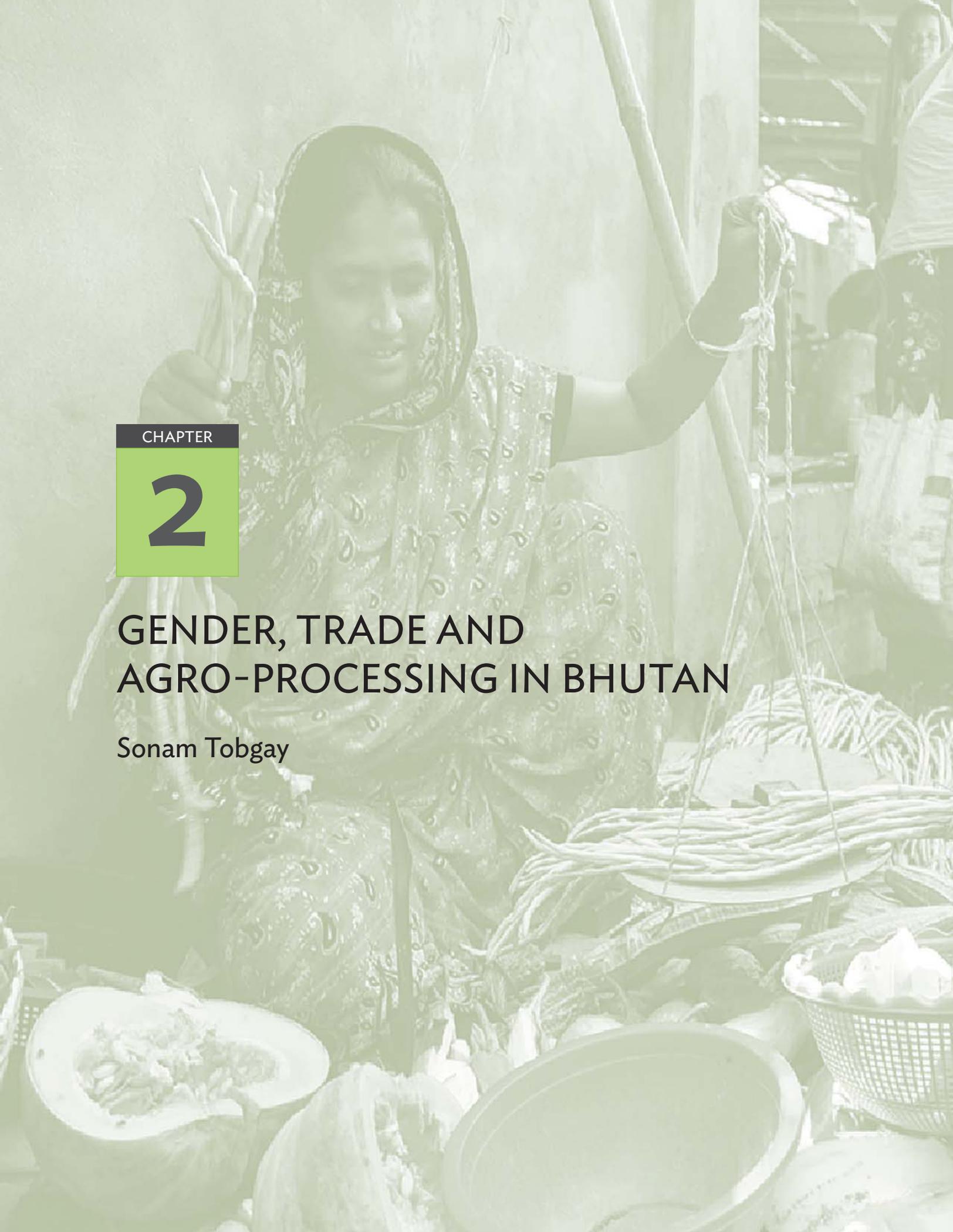
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A woman in traditional Bhutanese attire, including a patterned dress and a headscarf, is shown processing agricultural products. She is holding a bundle of long, thin roots or tubers in her right hand and a wooden pole with a rope in her left. In the foreground, there are several bowls and baskets containing processed goods, including what appears to be a bowl of sliced tubers and a basket of white, possibly dried, items. The background shows a rustic setting with other people and structures.

CHAPTER

# 2

## GENDER, TRADE AND AGRO-PROCESSING IN BHUTAN

Sonam Tobgay



# Gender, Trade and Agro-processing in Bhutan

## Executive Summary

The Bhutan case study assessed gender dimensions and its potential in regional trade integration with the prospect of expanding environment friendly industries. In comparison to other sectors, the agro-processing subsector in Bhutan encompasses parameters of both gender and green industries with the potential for intra-regional trade in South Asia. Agro-processing industries in Bhutan are limited to cottage, small and medium scale enterprises ranging from rice mills, fruit processing, juice and pulp extraction to dairy processing into cheese and butter. These enterprises are distributed across the country. For the purpose of the study, agro-processing of cheese and butter, rice milling, fruit juices and honey have been selected as these enterprises constitute components of trade, gender, and green development.

The study examines the role of women in the agro-processing subsector and identifies trade linkages both within the country and in the South Asian region. It provides recommendations and ways forward to mainstream gender into national priorities of policies and budgeting. The level of existing trade within the South Asian region has been outlined following the recommendations on policy objectives facilitating the planning process.

Chapter one outlines the background of the study including a brief description of the various agro-processing establishments visited during the study period. Some of the sites visited are Charru Tshongdrel, Bhutan Fruit Products Limited, Army Welfare Project, Druk Seed Center, Daga Shingdre Tsongpa, Bumthang Cheese and Bee Keepers Association. Data was collected from key stakeholders through semi-structured questionnaires, one-on-one interviews and group discussions. This Chapter also presents the gender scenario in the country citing that although Bhutan ventured into planned development only in 1961, the country has a literacy rate of 79 per cent in the urban areas out of which 72 per cent are female. The laws in Bhutan treat women and men equally with recourse to engendered legal acts safeguarding women's rights and interests, starting with the Constitution of Bhutan. However, while women in Bhutan enjoy full gender equality under the law, there are several areas in which women are at a disadvantage compared with men. The overall literacy rate for women, which stands at 45.9 per cent, is lower than that for men, which is 65.7 per cent. This seems to reflect in lower levels of female participation in formal employment and high public office. The government initiatives have been overcoming gender gaps by continuing to address gender concerns through providing women with greater access to professional, technical, and vocational training for enhancing their skills and knowledge.

Chapter two and three describe objectives and methodology of the study. Both primary and secondary data have been analysed, primary data has been sourced through key informant interviews while secondary data through reports, government publications and existing statistical data.

Chapter four assesses patterns of trade and women participation in the green sector. Bhutan's foreign trade is dominated by the free trade with India and preferential trade arrangements with other trading partners in the region including Bangladesh and Nepal. The country is a net importer of goods and services with 90 per cent of imports from India. Some of the major trade agreements include free trade agreements, preferential trade agreements and other regional trade agreements like South Asian Free Trade Agreement (SAFTA), South Asian Preferential Trade Agreement (SAPTA) and Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC) for the larger region. Despite concerted efforts, there are trade hurdles in the form of cross-border regulations, non-tariff barriers and inefficient logistics. The Chapter also presents the status of women's participation in agroprocessing sector in the country. The study found that women's participation is more predominant in manual jobs. For example, the study found that most women in Bhutan Fruit Products Limited and Bhutan Agroindustries Limited were engaged in factory floor task that requires less expertise and skills. Moreover, the study also captures upcoming women entrepreneurs taking up leadership roles, as evident from the Charru Tshongdrel and Bumthang Cheese enterprises being led and managed by women.

Chapter five and six present an analysis of the impact of regional trade on women's participation and entry points for women in the green sector through mainstreaming gender into regional trade. Regional trade, particularly with India and Bangladesh, has potential for women's economic empowerment and greater inclusion of women into mainstream economic development. Recognizing these potentials, Bhutan is making every effort towards issues of women and green development, women and regional trade and economic cooperation. The chapter underscores the importance of trade as a vital component of development, both for national employment and revenue gains. It was found that members of farmer cooperatives are predominantly women who supply fresh milk to milk processing units (MPUs) and cheese making factory. Milk is collected from farms and milk processing centers by farmer groups or individual entrepreneurs and taken to urban retail outlets. Such business models have encouraged women in large numbers to raise cattle and engage in dairy farming to supply fresh milk to the processors.

Agro-processing has the potential for economic empowerment of women beyond the micro and household levels, wherein women can carve niche areas of growth as actors and leaders in the future. However, agro-processing infrastructure in Bhutan is limited to basic manufacturing assembly lines, basic packaging floors, and manual unloading and loading bays; no gender friendly infrastructure has been observed. There is scope for realizing gender equality and trade through potential partnerships and support mechanisms facilitating institutional and organizational development.

Finally Chapter seven concludes the case study and reasons that regional integration has a lot to offer to the fragmented, small and weak economies of the South Asian countries. This may not necessarily be only in the areas of trade but also in the areas of cross border investment, project specific coordination, macro-economic policy harmonization and gender mainstreaming. The study presents a strong case for women empowerment that can go beyond individual and household level if adequate linkages are established in the agro-processing sector. It also highlights that women folks hold important roles and responsibilities in the value chain both as upstream suppliers and downstream processors. The Chapter also presents regional and national ways forward agreeing on common issues in Bangladesh, Bhutan, India and Nepal.

## Abbreviations

APIC	Agency for Promoting Indigenous Crafts
AWP	Army Welfare Project
BAFRA	Bhutan Agriculture and Food Regulatory Authority
BAIL	Bhutan Agroindustries Limited
BAOWE	Bhutanese Association of Women Entrepreneurs
BEKAP	Bee Keepers Association of Bhutan
BFPL	Bhutan Fruit Products Limited
BIMSTEC	Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation
BLSS	Bhutan Living Standard Survey
BOIC	Business Opportunity and Investment Center
CEDAW	Convention on the Elimination of All Forms Discrimination Against Women
CSMI	Cottage Small and Medium Industries
DRC	Department of Revenue and Customs
DSC	Druk Seed Center
DCSI	Department of Cottage and Small Industries
EDP	Economic Development Policy
EU	European Union
FDI	Foreign Direct Investment
FGD	Focus Group Discussion
FTA	Free Trade Agreement
FYP	Five Year Plan
GNH	Gross National Happiness
MDG	Millennium Development Goals
MOEA	Ministry of Economic Affairs
MOF	Ministry of Finance
MPU	Milk Processing Unit
MSME	Micro Small and Medium Enterprises
NCWC	National Commission for Women and Children
NGO	Non Governmental Organization
NPAG	National Plan of Action Against Gender
NSB	National Statistical Bureau
PTA	Preferential Trade Agreement
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asian Free Trade Agreement
SAPTA	South Asian Preferential Trade Agreement
SATIS	SAARC Agreement on Trade in Services

SDG	SAARC Development Goals
TAG	Technical Advisory Group
SPS	Sanitary and Phytosanitary
UN	United Nations
USA	United States of America
US	United States
WTO	World Trade Organization

## Background

The Bhutan case study aims to assess gender dimensions and its potential in regional trade integration with the prospect of expanding environment friendly industries. The researcher, upon consultation with stakeholders in Bhutan and members of the Technical Advisory Group (TAG) formed under the study, selected agro-processing subsector for the Bhutan case study. In comparison to other sectors, agro-processing subsector in Bhutan encompasses parameters of gender as well as green industries and has the potential for intra-regional trade in South Asia.

Agro-processing industries in Bhutan are limited to cottage, small and medium scale enterprises and are distributed across the country (refer to Annex 2.1). Table 2.1 provides information on the type of enterprises visited during the course of the study period. A detailed rationale for the following cluster choices has been discussed in Chapter two.

**Table 2.1 Type of Agro-processing Industries Visited During Study Period**

Name of Cluster	Location	Nature of Processing	No. of Employees	Management led by
Bhutan Agroindustries Limited	Thimphu	Fruits and vegetables	35 employees	Male CEO
Chharu Tshogdrel	Paro/Chukha	Rice milling	70 employees	Female Managing Director
Bhutan Fruit Products Private Limited	Samtse	Fruits and vegetables	300 employees	Male CEO and Board of Directors
Army Welfare Project	Sarpang	Spirit distillery	53 employees <sup>a</sup>	Male Managing Director
Bumthang Cheese Factory	Bumthang	Cheese and butter		Female Entrepreneur
Bee Keeping Association of Bhutan	Bumthang	Honey	35 members	Male Chairman
Daga Tshingdre Tshogpa	Dagana	Orange pulp	64 members	Male Chairman
Druk Seed Center	Paro	Seed production	55 employees	Male Program Director

<sup>a</sup> Only the General and Service Providers are reflected.

Source: Author's survey, 2014.

## Brief Description on the Processing Sites

### *Definition of Agro-processing*

Agro-processing industries refer to those industries that transform agricultural and livestock commodities into different forms that add value to the product. Agro-processing industries, especially fruit juice, pickle, cheese, wine, milk, rice milling and spirit brewery dominate the commercial sector of Bhutan. These are mainly operated as family businesses, farmer cooperatives and commercial undertakings both under public and private arrangements.

Agro-processing as defined in this study include both primary and secondary processes. Primary processing operations involve activities such as crop cleaning, peeling, drying, milling, grading and packaging. These activities are mainly carried out by members of farmer cooperatives and later transported to the factories as semi-finished products. At present, small-scale farmers do not possess the means or the ends to produce for large scale processing companies but serve as critical suppliers to the processing plants by supplying such items as mango cubes, orange pulp, fresh vegetables and rice paddy. Secondary processing operations entail increasing nutritional or market value of the commodity and physical form or appearance of the commodity by sending it through factory assembly processing and sealing into labeled airtight containers. Examples of secondary processing include rice milling, orange squash, tomato paste, vegetable seeds packing, pressing juice out of fruits and making cheese out of milk.

### *Agro-processing in Bhutan*

Agro-processing industries in Bhutan are essentially cottage, small and medium scale enterprises revolving around traditional food types. Small and medium food processing in Bhutan is characterized by traditional food processing practices constituting as high as 90 per cent of the subsector in the rural areas of the country. These enterprises are mostly family owned, employing three to five workers and cater to household consumers and domestic market. They are characterized by manual and batch-type processes and are labor-intensive, with minimal mechanization. According to the Department of Cottage and Small Industries, industry classifications are based on the number of employment size and investment, these have been presented in Table 2.2. In 2013 there were a total of 12,548 cottage and small industries in the country (DCSI, MoEA 2013). The main food processing industries in Bhutan, especially the rural-based food processing industries include rice de-husking mills, flourmills, dairy farms, poultry farms, bakery and confectionery, cheese making, homemade pickles, meat and fish and ice-cream making.

**Table 2.2 Industry Classification by Employment Size and Investment and National Total of Cottage and Small Industry**

Scale	Employment size	Investment (Million Nu.)	National Total (in 2013)	Types in the country
Cottage	1-4	Less than 1 million	7,293	Bumthang Cheese, Bee Keeping, Poultry farming, Home-made potato chips, pickles, Daga Tshingdre Tsongpa
Small	5-19	1-10 million	5,255	Chharu Tshongdrel, Poultry farming, Bakery
Medium	20-99	10-100 million	N/A	Bhutan Fruit Products Ltd., Bhutan Agroindustries Ltd., Rice mills, Dairy processing plants
Large	100+	Greater than 100 million	N/A	

Source: Department of Cottage and Small Industry, MoEA, 2013.

These enterprises produce products mainly for the local markets, while few products are also exported to India and Bangladesh. A few export-oriented agro-processing industries

are located in the southern belts of the country, capitalizing on cheap imported labor and easy access to raw materials.

### *Potentials and Constraints in the Agro-processing Industry*

The overall potential of agro-processing in Bhutan lies in high value niche areas capitalizing on the country's clean environment, fresh water resources and organic origin. The overall potential of agro-processing is significant as it can:

- Increase the value of crops and livestock products of farmers and thus yield higher economic returns and improved livelihoods;
- Extend shelf-life of commodities and enhance food security;
- Expand marketing opportunities and foreign exchange earnings;
- Overcome seasonality and perishability constraints;
- Empower women who are contribute significantly to agro-processing and;
- Creation of employment and skilled labor.

However, there are a number of constraints that limit further development of small-scale food processing industries in the country. Starting and developing a small business in Bhutan is no easy task. Entrepreneurs face many challenges, especially in the erratic input supply, high and inadequate transportation costs, access to finance, inadequate cold storage facilities and unreliable markets. The subsector also suffers from shortage of skilled labor and technical competence in agriculture, especially in the traditional food industry sector. This coupled with poor management, leads to inefficiency and poor competitiveness. Labor costs have also risen markedly overtime resulting in higher production costs for labor-intensive operation. This has led many modern agro-processing factories to move their operations to lower labor cost areas such as in the southern belts of the country, or to adopt automation.

Growth of the agro-processing industry is hampered by various constraints that range from shortages and high cost of equipment and spares, poor equipment back-up services, limited supply of raw materials, limited access to appropriate packaging material for processed products, limited industrial space for expansion, small size of markets and lack of technology. Since equipment is mostly fabricated using local raw materials, the overall result is rather low productivity and efficiency. Among other reasons, progress and expansion is limited due to (i) difficulties in accessing foreign currency; (ii) use of sub-standard equipment as most enterprises fail to mobilize resources to acquire new equipment; (iii) limited transfer of technology from research and (iv) high taxes on imported raw material and spares. Further, attention to hygiene and basic food safety procedures is found to be limited among informal enterprises. Knowledge of specific regulations and legislations governing food safety and hygiene issues is only evident among those processors who market their product through formal outlets. The required costs of meeting the standards of Bhutan Agriculture Food and Regulatory Authority (BAFRA) are seen as an additional cost rather than a certification for enhancing product quality and safety.

### *Opportunities in Agro-processing*

There is promising potential for agro-processing in Bhutan, particularly if adequate market research and development is carried out in product quality, branding and marketing. For example, Druk, a famous brand throughout India, has been generating good business and

increasing shareholder value. Agro-processing ingredients and processing standards have received superior recognition by the markets in Bangladesh, India and Nepal than Bhutan. However, the new government has laid down support schemes through the operations of Business Opportunity Investment Centre (BOIC) towards developing cottage, small and medium enterprises. BOIC is mandated to lend to new and existing enterprises at four per cent interest rate without any collateral. In addition, the objectives of employment generation and import substitution have been focused in the overall government's self-reliance policy. This allows for higher chances of formalisation of businesses and competition among processors that could contribute to improved revenue to central government and reduced prices for consumers. BOIC among other sectors has the provision of service processing facilities thereby relieving small-scale processors of the burden of equipment operation and maintenance. It has great potential in the development of medium-scale fruit and vegetable processing and preservation, though areas of product promotion and marketing needs to be strengthened. There are widespread shortages of fruits and vegetables during the winter months in the country and yet during peak production in the summer months there is a glut and large amounts of fruits and vegetables are exported. Therefore, there is potential for fruits to be processed into pulps/juices, wine, jams, jelly, marmalade, pickles, dried products and confectionery items.

Common utilities such as good roads, power, water and communication are vital to the development of industries in both rural and urban areas. Most of these resources are still developing in Bhutan. However, electricity which is an important element to agro-processing and rural engineering is readily available in most areas through hydropower which is the main source of supply.

The following enterprises were visited during the course of the study:

**Bhutan Agro-Industries Limited (BAIL)** – A state owned company, BAIL is a fruit and vegetable processing company established in 1993 and located 12 kilometers from the capital city. BAIL has been set up with a social mandate to uplift the Bhutanese rural economy by creating opportunities for farmers to earn additional income by selling their surplus farm produce to the processing plant. The company achieves this objective by buying horticulture produce from farmers for using it as a main ingredient in processing. Besides the national market, BAIL products are sold to India and Bangladesh.

At the time of interview (refer to Table 2.3), BAIL reported a total of 124 employees (including both casual and permanent laborers). Of the total employees, 119 were male and 15 were female. Within the administration and finance division of the company, five were female and seven were male. On the other hand, the Works Department is dominated by 34 males as compared to five females; one of the reasons for smaller number of females is the outdoor nature of the task requiring bulk physical-labor during loading and unloading for raw materials and finished products.

**Table 2.3 Employment by Job Type and Gender Distribution**

Job Type	Male	Female	Total
Administration and Finance Division	5	7	12
Works Department	34	5	39
Among Casual Workers	18	40	58
Of Total Employees	119	15	124

Source: Author's Survey, 2014.

BAIL's total sales in India for 2013 is recorded at 113.45 million ngultrums as compared to 92.55 million ngultrums in 2012 (refer to Table 2.4).

**Table 2.4 Total Sales in India and Bhutan, 2012 and 2013**  
(million Ngultrums)

2013		2012		TOTAL
Bhutan	India	Bhutan	India	
113.45	8.24	92.55	8.91	223.15

Source: BAIL, 2014.

Moreover, annual production of all assorted goods is recorded close to six million units in 2013 from 5.4 million units in the 2012.

**Table 2.5 Yearly Production in Number of Units<sup>a</sup> by Type of Products, 2012 and 2013**

Production Type	2013	2012
Jam and marmalade (all sizes)	75,345	113,713
Canned vegetables	2,211	1,306
Canned fruit (all sizes)	866	4,338
Canned fruit juice (all sizes)	28,487	51,379
Fruit Squashes	605,894	664,835
Pickles (all sizes)	48,126	46,872
Mineral water	5,190,985	4,581,515
<b>Total units produced</b>	<b>5,951,914</b>	<b>5,463,958</b>

<sup>a</sup> Units are numbers in terms of bottles, sachets, can containers, etc.

Source: BAIL, 2014.

Chharu Tshongdrel, the rice milling company is managed by a women entrepreneur educated at the University of California in Berkeley, USA. She portrays a role model for other women in socioeconomic empowerment and progressive entrepreneurship. With over 20 years of experience, the rice milling company exports high value Bhutanese red rice to United States of America and Europe, together comprising exports of up to 200 metric tons per annum. Chharu Tshongdrel procures paddy from farmers in the country by door-to-door collection during harvest periods. Poor road condition on the mountains with large distance between collection centers and the milling area continues to pose challenges driving up transportation costs. With Bhutanese farmers who are dominantly smallholders, no single producer can satisfy the entire demand.

Equipped with new infrastructure and adequate space, Chharu Tshogdrel's rice milling hub is in the southern border town of Phuentsholing neighboring India. This not only facilitates shipping procedures, but also allows for employing wage laborers from across the border town in India. About 80 per cent of the labor force required in hand-sorting of the grains is Indian women who travel across the border as day-laborers and return in the evening after working hours. A total of 60 employees are Indian women wage-laborers while only about 15 are Bhutanese women. Only 15 employees are on a regular payroll while the larger numbers are temporary day wage-laborers. Phuentsholing neighboring the Indian border

town is used as the main dispatch center with trucks plying via Indian highways destined to the Kolkata port. It is from Kolkata that bulk consignments are shipped in bigger sea vessels to port of destinations in the USA and Europe.

Some of the perennial challenges faced by Chharu Tshongdrel were reported to include occasional road blocks resulting out of political unrest localised in West Bengal districts and lengthy custom formalities both in the Bhutan border gate and in India. Access to finance has curtailed expansion of the factory infrastructure while small quantities of paddy available for sale from farmers have restricted the growth of enterprise from small scale to medium scale.

**Army Welfare Project (AWP)** is a commercial enterprise brewing alcohol products in Bhutan since 1974. It is the Royal Government of Bhutan's undertaking established to generate funds for the welfare of service personnel, ex-service personnel and their family. The AWP manufactures alcoholic beverages in two distilleries located in Gelephu and Samtse in Bhutan. Twenty per cent of exports are made to the north-eastern states of India. In addition, Gujarat, Kolkata, Guwahati and Cooch Bihar are some of the other markets for exports to India. As reported, annual total sales of 1.5 billion ngultrums were recorded in 2013.

One of the biggest challenges for AWP is that alcohol is included in the "negative list"<sup>42</sup> for trading partners in the region. The product also encounters significant "technical barriers to trade" owing to higher tariff brackets. Almost 90 per cent of employees on the production floor are dominated by women travelling across from Indian border towns neighboring Gelephu in Bhutan.

**Bee Keeping Association** of Bhutan was started as a government project in 1981 with support from the Swiss Development Cooperation (Helvetas). In 1998, the association was more formally established with full time office bearers and proper maintenance of books and accounts. Since 2001, the association has been functioning as a cooperative group with 35 registered members out of which only two are females the remaining are males. The members rear honey bees in boxes as an alternative source of livelihood deriving cash income from the sale proceeds. Some of the persistent challenges include physical difficulties faced by the women while transferring heavy containers like the bee-rearing boxes during migration seasons. Queen bee rearing continues to be difficult because of the technical skills required; and it is expensive to buy costing Nu. 2,000 per queen bee. Other challenges involve working on dilapidated machines and equipment, for example use of an old vehicle of 1996 model incurs additional maintenance cost resulting in lack of effective mobility.

With the office bearers limited to a two year term, annual honey production has been recorded at 15 metric tons and sold at Nu. 290 per kilogram. In monetary terms, this corresponds to Nu. 5,700,000 of sales per annum by the association.

**Daga Tshingdre Tshogpa** is a farmer cooperative set up in 2005. It is supported by government subsidy and comprises 64 members. It employs two permanent factory floor workers and hires casual laborers based on seasonal demands of processing. Managed by the plant Secretary, the processes orange pulp, mango cubes, bamboo shoots and mango pickles. Average annual total sales have been recorded at Nu. 415,715 with a profit of Nu. 247,352. Most packaging materials are imported from India including labels, stickers, carton boxes,

<sup>42</sup> In simplified terms, a negative list is part of the sensitive list with trading partner-countries protecting the subsector matching with a higher trade tariff.

vegetable oil and spices. Procurement from local farmers includes bamboo shoot, orange, chillies, radish and mango. Daga Tshingdre Tshogpa supplies the finished products to distributors in Thimphu through direct marketing. Long distance to markets from Dagapela to Thimphu continues to pose pressing challenges.

**Druk Seed Center** functions under the overall guidance of the Ministry of Agriculture and Forest of the Royal Government of Bhutan. It is one of the central programs of the Government focusing on seed production of cereals, vegetables and horticulture products. The organization has developed and trained a network of seed farmers across the country to grow high-quality seeds for market demand. Roughly about 20 metric tons of potato seeds are exported to India every year with the Center employing about 55 personnel out of which 25 are females and the remaining are males. In addition, it also employs about 100 casual non-permanent wage laborers that are mostly women.

**Bhutan Fruit Products Private Limited** was established in 1973, the enterprise is owned by Tashi Group of Companies, the main distributor based in Kolkata, India. About 90 per cent of the finished products in the form of orange squash, pickles, tomato ketchup, pineapple slices and other juices are exported to India. Some of the main markets for processed products are in Bangalore, Chennai, Cochin, and a bulk of them are in the North-Eastern states of India. Most raw materials including fresh fruits and vegetables, semi-processed pulp and frozen produce are directly purchased from India. Moreover, other raw materials like packaging materials ranging from pet bottles, paper labels and containers, etc. are procured from predominantly from India and some from China. Strong supplier relationships have been forged across the border towns with Indian traders for supply of fresh fruits and vegetables. The factory working hours were reported to operate from 8:30 am till 5:30 pm for a total of 150–250 laborers depending on the processing seasons. About 95 per cent of wage laborers travel across the border towns of India into Bhutan as daily wage-laborers. Ninety per cent of the labor force comprises women who are predominantly involved in work on the factory floor attending to various assembly chains depending on the production line schedule. Both national and Indian laborers are paid a minimum daily wage of Nu. 125 per day. Some of the concerns raised by the management include strikes and bandhs on Indian roads, cost incurred on fresher course for new employees, additional cost from turn-over of employees, and requirements to fulfil medical clearances, safety and quality standards set by the Bhutan Food and Regulatory Authority.

**Bumthang Cheese** was established in 1978 with support from Swiss Development Assistance under project Helvetas in Bumthang. In 1991, the processing plant was privatized and since then it has been run by a Swiss expatriate, now a Bhutanese citizen. At present, the cheese factory is being run as a family business by Aum Yozer Lham (Proprietor) and her two children. Milk which is the basic raw material for processing cheese is predominantly supplied to the factory by 38 farmers who are registered suppliers. In addition, some milk is supplied by a government owned jersey farm located in Bapalathang. The daily plant capacity is recorded at 800 litres of milk for processing cheese and butter. The selling price of cheese is recorded at Nu. 470/kilogram and depends on production capacity in the season. For a good summer season, the monthly average cheese production touches 1,250 kg. This does not include production of “datsi” to meet the local demand arising out of rituals and ceremony in the locality. During the winter months, production declines as a result of less pasture grazing.

Aum Yozer Lham reported that she earns an annual income of Nu. 2.5 million from her sale proceeds but incurs huge expenditure on timber and electricity required for heating

boilers for the processing line. High costs of replacing old machinery and maintenance of plant equipment have also been a major concern for the proprietor. On a visit to the plant, plumbing infrastructure appeared dilapidated with leaks in several corners. The raw material like special non-stick wrapping paper used for packing cheese and butter is purchased from India through an Indian merchant business associate.

### Gender Scenario in Bhutan – in general

Bhutan is governed by the overall guiding philosophy of Gross National Happiness (GNH) emphasizing on the importance of equitable and sustainable socioeconomic development, environmental conservation, promotion of cultural values and good governance. The country transitioned from a monarchy to parliamentary democracy with the first elections held in 2008 and the second in 2013 based on a written Constitution. Bhutan, though a small Himalayan Kingdom in South Asia, has a promising 30,000 megawatt of hydropower potential which if harnessed successfully will not only provide the country strategic significance but also fillip to the overall socioeconomic development of the country.<sup>43</sup> With planned development ushered only in 1961, the country enjoys an overall literacy level of 79 per cent in the urban areas and female literacy rate of 72 per cent (refer to Table 2.6).

**Table 2.6 Literacy Rate Disaggregated by Area and Gender**  
(per cent)

Area	Male	Female	Total
Urban	86.7	72.0	79.2
Rural	65.0	47.1	55.9
Bhutan	71.6	54.7	63.0

Source: BLSS 2012, NSB and ADB.

Average household size is 4.5 and ranges from 4.2 to 5.5 across the dzongkhags as shown in Table 2.7.

**Table 2.7 Average Gender Household Size by Area**  
(urban or rural)

Area	Household Head		Total
	Male	Female	
Urban	4.3	3.7	4.1
Rural	4.8	4.6	4.8
Bhutan	4.6	4.4	4.5

Source: BLSS 2012, NSB and ADB.

According to Bhutan Living Standard Survey (BLSS) 2012, the proportion of female-headed households is much higher (34 per cent) in the rural areas as compared to the urban areas (19 per cent).

<sup>43</sup> As per DGPC 2012 annual report hydropower contributes about 27 per cent to the overall government revenue through dividends and taxes.

Table 2.8 compares Bhutan with neighbouring countries on gender inequality index recorded the lowest in Bhutan at 0.464, and the highest in India at 0.610. Further, Bhutan recorded 887 females for every 1,000 males as compared to 1,016 females for every 1,000 males in Nepal.

**Table 2.8 Bhutan Compares with Neighbors on Gender Inequality Index and Sex Ratio**

Country	Gender inequality index 2012	Sex ratio (no. of females per 1,000 males, 2012)
Bangladesh	0.518	977
Bhutan	0.464	887
India	0.610	937
Nepal	0.485	1,016

Source: Human Development Report 2013, United Nations Development Program.

Laws in Bhutan treat women and men equally with the provision of specific legal acts safeguarding women's rights and interests, starting with the Constitution of Bhutan. The Constitution provides strong statement on the equal rights of all citizens, regardless of sex. Further, the Principles of State Policy commit to create a state free of discrimination and to take measures to eliminate discrimination against and exploitation of women. Bhutan's Inheritance Act of 1980, for example, guarantees equal inheritance rights to men and women while traditional inheritance practices favour daughters over sons. The recently published Gender Policy Note (2013) by the World Bank reaffirms that in Bhutan most women acquire land ownership through inheritance, particularly in matrilineal communities. Unlike in other countries, the matrilineal inheritance practice offers economic opportunities for Bhutanese women and contributes to their relatively equal status with men. Further, Article 9, Clause 17 of the Constitution mentions, "The State shall endeavor to take appropriate measures to eliminate all forms of discrimination and exploitation against women, including trafficking, prostitution, abuse, violence, harassment and intimidation at work in both public and private spheres". The inclusion of such anti-discrimination clause does demonstrate a strong State commitment to gender equality, though it does not specifically include the economic, political and social participation of both genders.

Similarly, Bhutan Vision 2020 outlines a vision of development based on GNH emphasizing the ability for all to realize their potential, equitable sharing of the benefit of development and opportunities for all to contribute to decisions that affect their lives, livelihoods and families. Along with environment, poverty and climate, the importance of gender has been highlighted while formulating the country's developmental plans with guidelines encouraging gender mainstreaming. More specifically, the government recognizes the important role that women play in economic development and is committed to promoting gender equality in all spheres and sectors of Bhutanese society. Such commitment was reinforced with the government ratifying the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1981 and included goals of achieving gender equality in the past four consecutive five-year policy plans beginning in 1992. The stated commitments to address gender gaps have become more detailed, the most recent of which was unveiled in 2008.

The National Assembly established the National Women's Association of Bhutan as an NGO in 1981, and the National Commission for Women and Children was founded in

2004. NCWC spearheads the implementation of the aims and objectives towards gender equality and protection of children. There are strong ongoing commitments to the achievement of the Millennium Development Goals (MDGs) and the SAARC Development Goals (SDGs), both of which include gender components. Further, in 2008 a National Plan of Action on Gender (NPAG) was formulated to accompany the 10th FYP (2008–2013) requiring each sector to effectively mainstream gender issues into their policies and programs. NPAG recognizes women's economic disadvantage and thus identifies economic development with focus on women employment.

While women in Bhutan enjoy full gender equality under the law, there are several areas in which women stand at a disadvantage compared to men. The literacy rate for women, which stands at 45.9 per cent, is lower than that for men, which is 65.7 per cent. This reflects onto lower levels of female participation in formal employment and higher public office. The gap is particularly acute in rural areas, where only 39.2 per cent of women are reported to be literate. Although labor force participation rates for women have increased significantly, from 38.4 per cent in 2001 to 64.6 per cent in 2009, women tend to be engaged in less remunerative employment or as unpaid family members, particularly in the agriculture sector, which employs 72.1 per cent of female workers. However, even if women are engaged in less remunerative work, data reveal an absence of the feminization of poverty in Bhutan, as poverty is slightly higher among male-headed households. Another area requiring attention is the low representation of women in parliament and higher public office, as well as civil service.

With respect to economic development, there are ongoing plans such as the promotion of Cottage, Small and Medium Industries (CSMI) giving emphasis on mainstreaming women into the planning process. The CSMI strategy has incorporated a set of measures to enhance competitiveness, including the development of clusters and/or value chains. The areas of focus include the ones which have been particularly important for women's enterprises, such as textiles and handicrafts. Cooperation with the Agency for Promotion of Indigenous Crafts (APIC) is also envisaged in four specific crafts, including silk and weaving, embroidery, cane and bamboo crafts.

Government initiatives continue to support priority actions to address gender concerns through (i) providing women with greater access to professional, technical, and vocational training; (ii) enhancing the skills of women farmers and vulnerable groups of women to encourage diversification of their income-generating activities; (iii) promoting cottage and small rural-based enterprises, and providing increased access to financial services to accelerate growth in such enterprises; (iv) making rural-based skills and training programs more women-friendly to encourage greater participation of women; (v) addressing the problem of rising female unemployment, especially in urban areas; (vi) encouraging better understanding of the extent and nature of women's involvement in the informal sector; (vii) addressing the issue of underage girls employed as domestic workers; and (viii) strengthening the collection, analysis, and use of sex-disaggregated data.

## Objectives and Rationale for Selection of the Green Sector

### Objectives

In line with the overall objectives, the study examined the above mentioned industries focusing closely on the importance of trade both within Bhutan and the potential for growth in the South Asian region specifically in the context of exploring linkages between gender and green trade.

The main objective of incorporating gender and environment into the study was to explore the potential for women to perform their jobs using cost effective methods while ensuring conservation of the environment, and to accelerate sustainable development facilitating people's quality of life. As women in rural Bhutan are mainly engaged as agricultural workers, home-makers and caregivers, they play a crucial role in the environment and green trade. The rural women play a vital role as farmers and conservationists, and are more reliant on the environment for their basic needs such as food and water. Likewise, awareness and knowledge on a healthy environment within the agro-processing needs are integrated into their traditional practices of farming and home processing. With greater development access to outside markets, the need to adopt gender-responsive measures towards socio-economic development and environment policy making has been timely.

Some of the specific objectives of the study include;

- a) To analyze aggregated agro-processing production and levels of regional trade;
- b) To examine the specific role of women in the sector capturing women and trade linkages;
- c) To identify gender issues and concerns in the sector and recommend actions that will mainstream gender in the national priorities of policies and budgeting;
- d) To identify green components in the sector and potential for employment creation and trade development in the region;
- e) To determine the level of trade in the region;
- f) To recommend policy objectives in the planning process.

### Rational for Selection

The above industries have been selected in an attempt to accommodate the three critical factors of including gender, green development and regional trade integration. In addition, research questions on the availability of data and other information have been an important determining factor. Consultations with key stakeholders and discussions at preliminary workshops have also contributed to justifying the rational of choosing the agro-processing sub-sector.

Within the agro-processing sector, the following attributes are considered to characterize the selection process;

- i. Gender component in terms of leadership roles, production responsibilities and capacity, potential for future growth and expansion, etc.

- ii. Geographical and regional distribution in terms of location of the industry representative of country specific production scenarios;
- iii. Size and production capacity of the agro-processing sector including backyard, cottage, small and medium scale.
- iv. Level of existing trade both within the country and in the South Asian region and the potential to increase trade in the future.

## Methodology and Data Sources

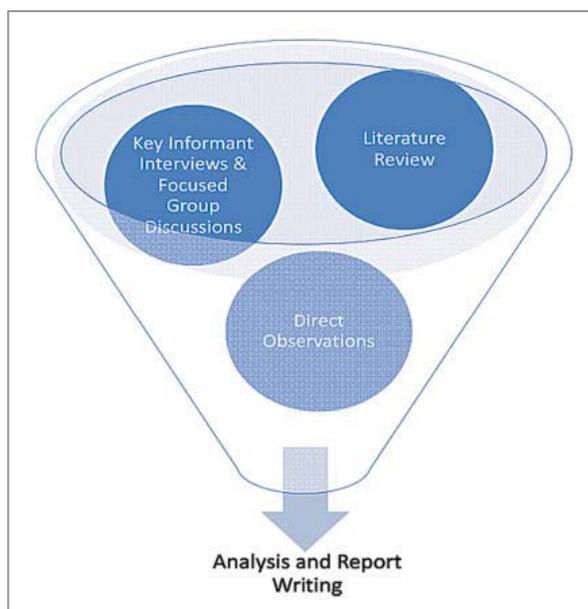
The study collected primary information through field visits to Samtse, Bumthang, Paro, Chukha, Sarpang and Thimphu (refer to Annex 2.2 for people met). One-on-one consultations were held with proprietors, officials of the enterprise, factory floor workers through the use of semi-structured interviews (refer annex 3 for sample SSI). In addition, group discussions were held with office bearers, employees and suppliers. In line with the scope of the assignment, the consultant used a checklist of open-ended guide/ entry questions for both group discussions and semi-structured interviews. This checklist evolved from the first version and new information and insights emerged from interactions with various people and direct observation of field activities as the assignment progressed. Additional notes complementing the survey included conversations with the key informants in the factory premise.

Secondary data has been collected from existing reports and publications (refer annex 3 for references made). Constant guidance and feedback have been provided by the study's Technical Advisory Group member from Bhutan and UN Women Bhutan representative.

Key to the process has been the application of "triangulation" method, checking information across various sources (secondary information, group discussions, key informant interviews, and direct observation) to enhance the veracity of the assessment.

The study has reviewed the status of agro-processing industry in the country by critically examining the issues of gender, trade and green growth. This encompassed looking at government policies and legal frameworks, constraints and infrastructure, know-how and competitiveness, gender aspects, general challenges and strategic opportunities for regional trade in the South Asian region. Upon completion of consultations with key informants and field visits, information accrued was analyzed for this report.

**Figure 2.1**  
**Basic Framework for Information**



## Assessing Patterns of Trade and Women's Participation in the Green Sector

### Bhutan's Foreign Trade

Bhutan's trade is predominantly with India but with huge trade imbalances as recorded in 2011 revealing Nu. 8.8 billion trade deficit with India and with third countries. Bhutan has free trade and commerce agreement (FTA) with India, and preferential trade agreement (PTA) with Bangladesh which is one of the top three export destinations. The current trading arrangements allow duty/tax free access to 18 exportable items from Bhutan to Bangladesh, however, with the recent South Asian Free Trade Agreement (SAFTA) meeting held in Bhutan (July 2014), the two countries are working on possible FTA arrangements for the future. SAFTA is a regional trading block aimed at reducing tariffs in stages for intra-regional trade between the eight South Asian countries. Member countries over the years have made commitments to reduce tariffs as reported in Table 2.9.

**Table 2.9 SAFTA Trade Liberalization Program**

	Phase I	Phase II	
	2006–2008	Five years 2008–2013	Eight years 2008–2016
<b>Least Developed Countries (LDC)</b> (Bangladesh, Bhutan, Maldives, Nepal)	Tariff cut to a maximum rate of 30 per cent.		Subsequent tariff reduction from 30 per cent or below to 0–5 per cent.
<b>Non-LDC</b> (India, Pakistan, Sri Lanka)	Tariff cut to a maximum rate of 20 per cent.	Subsequent tariff reduction from 20 per cent or below to 0–5 per cent.	

Source: SAFTA, Article 7.

Other regional agreements include South Asian Preferential Agreement (PTA) and SAARC Agreement on Trade in Services (SATIS).

Bhutan is also negotiating trade agreements with Nepal. In 2011, the value for Bhutan's export to and import from Nepal were recorded at Nu. 76 million and Nu. 138.89 million respectively. Likewise, Bhutan and Thailand signed a Trade and Economic Cooperation Agreement in November 2013. The value for Bhutan's exports to and imports from Thailand was Nu. 4.67 and Nu. 1,223.70 million respectively in 2011. On the global front, Bhutan's membership in the World Trade Organization (WTO) began in 1999; the country almost became a member in 2009 and is now suspended accession protocols indefinitely. On a regional level, Bhutan is member to the Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC) with ongoing negotiations for a free trade area.

**Table 2.10 Direction of Trade Including Electricity, 2007–2011**  
(million Ngultrums)

Trade	2007	2008	2009	2010	2011
<b>Exports</b>	27,859.06	22,590.64	23,992.74	29,324.39	31,485.95
India	22,723.72	21,480.02	22,434.39	26,000.89	26,377.97
Third countries	5,135.34	1,110.62	1,558.35	3,323.50	5,107.98
<b>Imports</b>	21,745.44	23,495.12	25,650.18	39,084.09	48,697.64
India	15,099.54	17,339.55	19,968.01	29,338.00	35,201.07
Third countries	6,645.90	6,155.57	5,682.17	9,746.09	13,496.57
<b>Balance of Trade</b>	6,113.62	(904.48)	(1,657.44)	(9,759.70)	(17,211.69)
India	7,624.18	4,140.47	2,466.38	(3,337.11)	(8,823.10)
Third countries	(1,510.56)	(5,044.95)	(4,123.82)	(6,422.59)	(8,388.59)

Source: Statistical Year Book, 2012, National Statistical Bureau, 2012.

In 2012 (refer to Table 2.11) the country recorded a Nu. 24,676.48 million trade deficit, almost a 70 per cent decline compared to the previous year.

**Table 2.11 Overall Balance of Trade Including Electricity, 2005–2012**

Year	Imports	Exports	Balance
2012	53,093.61	28,420.13	(24,673.48)
2011	48,697.64	31,485.95	(17,211.69)
2010	39,084.09	29,324.39	(9,759.70)
2009	25,650.17	23,992.74	(1,657.43)
2008	23,495.12	22,590.64	(904.48)
2007	21,745.44	27,859.06	6,113.62
2006	19,011.00	18,771.00	(240.00)
2005	17,035.07	11,386.17	(5,648.90)

Source: BACS, DRC, MoF.

As noticed from Table 2.12, Bhutan's trade is dominated by 90 per cent of imports coming from India and also a majority of exports to India and Bangladesh (refer to Table 2.12 and Table 2.13). Bangladesh represents barely one per cent of imports and about six per cent of exports constituting mainly mandarin, apples and particle board finished product furniture.

**Table 2.12 Top Ten Country of Imports**

Country	Ngultrums in Million
India	41,82.56
South Korea	1,658.94
China	1,330.17
Japan	1,260.75
Austria	939.70
Singapore	783.47
Thailand	740.65
Sweden	609.16
Nepal	467.76
Switzerland	392.71

Source: BACS, DRC, MoF.

**Table 2.13 Top Ten Country by Exports**

Country	Ngultrums in Million
India	17,502.18
Bangladesh	1,172.17
Italy	124.97
Japan	113.73
Nepal	107.45
Hong Kong	79.09
Netherlands	70.05
Germany	30.31
Samdrupjongkhar	20.42
Bulgaria	16.77

Source: BACS, DRC, MoF.

**Table 2.14 Balance of Trade with Bangladesh**

Year	Imports	Per cent of Imports	Exports	Per cent of Exports	Balance
2012	281.29	0.53 per cent	1,172.18	6.08 per cent	890.89
2011	169.35	0.35 per cent	1,226.66	3.9 per cent	1,057.31
2010	190.115	0.49 per cent	906.08	3.08 per cent	715.965
2009	117.35	0.46 per cent	758.02	3.16 per cent	726.1
2008	123.55	0.50 per cent	632.41	2.80 per cent	508.86
2007	75.41	0.30 per cent	469.59	1.70 per cent	394.18
2006	79.51	0.40 per cent	470.13	2.5 per cent	390.62

Source: BACS, DRC, MoF.

Given the above scenario, it must be noted that inadequate physical infrastructure adversely affects economy-wide productivity and raises trade costs, and as a result, constrains the country from benefiting from opportunities offered by both regional and foreign trade. Ageing transport systems increase travel time between rural and urban areas of the country as well as outside the country. Cold chain and other specialized infrastructure required for exporting high value agricultural and good products in many places are rare.

## Trade Agreements and Legal Environment

**Foreign Direct Investment Policy 2010** - The Foreign Direct Investment Policy 2010 has been adopted with an objective to achieve economic self-reliance by the year 2020 and full employment up to 97.5 per cent over the same period. Sectors like agro-processing, organic farming, dairy and horticulture are being opened to 74 per cent foreign ownership. A 100 per cent FDI has been approved in areas such as hotels and resorts, health sector and infrastructure facilities. As also laid out in the FDI policy document 2002, the opening of the national economy to foreign direct investment is envisaged as providing a beneficial boost to private sector development and industrialization, through easier access to capital, technology, and markets. Among them, agriculture and agro-processing sectors have been listed open to encouraging foreign direct investment in the country.

Although the FDI policy undoubtedly prompted sectoral diversification and privatization by clearing industry wide ambiguities, the industry sector continues to be heavily concentrated on a narrow range of products. It is highly dependent on expatriate labor and is restricted by the small, fragmented domestic market and a narrow range of export markets. It is also limited by inadequate and expensive transportation and constrained by national sensitivities concerning resource exploitation, especially in tourism and logging and by caution regarding foreign investment and foreign labor. The main challenge facing the government is how to realize its commitment to private sector activity in the face of such constraints.

**Micro Small and Medium Enterprise Development Policy** - The overall objective of the Micro Small and Medium Enterprise (MSME) policy is to foster an enabling policy and regulatory environment, eliminating structural barriers constraining access to key resources. The MSME policy is intended to define and develop a reasoned set of policy statements to foster mobilization of input supplies, entrepreneurship and innovation for the benefit of the MSME sector in Bhutan. The policy is drafted in response to the challenges of globally integrated markets, emerging technologies and the competitive differentiations they are conferring on Bhutan's trading partners, the growing incorporation of knowledge in production networks and the burgeoning importance of enhancing energy-efficiency and 'green' technologies all around. The policy also emphasizes that the country's MSMEs receive all legitimate support from the government and ensure that MSMEs become and remain learning, resilient, dynamic and outward-looking enterprises.

**Eleventh Five Year Plan (2013–2018)** - Likewise the 11th FYP supports industrial development with focus given on sustainable industrial development on MSMEs. This has prompted the establishment of new institutions like the Department of Cottage and Small Industries (DCSI) and Agency for Promotion of Indigenous Craft (APIC) both housed under the Ministry of Economic Affairs. The overall policy framework and actions aim to strengthen business environment through (a) better business laws and regulations, (b) simplification and acceleration of business formalization by removing unnecessary requirements for both business registration and licensing, and (c) increasing responsibilities and administrative efficiency of regional trade offices.

**The Economic Development Policy 2010** – The EDP is the apex policy for economic development of the country and is the guiding document for all ministries and agencies to stimulate economic growth. The policy provides the basis for government intervention to enhance productivity of the economy as a whole. Wherever necessary, policies, laws, rules and regulations are harmonized or amended in line with the provisions of the economic development policy. The Economic Development Policy 2010 recommends a review of the national regulatory framework to enable favourable conditions for business development, identification of economic opportunities, and sector reforms. In order to promote investments and encourage entrepreneurship, the policy further recommends fiscal incentives across all sectors. The goal of the policy is to enable the country to create sufficient jobs for the population and achieve economic self-reliance by 2020.

**Vision 2020** – In the Vision 2020 document, the private sector development has been given priority by the government since the 6th FYP (1987–1992). Further, the Vision 2020 envisages private sector as the main engine of the nation's future economic growth. The private sector is expected to play an increasing role in fostering economic development and as a source of employment, especially for the youth. The Bhutan 2020 – Vision for Peace, Happiness and Prosperity is a 20 years perspective strategy document outlining policy and program support towards small and cottage industry comprising agro food processing aimed at greater access for small scale producers to technology, credit and markets so as to enable them to produce profitably for domestic market.

**Free Trade with India** – Nearly 96 per cent of Bhutan's trade is with India. Aside from historical and friendly political ties, this can also be associated with geographical proximity and the support India had provided to Bhutan both for producing exportable services, such as electricity destined for the Indian market and for sustaining imports through generous grants made in non-convertible rupees. All this has been facilitated by an institutional framework that includes a bilateral free trade agreement between the two countries, use of Indian rupee as a medium of exchange both internally in Bhutan and for trade with India, and a fixed exchange rate between rupee and ngultrum.

Bhutan being an import-dependent economy (with imports amounting to 60 or 70 per cent of GDP in recent years), there has been minimal compulsion to protect the domestic economy with import tariffs or quantitative restrictions. Due to limited domestic market, the industrial sector has been largely export oriented. The domestic agriculture sector has also not lobbied for protection, typical in many countries, due to scattered population and the predominance of small subsistence farmers. Yet quantitative restrictions on hard currency imports were common until 1990. The chief motivation, however, was to conserve scarce hard currency and INR rather than to protect domestic industry.

**Regional Trade Agreements** – At the regional level, Bhutan is a member of two sub-regional groupings: the South Asian Association for Regional Cooperation (SAARC), with Afghanistan, Bangladesh, India, the Maldives, Nepal, Pakistan and Sri Lanka, and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), with Bangladesh, India, Myanmar, Nepal, Sri Lanka and Thailand. Bhutan is a founding member of SAARC and has negotiated three trade agreements under its umbrella: the Agreement on SAARC Preferential Trading Arrangement (SAPTA); the Agreement on South Asian Free Trade Area (SAFTA); and the SAARC Agreement on Trade in Services (SATIS). At the multilateral trading regime, Bhutan's interest on becoming a member of the World Trade Organization (WTO) is still being studied. The multilateral examination of the foreign trade regime is proceeding on the basis of a draft working party report circulated in December

2007. Given Bhutan's inherent limitations due to location and small domestic market size, WTO members will likely have greater interest in services than in the market access to goods. Tourism and energy are the two areas that could interest WTO members, in view of Bhutan's vast hydropower potential and the market for electricity in India and Bangladesh.

## Emerging Challenges for Trade

Bhutan is still in the process of becoming a member of the World Trade Organization. The government is working towards improving the standard of Bhutanese agricultural products by ensuring that adequate infrastructure for grading; standardization and quality certification is in place through the Bhutan Agriculture Food and Regulatory Authority (BAFRA). While quality control has become an important element of competitiveness in international trade, Bhutan is yet to establish a comprehensive food safety regime. In Bhutan, few industries have attained ISO 9000 certification, which limits its ability to gain access to developed country markets, such as the United States (US), Japan and the European Union (EU). Therefore, adequate infrastructure and mechanisms to assess quality and a certification system for exported products are although challenging but essential components for Bhutan to increase exports.

Currently, Bhutan is taking the steps to strengthen its capacity to deliver quality food products by updating food laws and regulations in accordance with Sanitary and Phytosanitary (SPS) requirements, with a focus on proactive and preventative food quality and safety assurance measures. On the whole, the existing regulatory framework relies mostly on end product testing and does not sufficiently monitor hazards and manage associated risks at various stages in the food chain. There is also a limited institutional capacity to cope with the emerging trend of risk management in the food production system. Unless there is significant investment in strengthening human resources and institutional capacity, it will be cumbersome to expand trade in this sector.

Another challenge is trade logistics that involves a range of processes and services involved in moving goods from one country to another. For example, customs and administrative procedures, organization and management of shipment operations, tracking and tracing, and the quality of transport and information technology infrastructure are required in good order of business. Quality logistic services play a key role in facilitating the transportation of both regional and international trade in goods, supporting a country's competitiveness. Bhutan suffers from inefficient logistics of the mentioned and thus from trade by imposing extra costs in terms of time and money. Bhutan like many developing countries is yet to benefit from the productivity gains of logistics modernization and internationalization implemented over the last 20 years by advanced economies. As a result, it faces significant challenges in moving tradable goods. A landlocked country encounters particular challenges when it comes to logistics – for example, it takes up to six hours to drive a distance of 174 kilometers from Thimphu to Phuentsholing. Moreover, lack of a sea port makes transport expensive. Currently all consignments coming in to Bhutan are received from Kolkata sea port in West Bengal, India.

## Women's Participation in the Agro-processing Sector

Women's participation is concentrated mainly on the factory floor attending to manual labor activities such as peeling, cutting, washing, packaging and labelling (refer to Table 2.15 and Table 2.16). Certain production lines such as pickling have been traditionally operated exclusively by women taking advantage of productivity gains from agile fingers. However,

the work is uninteresting and women work all day filling jars with pickles or slicing chillies, peeling fruit skins and the like. Men are engaged in the areas of loading and unloading consignments requiring physical strength. Although the production operations adhere to the Bhutanese labor laws regarding maternity leave and benefits, there is, nonetheless, a tendency of labor turnover every season. This practice and the fact that most of the female workforce comprises predominantly seasonal and production line workers, who are often illiterate and unskilled, explains the limitation of promotion opportunities for female employees. Believing that only women have the patience and know-how for food production of this kind, most processing companies have hired women for the job.

Immigrant female labor plays a crucial role behind some of the agro-processing industries as noticed in processing factories of Druk Fruit Products Limited, Chharu Tshogdrel and Army Welfare Project. Labor from India work in Bhutanese factories as daily wage laborers returning to their country in the evenings based on work permits. Factory production line calls for cheap labor, and the people who are willing to do such work for minimum wage labor are the less educated lacking work experience and with limited opportunities. Often taking on the hardest physically demanding jobs for minimum wage while working in back-breaking job responsibilities, the works mostly in food processing factories and/or farms.

The enterprises employ temporary labourers during the peak production season, while the number of permanent employees in a processing enterprise is generally less than 35 people. The demographic characteristics are listed in Table 2.15 and Table 2.16 based on the fieldwork.

**Table 2.15 Number of Women Employed in the Following Agro-processing Sectors**

Enterprise	Women	Men
Bumthang Cheese	3	1
Druk Fruit Products Ltd.	250	15
Charru Tshongdrel	75	2
Army Welfare Project	65	10
BEKAP	1	5
Druk Seed Center	22	18
Daga Tshingdre Tshogpa	5	3

Source: Author's survey, 2014.

Processing enterprises and Cooperatives provide an important way for the monetization of rural economy. At the time of interview, a farmer reported earnings of Nu. 76,000 per annum from supplying fresh milk to the cheese factory in Bumthang. Likewise, members of BEKAP earn between Nu. 65,000–Nu.150,000 per annum from the sale of honey and queen-bees. Similarly, earnings were recorded for farmers who supply raw materials to BAIL and Daga Tshingdre Tshogpa. Therefore, the development of agroprocessing not only helps in creating employment but also reducing poverty by generating non-farm employment. This has led to an increase in farmers' income by establishing and strengthening the relationship between farmers and outside markets, expanding the supply chain and value chain, increasing value addition, promoting monetization of rural economy, and opening up rural households to new economic opportunities.

For example, BEKAP's bottled honey is available on the shelves of major retail shops in the capital city of Thimphu. Similarly, Bumthang Cheese and Apple juice are readily available

in most major retail shops such as Sherang Grocery Store, Lhatshong, Tashi Retail, Shop Number 7 and 8 Eleven. For bigger players like the Bhutan Agro-processing, Druk Fruit Products Limited and Army Welfare Project, there are established distributors performing functions of both wholesalers and retailers across the country and export branch offices outside Bhutan.

**Table 2.16 Employment Category in the Surveyed Agro-Processing Sectors**

Description	Women	Men
Managerial post	2	4
Qualification	High school drop outs	Mix
Position	Mostly factory floor level	Mostly managerial
Skill laborers	Dominantly low	Mix
Pay scale (factory)	Min. daily wage (Nu.125/day)	Min. daily wage (Nu.125/day)
Pay scale (managerial)	Monthly salary	Monthly salary
Poverty	Vulnerable	Not as vulnerable

Source: Author's survey, 2014.

The study also noted cases of some promising women entrepreneurs in the agro-processing sector. For example, Charru Tshongdrel, a rice milling company is managed by a young woman entrepreneur as the Chief Operating Officer. Educated in the University of California at Berkeley, the woman entrepreneur projects new ideas corresponding to changing times through innovation, creativity and entrepreneurial skills, these have been showcased by venturing into business expansion and market diversification both in the United States and Europe. Similarly, Aum Yozer Lham though uneducated has sharp business acumen and is the leading producer of Swiss cheese popularly known as Bumthang cheese. With skills and knowledge acquired on the job, she projects strong determination to expand her business through product diversification and increasing sales.

## Impact of Regional Trade on Women's Participation in Green Growth Sectors

Bhutan's regional trade particularly with India and Bangladesh has potential for women's economic empowerment and greater inclusion of women into mainstream economic development. Recognizing these potentials, Bhutan is making every effort towards issues of women and green development, women and regional trade and economic cooperation. This is evident from the overall GNH policy wherein green development is a strategic choice undertaken by the Royal Government of Bhutan by giving impetus to the creation of a more sustainable and healthy future for the younger generations.

### Volume of Trade in the Region

Table 2.17 presents trade flows corresponding to fruit juices and jams recorded at Nu. 148,792 million worth exports to India in 2012. Over the last six years, Bhutan has achieved a positive trade balance with respect to fruit juices and jams. The highest record was in 2010 with Nu. 80,470 million.

**Table 2.17 Trade Flows, Fruits and Jams**

Imports from India ('000 Nu.)	2007	2008	2009	2010	2011	2012
Fruit juices	75,910	78,498	80,114	75,152	99,999	1,38,927
Exports to India ('000 Nu.)	2007	2008	2009	2010	2011	2012
Fruit juices and jams	1,40,292	1,53,360	1,39,260	1,55,622	1,35,798	1,48,792
Trade Balance	64,382	74,862	59,146	80,470	35,799	9,865

Source: Bhutan Trade Statistics, various years.

Table 2.18 and Table 2.19 present that Bhutan's larger share of trade in processed foods and beverages is predominantly with India compared to other third country trading partners. For example in 2011, exports to India were recorded at Nu. 406.5 million against Nu. 26 million to third countries. Similarly, imports in 2011 were Nu. 1,478 million from India against Nu. 265 million from third countries. Total exports and imports to India were recorded at 1.6 per cent and 4.2 per cent respectively as per centage share of total trade. On the other hand, per centage share of total trade to third countries was much lower at 0.5 per cent and 2 per cent respectively (refer to Table 2.19).

**Table 2.18 Exports and Imports Data from India for Processed Foods and Beverages, 2005–2011**  
(million Ngultrums)

	2005	2006	2007	2008	2009	2010	2011	Share of total in per cent (2011)
Exports	389.2	413.9	368.0	276.3	318.9	317.5	406.5	1.6
Imports	752.3	765.7	763.1	822.5	1,009.8	1,313.0	1,477.7	4.2

Source: Royal Monetary Authority, Annual Report 2011–2012.

**Table 2.19 Exports and Imports Data Other than India for Processed Foods and Beverages 2005–2011**  
(million Ngultrums)

	2005	2006	2007	2008	2009	2010	2011	Share of total in per cent (2011)
Exports	5.3	4.6	8.1	6.7	7.1	17.4	25.9	0.5
Imports	151.2	153.3	164.9	179.7	151.3	212.0	264.8	2.0

Source: Royal Monetary Authority, Annual Report 2011–2012.

## Trade and Women's Participation in the Green Sector

Trade is an important component of development both in terms of national employment and revenue gains. It has been observed that members of farmer cooperatives are predominantly women, most of these women supply fresh milk to the milk processing units (MPUs)

and the cheese making factory. Though the subsector does not trade outside of Bhutan for now, continuing to process cheese and butter has kept the participation of women alive towards generating cash income. Milk collection, processing and marketing in Bhutan is geared to supplying milk and other dairy products to the urban centers. Milk is collected from farms and milk processing centers by farmer groups or individual entrepreneurs and taken to urban retail outlets. The processed milk and milk products are sold to the urban population through established distribution channels including direct delivery to retailers.

The Bhutanese population is estimated roughly at 700,000 and growing annually at 2.3 per cent per year. Rapid increase in urban population has led to increase in purchasing power and demand. Table 2.20 shows past and future urban demand for dairy products, suggesting that farmers will continue to rear cattle to meet processing demands. Cattle rearing practices in most parts of the country involve open-grazing in meadows and stall-fed during winter months.

**Table 2.20 Urban Consumption Growth of Dairy Products, 2005–2015**

	Urban Consumption (MT)		Annual Growth Rate (per cent)	2015 Value (Million Nu)
	2005	2015		
Fresh milk	1,691	4,386	10	96
Tetra pack milk	921	3,726	15	108
Milk powder	1,860	3,574	6.75	554
Butter	788	1,514	6.75	272
Processed butter	243	630	10	88
<i>Datse</i>	1,785	4,630	10	417
Gouda type cheese	13	44	13	13
Processed cheese	378	1,283	13	257
			<b>Total</b>	<b>1,806</b>
			<b>Total import</b>	<b>824</b>
			<b>Total local products</b>	<b>982</b>

Source: IBRD, SLSP Consultants.

Along similar lines, the agro-processing subsector employs a large number of people considering both backward and forward linkages as evident from Table 2.21. For example, almost 68 per cent of women workforce are engaged in agriculture, livestock and forest activities. Moreover, suppliers of raw materials who are mostly farmers from Bhutan and India (for imports) are predominantly women, manifesting women's participation in the green sector as well as encouraging greater participation of women in the agriculture and livestock farms. Supply of raw materials by farmers to the processing plants include chilli, chick pea, tomato, baby corn, carrot, mango cubes, orange pulp, fresh apples, oranges and peaches. The subsectors of dairy products and farm crops exhibit benefits of employment and job creation, income generation and entrepreneurship.

**Table 2.21 Percentage Distribution of Employment by Sex and Economic Activity**

Economic Activity	Male	Female
Agriculture, Livestock and Forestry	53.3	67.7
Hotels and Restaurant	1.7	2.1
Mining and Quarrying	0.5	0.3
Wholesale and Retail	6.4	11.1
Construction	2.2	0.5
Manufacturing	3.8	6.8

Source: Statistical Yearbook, 2012.

## Integrating Gender in Regional Trade: Proposed Entry Points

### Summary Observations on Gender in the Agro-processing Industry

The study found that women folks largely dominate the agro-processing sector in Bhutan, however with preponderance on factory floors carrying out manual tasks. This may be attributed to low level of education, skill, knowledge and limited opportunities. It must be noted that agro-processing has potential for economic empowerment of women beyond the micro and household levels, curving niche areas of growth as actors and leaders in the future. Similarly, women entrepreneurship in handicrafts, trading, tours and travel, floriculture, and hotel management exhibits great potential in Bhutan.

Symptomatic of a developing country, agro-processing infrastructure in Bhutan is limited to basic manufacturing assembly lines, basic packaging floors, and manual unloading and loading bays. No special gender friendly infrastructure has been observed. Only in BAIL, separate changing rooms for men and women were observed. Nonetheless, the awareness of installing gender friendly infrastructure does prevail with plans to develop the infrastructure in the future aligning it to existing company policies and requirements. Maternity leave and feeding time for working mothers and adequate working conditions, rights and entitlements were observed as per labor laws.

There is opportunity to increase gender equality and trade with potential partnerships and support mechanisms through institutional and organizational development. Trade potential with India, Bangladesh and Nepal is bound to increase with both exports and imports gaining greater momentum especially with commitments on trade facilitation mechanism. Consequently, one must identify specific and targeted areas of interventions and regional cooperation. To integrate larger trading partners, trade facilitation and logistics initiatives must focus on customs and border management, trade infrastructure investment, port efficiency, transport security, logistics and transport services, regional trade corridors and transit and multimodal transport wherever possible.

Cross border regulations are another means for facilitating trade. For example, the ability to move goods and services across borders rapidly, cheaply, and above all, predictably is a critical determinant of export competitiveness. Likewise, trade in the region must focus on the measures to reduce cost of trading across borders and involve improving all aspects in the

operations of regional and local supply chains allowing significant opportunity for trading partners to realize economic development and poverty reduction targets.

## Potential Entry Points

Some of the proposed entry points to integrate gender and green trade are:

### National Level

- Develop and strengthen women entrepreneurship in agro-processing and other sectors through women groups and associations such as the Bhutan Association of Women Entrepreneurship (BAOWE), an initiative to empower women through entrepreneurship.
- Women empowerment activities through education, training, micro-credit and business incubation.

### Regional Level

- SAARC forums should facilitate mainstreaming of women in agro-processing with respect to working conditions, rights, and entitlements by exploring opportunities for potential areas of cooperation with more partners focusing on women economic empowerment.
- There exists a realistic potential in formalizing business and possible partnerships and agreements. In the last few decades, SAARC countries have pursued regional trade integration through various trade agreements to accelerate economic development in the region. Trade can positively influence the distribution of income between men and women, by creating new employment and business opportunities. By expanding markets and increasing production, trade is a window of opportunities for women, as workers or as entrepreneurs
- Regional integration arrangements can increase investment in member countries by reducing distortions, enlarging markets, and enhancing the credibility of economic and political reforms. The benefits of regional integration include gains from new trade opportunities, larger markets, and increased competition. It can also raise returns on investments, facilitate larger investments, and induce industries to relocate. Regional integration can commit governments to reform, increase bargaining power, enhance cooperation, and improve security. But these benefits are neither automatic nor necessarily large. Regional integration arrangements must be viewed as means to improve welfare in participating countries and not as ends in themselves.

## Conclusion and Ways Forward

Despite the differential gender effects and experiences in relation to trade and the environment, and the compelling argument for integrating gender dimension into trade and export strategies and initiatives, gender features only marginally in trade initiatives. Although it is reflected in the national documents (NPAG, etc.), it is very rarely integrated into trade facilitation and logistics initiatives. There does appear to be a shift, however. With the lowering of traditional market access barriers as a result of FTAs and PTAs, high trade transaction costs have become one of the most important obstacles that Bhutan is facing to benefit from national, regional and global trade. The ability to move goods and services

across dzongkhags and custom territories rapidly, cheaply, and above all, predictably is a critical determinant in materializing gains.

With greater trade liberalization globally, obsolete and bureaucratic border clearance processes imposed by customs and other agencies are seen as posing greater barriers to trade than tariffs. Complex and cumbersome procedures and systems, along with poor infrastructure, increase transaction costs and cause delays to the clearance of imports, exports and transit goods. These delays and costs affect a country's competitiveness, by either imposing inefficiencies that effectively tax imports, or by adding costs that increase the price of exports. Further, inefficient customs and border management create possible opportunities for corruption.

Regional integration has a lot to offer to the fragmented, small and weak economies. This is not necessarily only in the areas of trade, as has been the focus of all the regional groupings thus far, but also in the areas of cross border investment, project specific coordination, and macro-economic policy harmonization. Such coordination of efforts will assist in mobilising scarce financial resources, and in fostering a competitive and dynamic environment in each of the economies.

Women play a dominant role in the agro-processing sector in Bhutan, being involved in key processing areas, both at the managerial and manual work force levels. The study found that women's participation can go beyond individual and household levels if adequate linkages are established in the agro-processing sector. It has also been observed that women folks hold important roles and responsibilities in the value chain both as upstream suppliers as well as downstream processors.

Some probable ways forward are as follows;

1. Agreeing on regional commonalities in Bangladesh, Bhutan, India and Nepal for future collaborations.
  - Non-tariff barriers (custom regulations, transit permits and fund transfer) trade facilitation
  - Potential economic empowerment of women
  - Database and record keeping (uniformity)
  - Regional definition/agreement on green goods (common branding/labels) across countries.
  - Infrastructure, road networks, transport and auction centers, etc.
2. Backward linkages and forward integration (National)
  - agriculture/farmers/cooperatives/groups/organic orientation
  - agro-processing enterprises
  - support systems (contract farming, fdi, venture capitalist and certification)
3. Women participation still skewed towards low income rural sector, however there is immense potential for
  - program(s) towards economic empowerment (compliance and certification, direct export to high end markets in the region and beyond )
  - trade facilitation support (domestic and regional)
  - pro-poor entrepreneurship development
4. Capacity building interventions
  - training and education
  - infrastructure (factory floor, roads, and storage, etc.)
5. Continue ongoing government efforts
  - mainstreaming gender in trade strategies

- gender consideration in regional trade agreements
- who is benefitting from trade liberalization
- NPAG
- institutional strengthening (BAOWE, NCWC, RENEW, BNEW)
- preferential education opportunities
- 6. Branding/Certification/Accreditation (beyond BAFRA)
  - Organic/Bhutan/Natural
  - Affordable Credit (Micro and others)

## Annexes

### Annex 2.1 Distribution of Agro-based Industries in the Top Seven Dzongkhags

Dzongkhag	Agro-based	Forest based	Mineral based	TOTAL
Thimphu	32	103	12	147
Sarpang	24	36	9	69
Chukha	20	31	12	63
Bumthang	11	44	4	59
Samtse	11	19	21	51
Mongar	6	60	2	68
Samdrupjongkhar	6	29	6	41
<b>TOTAL</b>	<b>110</b>	<b>322</b>	<b>66</b>	

Source: Cottage and Small Industry Report 2013, DCSI, MoEA.

### Annex 2.2 List of People Interviewed

1. Aum Yozer Lham, Proprietor, Bumthang Cheese
2. Mr. Tashi Wangdi, Marketing Manager, BAIL
3. Ms. Dechen, Proprietor, Chharu Tshogdrel
4. Mr. Thinley Tharchen, Administration Officer, BFPPL
5. Mr. Jyoti Subbha, Laboratory Assistant, BFPPL
6. Ms. Tandin Zangmo, Laboratory Assistant, BFPPL
7. Ms. Rita Gurung, Plant Manager, BFPPL
8. Mr. Deo Kumar, Treasurer, BEKAP
9. Mr. Dhan Raj Gurung, Internal Auditor, BEKAP
10. Mr. Sonam Rinchen, Board Member, BEKAP
11. Mr. Namgay, Board Member, BEKAP
12. Mr. Sangay, Board Member, BEKAP
13. Mr. Tul Bahadur Chhetri, Chairperson, BEKAP
14. Mr. Ugyen Rinzin, General Manager, AWP
15. Mr. K.B Gurung, Secretary, Daga Tshingdre Tshogpa
16. Mr. Panphe Devi Board Member, Daga Tshingdre Tshogpa
17. Mr. Jurmi Dorji, Chairperson, Daga Tshingdre Tshogpa



CHAPTER

# 3

## GENDERING GREEN GROWTH: A Dialectical Analysis of Gender, Trade, and Development in India

Ritu Dewan



# Gendering Green Growth: A Dialectical Analysis of Gender, Trade, and Development in India

## Executive Summary

This study, which centres on the myriad interlinkages between gender, trade and sustainable development, is based on several assumptions including that of patriarchy being a macroeconomic construct; that no policy can be gender-neutral; that the most fundamental structures that determine empowerment are access to ownership, control and distribution of productive resources whether privately or collectively owned. A totally unexplored sector has been selected for analysis – that of the organic horticulture – the specific product being sea buckthorn that grows almost exclusively in the cold desert of Ladakh in the state of Jammu and Kashmir. This berry has a huge trade potential, both nationally and internationally, in three large international markets – pharmaceuticals, beauty and food products. The analysis reveals several unique interconnections between sustainable development, trade and gender, that:

- Sea buckthorn is essentially a ‘wild harvest’ farmed on common property which is collectively owned;
- Its growth is essential for erosion control and environmental sustainability in a cold desert;
- It is controlled almost exclusively by women of all communities across all levels of the value chain, right from gathering to sale to processing to value-addition;
- The entire process is without exception at every stage and in every village characterised by women working in self-help groups;
- Clean energy (specifically solar energy) is essential for the women involved in this sector both as producers and as consumers in order to increase output as well as reduce household drudgery and time poverty;
- Women have almost total control over their earnings and exercise a high degree of autonomy and decision-making over both economic and extra-economic aspects of their lives;
- Women utilise the major proportion of their earnings primarily for tourism within the circuit of their dominant religion, that of Buddhism.

Some suggestions for further development of this sector in a gender inclusive and green manner, include the following: Environmental protection and regeneration of ‘Wild Harvest’ land, and also the introduction of what we term as ‘Conscious Cultivation’ – that is, commercial cultivation with a consciousness based on environmental concerns; Formalizing, institutionalizing, and protecting the rights of women to land whether individually or collectively owned and accessed; Regulation of private appropriation of a commodity that is based on what is essentially a common property resource; Strengthening of cooperatives and group-based production systems; Increased investment in research in order to increase the number of products; Increased outreach of pricing and marketing information in a gender-appropriate manner; Market expansion by linking with the tourism sector locally, nationally, regionally and globally; Formulation of forms of certification appropriate to ‘Wild

Harvest' products and also introduction of product-branding; introduction of solar energy the process of production, mobile pulping vans, and reduction of wastage by improving berry-collection methods; reduction of occupational health and safety hazards by distribution of protective gear; investment in all-weather road connectivity.

This study ends with recommendations relating to sea buckthorn and the measurement of gender and green growth. One, the creation of a Regional Production Bloc for sea buckthorn that includes all similar climatic regions of Nepal and Bhutan which would form not only the basis of shared technology and shared information base, but would also function as a joint bargaining block for gaining trade advantages. This Regional Cooperation Project can cover all the three sectors of Organic Cultivation, Renewable Energy, and Eco-Tourism. Two, the creation of the Green Growth Gender Index which should be incorporated into every single Cooperation Project, and which can be easily calculated on the basis of the formula provided in the report.

## Abbreviations

ADB	Asian Development Bank
AHDC	Autonomous Hill Development Council
APEDA	Agricultural and Processed Food Products Export Development Authority
BDO	Block Development Officer
CPR	Common Property Resources
DIHAR	Defence Institute of High Altitude Research
DRDO-FRL	Defence Research and Development Organisation-Field Research Laboratory
FAO	Food and Agricultural Organisation
FIR	First Information Report
FWPR	Female Work Participation Ratio
G3	Green Growth Gender
HMNEH	Horticulture Mission for North East and Himalayan States
IFAD	International Fund for Agricultural Development
IFOAM	International Federation of Organic Agriculture Movements
ISEC	International Society of Environment and Culture
J&K	Jammu and Kashmir
LEHO	Ladakh Environment and Health Organisation
LERDA	Ladakh Renewable Energy Development Agency
NABARD	National Bank for Agriculture and Rural Development
NAC	National Agricultural Census
NHM	National Horticulture Movement
NREGA	National Rural Employment Guarantee Act
NSS	National Sample Survey
PCS	Primary Cooperative Societies
R&D	Research and Development
SAARC	South Asian Association for Regional Cooperation
SHG	Self-Help Group
SHM	State Horticulture Missions
UAE	United Arab Emirates
WAL	Women's Alliance of Ladakh
WPR	Workforce Participation Rate
WTO	World Trade Organisation

## Introduction

The fundamental purpose of this project titled *Gendering Green Growth: A Dialectical Analysis of Gender, Trade, and Development, in India* is to examine the two-way connect between the nature of the development process, the level of its sustainability, and the extent of gendered inclusion, perceived within the context of national and international forces that are becoming increasingly intertwined and interdependent. The structure of this project is consequently based on the dialectical approach which incorporates the syndrome of thesis-antithesis-synthesis.

The issues are located in a specific paradigmatic philosophy that perceives growth in the broad classical concept of development, and thus debates the necessity of a nation's 'goal' to be inclusive development rather than inclusive growth. This also brings to the fore two interdependent aspects – that of people-centric policies as opposed to commodity fetishism, as well as the supremacy of economic and associated extra-economic rights of particularly those, who are off the page of the current dominant growth-development strategies. It therefore needs to be pointed out at the outset itself, that growth and development are used interchangeably. Needless to state, no concept of growth/development can be isolated from the issue of environmental sustainability.

Viewed in an international as well as a regional context, the enhancement of a nation's development is being increasingly carried out through exports as well as import substitution. Trade benefits, as currently defined, are pre-determined by existing structures – land, resources, ownership and control patterns, caste, community and patriarchy. The central issue therefore is understanding the linkages between the gendered nature of the growth pattern and the extent of 'greenness' achieved, and in what manner and through what policy interventions can these linkages be enhanced in both the present and the future.

Central to this study are several levels of assumptions:

1. That patriarchy is a macroeconomic context
2. That there is no policy that is or can be gender-neutral
3. That there is an unbreakable link between the macro, meso and micro
4. That resource allocation within economies and also households impact women's productive capacities and participation in economic activities
5. That the most fundamental structures which determine empowerment are access to ownership, control, and distribution of productive assets of all forms, whether privately owned or as commons.

## Background, Objectives and Rationale for Selection of the Green Sector

### Background and Objectives

The primary research concept, located in the above-defined philosophical, theoretical, and empirical paradigm centres on the interconnections between gender, trade and development as operative in an increasingly globalised world. The broad sector that has been identified as the primary focus for this study is that of green agriculture, the sub-sector

being organic horticulture, which too, is a rather generic sector with several layers that are only sometimes connected. To this, efforts have been made to intermesh the all-important issue of clean energy, specifically in the context of production as well as in the process of value-addition. Intriguingly, the third identified sector of tourism emerges as being linked to environmental sustainability and organic cultivation. The basis of selection of the research sector has been determined by several factors.

One, although it would be definitely 'easier' to study just one issue, it was decided that it is infinitely better, both for purposes of research and also for evolving strategies that an attempt be made to examine the green sectors in an integrated yet specific manner; in fact, as will become evident, the sub-sectors of clean energy and ecotourism are intimately intertwined, both as a cause and as an offshoot, with direct implications for women's empowerment.

Two, that this selection should enhance gender equality in the present as well as in the future.

Three, that there should exist a potential for trade expansion, in terms of increasing exports as well as creating substitution for imports.

Four, that the identified areas should be amenable to policy intervention; this policy intervention should preferably encompass all governance levels between the individual, the village, the block-taluka, district, region, state, and of course the Centre with its myriad interconnections between national and international interests.

Five, that there prevails the possibility of creating a hitherto unexplored 'best' practice, and hopefully and ideally, one which can be replicated in other situations and regions.

## Selection of Green Sector

The selection of the research areas for this study is based on the non-negotiable essential criteria of the prevalence of green sectors, which have interlinked potential for enhancing women's role in trade, with the fundamental purpose of strengthening their economic and hence extra-economic independence and power. This identification has been made, of course, on the basis of relevant secondary data sources, some of which are included in the bibliography.

### *a) Renewable Energy*

The major cleanest form of renewable energy that is somewhat statistically significant at the national level – and which also has a rather large potential for expansion in India – is that of solar energy. The main geographical regions are Maharashtra and Jammu & Kashmir. In fact, it has been recently announced that the world's largest solar energy plant is being set up in the district of Ladakh, the cold desert located in Jammu & Kashmir.

Energy consumption in Indian households is a mix of non-commercial (fuel wood, dung etc.), commercial (bio- and fossil) fuels and other energy sources based largely on geographical location, disposable income and local availability. However, the rising price of coal has led to an increasing demand for alternate sources in the form of renewable energy which contributed to 12.2 per cent of the power generation in India in 2011. It is estimated that during the 11th Five Year Plan period barely 2 per cent of energy investment in India went towards alleviating the drudgery suffered by women and children, who together

collect close to 28 per cent of all primary energy. However, few if any inputs in terms of investment, management or technology are provided to them – something that all other energy sectors take for granted. This is partly due to a lack of gender mainstreaming as well as the non-incorporation of gender concerns in a sector that is perceived as being primarily technology-driven. However, as is known, women play key roles in energy use and supply; energy projects will consequently not be effective unless gender differentials are addressed. Energy projects can contribute to gender equality and women's empowerment by involving them throughout the value chain and in decision-making roles from which they have traditionally been excluded.

Women have a significant role in both the usage and supply of energy at the household level, as well as in the production of primary products which is the mainstay of livelihoods. Needless to say, gender plays an important role in realising the possibilities of tapping renewable energy in high potential regions in order to attain micro as well as macro level efficiencies. The issue here is to what extent are gender needs incorporated in solar energy plans and policies. Additionally, and as importantly, to what extent if at all, has solar energy been integrated into the production of commodities and services, and to what extent have productivity and technology been enhanced via greening.

### *b) Tourism*

A hugely neglected area of research is that of the gendered nature of tourism, with most studies focusing on issues of trafficking, violence, etc. This is not to say that these aspects are in any way unimportant, but that there are a large number of positives and negatives that need to be identified and debated, particularly if women are to gain from the huge potential that exists when tourism is perceived as a tradable.

Women generally tend to remain invisible in tourism, thus complicating the fact that patriarchy often reproduces past structures and also hides the unequal role of men and women in tourism.

As primary providers of support structures related to tourism, their work is generally not recognised and thus under-valued. Other related aspects noted, are a rise in domestic violence, increase in sexual harassment by both 'locals' and outsiders, emergence of commercial sex workers due to poverty as well as consumerism/globalisation, etc.



However, there are several positives of tourism too, if it is appropriately expanded. Female-headed households often emerge as independent functionaries, with micro- and own-account enterprises increasing. Additional positives are, improved employment opportunities such as handicrafts, embroidery, house-keeping, food-vending, travel agents, receptionists, etc.; though these are predictably stereotypical in essence, they yet provide women an opportunity to venture into the public domain. Another possible gain is the resurgence and preservation of culture and cultural activities; the issue, however, is how 'culture' is defined.

### *c) Organic Agriculture*

Selection on the basis of the primary focus sector of organic agriculture in the broad context of the term proved to be somewhat problematic. There are two major areas of organic agriculture in India – fishing and horticulture.

Various levels of fishing exist in both coastal and inland zones – deep-sea fishing with mechanised or non-mechanised trawlers that stay out for over a week; smaller boats that fish in relatively shallower waters and return within a day or two; two-person boats that fish in brackish waters and in creeks – all these activities are conducted by men. While women do not go fishing into water, they are fully responsible for the catch once it is brought to the shore – unloading, sorting, storing, drying, and marketing.

Estuarine fishing too is conducted mainly by men, with women, especially those who are poor, being restricted to fishing in brackish waters and also paddy fields, primarily though not solely, for self-consumption. Inland fishing, on the other hand, is being increasingly carried out through the auction of ponds by village panchayats to the highest bidder, none of whom are women. Perceived through a gender vision, therefore, women appear to have little direct connection with fishing, unless it is viewed as an un-priced component of nutrition. Gender interlinkages with trade in fishing are consequently somewhat indirect and tenuous, unless related to fish processing which is done entirely by women, but over which women have no control whether in terms of production or sale or export.

Subsequently, the other major component of green primary production – that of organic agriculture was examined. It is indeed interesting that almost half of the total organic producers in the world are from India. India is ranked amongst the top 30 countries in the world in total global area under organic cultivation, but in the top 90, in terms of ratio of agricultural land under organic cultivation to total farming area. Also, India accounts for a significant and increasing share of the world's retail sale of organic foods particularly to the European Union and USA. The area under certified organic management in India has increased by about 25.85 times from 42,000 hectares in 2003–2004 to 1,085,648 hectares in 2009–2010. The total production from organic cultivation is 1,811,111 MT; nearly a third of this production is exported, valued at Rs. 591 crores in 2008–2009. Interestingly, most of the farmers numbering 597,873 who have shifted to organic farming are small and marginal farmers.

The top three commodities in terms of share of cropped area under organic farming in India are Cotton, Oilseeds, and Fruits & Vegetables, while in terms of production Fruits & Vegetables rank the highest, followed by Cotton (Raw Seed), and Oilseeds including soya.

Additionally – and this is a crucial factor that determined the selection of organic cultivation as the central research area – the majority of farmers involved in producing organic goods have small and marginal holdings; this is central to the study precisely because most of the women who are farmers are primarily those from these categories of land-holdings. Further, organic cultivation has been more successful and also more widespread in regions where the proportion of small farmers is high. The analysis of this strongly gendered interconnection in the context of the on-going processes of feminisation and also the recently emerging issues of de-feminisation would result in yet unexamined possibilities of policy intervention and enhancement of gendering green growth.

The two states that rank the highest in the production of fruits and also vegetables, as is widely known, are Himachal Pradesh and – yet again – Jammu & Kashmir. The selection

of the research area as a case study was thus, in an intricately intertwined manner, already pre-determined.

Within fruits and under the umbrella of organic agriculture, the focus of the study is on Sea Buckthorn. This grows primarily on forest and 'uncultivable' land and thrives in waste and 'degraded' land conditions; as chemical fertilisers and pesticides are obviously not applied, in what is essentially a common property resource, the fruit is truly organic. The plant lasts for at least 15 years, after which its productivity begins declining. The spread of the tree is affected by deforestation, as pollination takes place via the Chunka bird which feeds on the berries and spits out the seeds.

The Sea buckthorn (*Hippophae rhamnoides L.*), a thorny bush that grows in the wild, is found mainly in Central Asia, including Nepal, Bhutan, Pakistan, Afghanistan, and Kazakhstan. A mention of this fruit can be traced to ancient Greek literature and Tibetan and Chinese medicine texts dating to the Tang Dynasty of 618-708 AD. Known as a wonder-plant (tasru), its fruits are rich in carbohydrates, protein, organic acids, amino acids and vitamins, thereby making it an important raw material for health and pharmaceutical products as well as cosmetics. Interestingly, the juice was the official beverage for Chinese athletes at the Seoul Olympics in 1988. Also, it was the first juice in space, Russian cosmonauts using it both to relieve stress and as protection against radiation.

In India, the Sea buckthorn (known locally as Sha lu lu) grows mostly in the wild, cold and dry regions of Ladakh, Kumaon-Garhwal, Lahaul-Spiti and Kinnaur in the Northwest, and in Sikkim and Arunachal Pradesh in the Northeast regions. The selected region of study (Leh-Ladakh) has a reported 11,500 to 30,000 hectares, as compared to 1.1 million hectares in China, 47,000 hectares in Russia and 30,000 hectares in Mongolia. Ladakh is unique in many respects for its extreme geo-climatic conditions, and the plants here respond by synthesizing phytochemicals to fight adversities with a unique chemical composition as compared to those grown elsewhere. It is claimed that only Ladakh berries contain Omega 7, while those from other regions in the world have only Omega 3, 6 and 9.

## Selection of Study Region

The district of Ladakh integrates all the components that have been identified for this project, additionally linking the micro with the macro level, from the household to the State, incorporating both intra and inter disparities that are economic and extra-economic, the common thread cutting through all aspects being the central one of gender. It is necessary to point out at the outset that the Ladakh region is among the most understudied in India, the few articles that exist relating primarily to culture and sometimes to tourism, the latter being dealt with in a somewhat non-analytical and journalistic manner. This is not to decry the quality of writing, but rather to assert the urgency of a serious and scientific study of this hugely neglected region.

Jammu & Kashmir, the northern most State of India, has a tremendous potential for the production of renewable energy; its share is currently 7 per cent which is significant from the national perspective. Ladakh in particular, can provide a feasible option for solar, hydro and wind energy systems. Moreover, the region itself is a fine example of increased use of renewable energy.

The 2011 Census data show the wide variations and yet relatively high dependency of households on the use of solar energy for lighting and also cooking. While the state of

Jammu & Kashmir reports only 1.03 per cent of total households that use solar energy as the main source of lighting, the proportion in Kargil is almost 10 per cent, that in Leh almost 13 per cent. Dependency on firewood for cooking also shows wide variations.

Natural energy sources including sunshine, wind, vegetation, water flow, biomass and other biological wastes, though abundantly available in Jammu & Kashmir, have not yet been substantially harnessed, resulting in low per capita energy availability, deforestation and also poor health. Renewable energy acquires a promising option not only for energy availability and of environment protection but also socio-economic conditions, especially as the topography of the state provides an extensive network of canals and streams.

The nature of the impact of tourism on women depends on other prevailing factors such as the level of penetration of globalisation, the level of development of external economic/market relations, conflict situation, distance from cities/towns, etc. Ladakh, being one of the highest lands in the world, has a distinct climate which attracts tourists in all seasons, its unique climatic conditions having made it famous for ecotourism. The Buddhist culture is a pre-dominant attraction, and tourism related to it is an integral part of the development of the regional economy.

Tourism is a major job creator and important source of livelihood for the residents of the Leh-Kargil region. The socio-economic impacts of tourism have been positive as well as negative. On a positive note, the rise in tourism has resulted in a substantial increase in income, for at least some sections of the population, one of the major causes for this being the home-stay services, whereby the local residents rent out abode alternatives to tourists. The key advantage of this option is the direct transaction between the local residents and tourists without the interference of agents, guides etc. Moreover, if properly and sensitively enhanced, it has the potential to play a vital role in empowering women.

Women in the Ladakh region have benefitted from homestays as the direct access to income often gives them control over money and decision making. Tourism has enabled women become independent functionaries and provided them access to improved livelihood opportunities. The negative effect of rising tourism can be seen in the form of increasing dependency, as each individual becomes a part of the long chain of producers and suppliers. This has in turn led to a common dependency on the same resources such as energy etc. pushing forth the artificial scarcity of the common property resources.

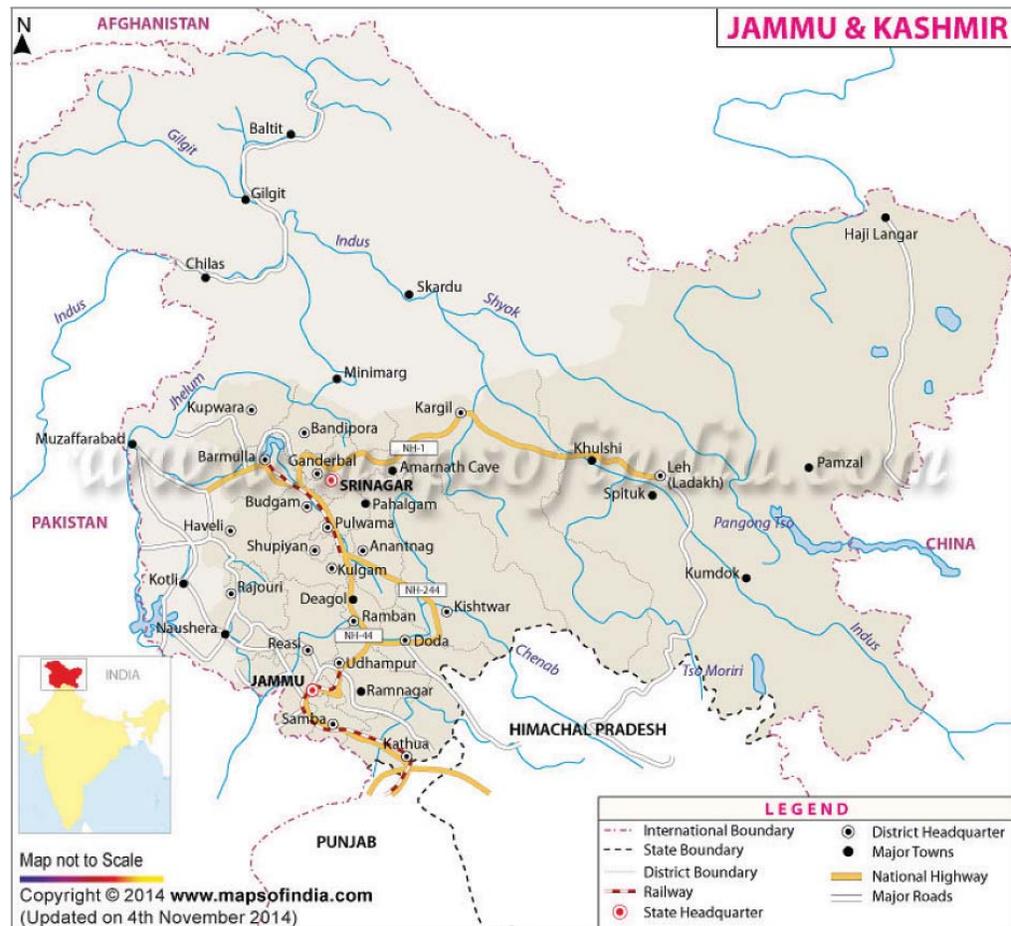
The three regions that constitute the state of Jammu & Kashmir have strikingly separate geo-climatic and historical conditions which has led to separate structures of resources and sources of production. The region of Ladakh is located within the three parallel ranges of the Himalayas – Zaskar, Ladakh and Karakoram – with the majority of the population living along the major rivers of Indus, Shyok, and Zaskar. Ladakh, the largest district, was segregated into Kargil and Leh in 1979. The climatic conditions in this region are referred to as cold desert as it possesses the characteristics of both arctic as well as desert weather. The district's three tehsils of Leh, Sumoor and Khalti are divided into 9 CD Blocks, namely, Leh, Khalti, Nyoma, Durbuk, Kharu, Nubra, Saspol, Panamic and Chuchot. Designated as a tribal district in 1989, the majority population consists of Buddhists, nomads, and Muslims.

Ladakh is also known for horticulture with apples and apricots being the main fruit crops. The rise in the use of modern techniques has led to the popularisation of greenhouse techniques. A substantial change has been observed in the land holding pattern by women in Leh and Kargil between 2001 to 2005–2006 (the agricultural census years). Land holdings

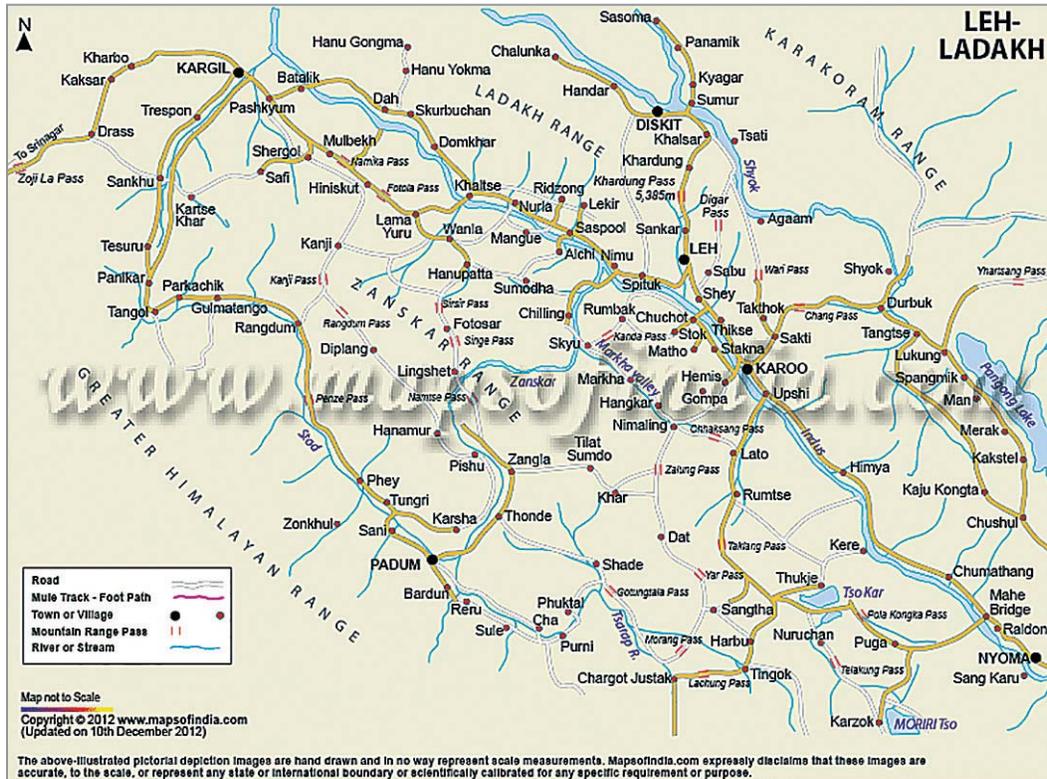
by women across all classes, almost doubled and showed a rise from 970 in 2001 to 1731 in 2005–2006. Of this, a substantial increase has been in marginal holdings which have doubled from 756 in 2000–2001 to 1405 in 2005–2006 in Kargil. A similar trend has been witnessed in Leh as well, where the number of holdings across all classes increased from 3698 in 2000–2001 to 5318 in 2005–2006, with marginal holdings increasing from 2947 to 4341 during the same period.

Traditional agricultural practices have defined somewhat precise roles for women and men. Men plough the field using the Dzo while women level the soil surface with a ‘T’ shaped wooden implement called a bat. However, over time there has been a significant change in the methods of production and a sharp fall in the number of cultivators, one of the main reasons being the migration of men. This has resulted in either the agriculture land being left to women to administer, thereby increasing their workload; or the lack of acknowledgment which has led to increasing the invisibility of women in agriculture.

MAP 3.1 Jammu and Kashmir



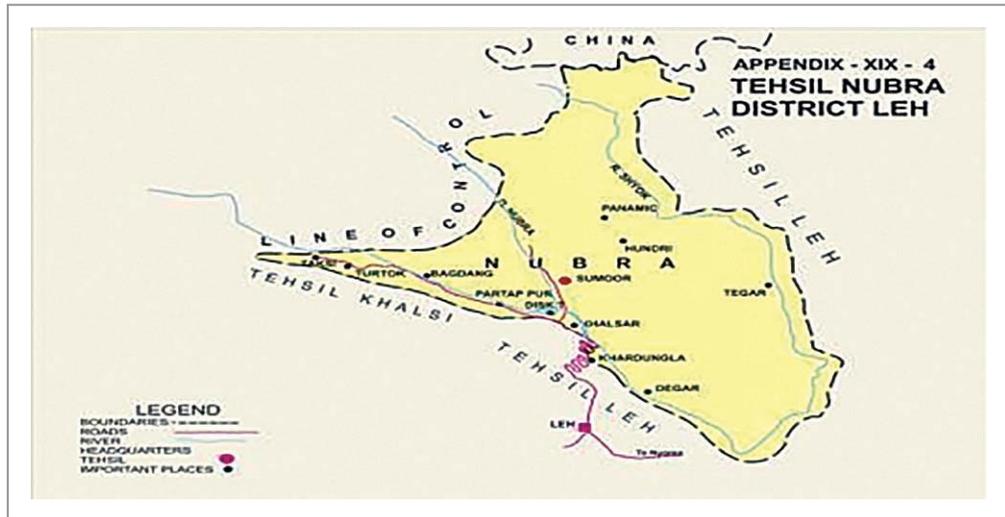
MAP 3.2 Fieldwork Region: Leh-Ladakh



MAP 3.3 Fieldwork Blocks



MAP 3.4 Nubra Valley



## Methodology and Data Sources

The study is based on macro, meso and micro level determinants, and the inter-linkages between them. Primary and available secondary data sources are integrated to assess the current status of women's involvement in the relevant sectors; such an approach provides insights into the status of women and whether they have a role in production and household related decision-making; and also helps examine the two way impact between greening and the status of women. Field work, focus group discussions and interviews are the basis to identify various hitherto uncaptured components of women's contribution to economic activities and also potential opportunities, both at the national and international levels.

A multi-layered secondary-based inquiry had been envisaged with the purpose of unravelling the relevant threads at global, regional, national and state levels, with the ultimate objective of the dialectical tracing of the macro to the micro via the meso. The ten stages planned across the four data universe were as follows:

- 1) Area and production of, amount (output and value) and share of trade in, and farmers involved, both women and men in Total Agriculture
- 2) Area and production of, amount (output and value) and share of trade in, and farmers involved both women and men in Organic Agriculture to Total Agriculture
- 3) Area and production of, amount (output and value) and share of trade in, and farmers involved both women and men in Horticulture to Total Agriculture
- 4) Area and production of, amount (output and value) and share of trade in, and farmers involved both women and men in Organic Horticulture to Total Horticulture
- 5) Area and production of, amount (output and value) and share of trade in, and farmers involved both women and men in Selected Green Growth Sector to Organic Horticulture, both wild and cultivated
- 6) Share to total foreign exchange earned by Organic Horticulture and to Total of Organic Agriculture

- 7) Destination-wise trade in Organic Agriculture, Organic Horticulture, and Selected Green Growth Sector, exports as well as imports
- 8) Total women employed in trade at all levels
- 9) Tariffs, Quotas and Non-Tariff Barriers relating to Organic Agriculture, Organic Horticulture, and Selected Green Growth Sector
- 10) Accreditation relating to organic production and trade

The study had hoped to locate the field analysis within the broader canvas of secondary information gleaned from numerous sources, so as to enable the examination of the gender-trade interconnects. These sources include the South Asian Association for Regional Cooperation (SAARC); the Asian Development Bank (ADB); the World Bank; the World Trade Organisation (WTO); the National Agricultural Census (NAC); the National Sample Survey (NSS); the Population Census; the Planning Commission; State, district and block level handbooks and websites; relevant government ministries such as the Ministries of Horticulture, Agriculture, Rural Development, Forests and Environment, Science and Technology, Tourism, Renewable Energy, Commerce and Industry, Women and Child Development etc.

It is indeed disheartening that most of this information is unusable. The reasons are several – varying definitions of basic terms such as organic and green; intermittent information and hence huge gaps in time series data; incomparability across countries; widely differing data from different sources even for same time periods; and what is predictable but quite unforgivable – the utter lack of acknowledgment of women’s involvement at any and every level. This lack of a macro gender perspective underlines the urgent need of a study such as this, and the necessity of visibilising the invisible. Since a time series of data essential for regression or econometric analysis for most variables was difficult to obtain, analysis has been done via growth and extent of change.

Graphical techniques have been employed to the extent possible to capture the changes that have taken place over the last few years. In the absence of a time series, and since primary data collection has been through structured interviews/questionnaires/focus group discussions with identified stake holders, detailing of best as well as worst practices, case studies and oral history is the mainstay of the study.

The perspective within which the entire analysis is to be conducted is located in what the study team termed as a ‘Gendering Green Growth’ paradigm, the broad canvas being the capturing, outlining and delineating of linkages between trade and women in a concrete regional reality. Issues that are specially, though not solely focused on, include the following:

- a) Linkages between globalisation, privatisation, resource control, feminisation, and de-feminisation.
- b) Expansion and unlocking of trade opportunities, the extent to which women have the capacity and ability to take advantage of such opportunities, and which measures could be undertaken to ensure gendered inclusion in trade policies. Specifically, therefore, how women can take advantage of particularly their comparative advantage in the selected sector.
- c) To what extent has renewable energy in the form of solar energy been integrated especially into the process of production of organic foods.
- d) The possibilities of incorporating gender interests, both as consumers and as producers, while expanding the circuit of Buddhist Tourism.
- e) To what extent and in which manner can all the three sectors of solar energy, horti-

- culture, and tourism become 'better' tradable commodities, both nationally and internationally, as exportable goods as well as substituting imports.
- f) The prevailing level of involvement of all stakeholders in the creation of green tradables, and how they can be tapped for gendering this tradability.
  - g) Impact of greening on women, and impact of women on greening.
  - h) Creation of a Green Growth Gender Index.

## Assessing Patterns of Trade and Women's Participation in the Green Sector: Macro Perspective

### Organic Cultivation

The share of the agricultural GDP to overall GDP in India has declined from 31 per cent in 1970–1971 to a mere 11 per cent of GDP in 2012–2013 at 2004–05 prices, while the 2011 Census indicates that the agricultural sector accounts for nearly 55 per cent of total workers which has resulted in the increased fragmentation of land holdings. Consequently, the average size of operational holdings has shown a successive decline from 2.28 ha in 1970–71 to 1.23 ha in 2005–2006 to 1.15 ha in 2010–2011 at an all-India level. The increased fragmentation is evident from the fact that small and marginal holdings constitute almost 85 per cent of the holdings in 2010–11, while the number of female operational holders rose from 11.70 per cent in 2005–2006 to 12.78 per cent in 2010–2011. Further, as per the Land Use Statistics 2010–2011, the gross cropped area in the country was 198.9 million hectares.

The green revolution in agriculture involved a massive use of fertilisers and high yielding varieties of seeds and crops which resulted in increased agricultural productivity. However, the indiscriminate use of fertilizers and pesticides has had significant negative externalities, such as those observed in soil degradation, increased salinity, other environmental problems, as well as an impact on human health and decrease in agricultural production. Organic agriculture/farming is an agronomic technique which is environment friendly. There are diverse definitions of organic agriculture and range from a focus on production systems to ethical issues, such as fair labour practices and animal ethics. In order to promote organic agriculture and to ensure fair practices in the international trade of organic food, the Codex Alimentarius<sup>44</sup> Commission defines organic agriculture as 'a holistic food production management system, which promotes and enhances agro ecosystem health, including biodiversity, biological cycles and soil biological activity'. The definition thus emphasises agro systems which are socially and ecologically sustainable systems, which use on-farm resources efficiently for inputs and one where the use of synthetic fertilisers and pesticides is avoided. In India, almost 70 per cent of cultivable land is under rain-fed agriculture and farmers in these areas often use organic manure that is readily available either on their farms or locally. Thus, only on the 30 per cent cultivable area which is supported by good irrigation facilities is the use of synthetic fertilisers rampant (Ramesh et.al., 2005). Organic cultivation in India can be classified into the following three categories, namely: farmers who are situated in either the no input or low input use zones who have traditional-

<sup>44</sup> Codex Alimentarius is a joint body established by the FAO, WHO and UNCTAD to harmonize rules and regulations on organic food. The Codex Alimentarius Guidelines define substances which can be used in organic food and farming systems.

ly practiced organic cultivation and for whom organic is a way of life; farmers who have adopted organic methods of cultivation as a response to recognising the negative environmental impact of conventional agriculture on soil quality, rising costs of production accompanied with falling production, food toxicity etc.; commercial organic farmers (farmers and enterprises) who have systematically adopted commercial organic farming to exploit the growing opportunities and premium prices. While the first category of farmers, are not certified organic farmers, the second category comprises of both certified and non-certified organic farmers, with most of the certified organic farmers being in the third category. Much of the data on organic agriculture available relates to this category of commercial organic farmers.

It is pertinent to note that apart from agricultural land, there are other organic areas which include areas for wild collection, aquaculture, forests and grazing areas on non-agricultural land. Across the world, of a total of 69 million hectares of organic (agricultural and non-agricultural) areas, nearly 31 million hectares is non-agricultural. There were more than 1.9 million organic producers in the world in 2012, Asia accounting for 36 per cent of them, followed by Africa (30 per cent) and Europe (17 per cent). Countries with large numbers of organic producers are India (0.6 million), Uganda (0.18 million) and Mexico (0.17 million).

Table 3.1 presents details of the area under organic agriculture (including area in-conversion) in Asia, the SAARC region, China and India.

**Table 3.1 Area Under Organic Agricultural Land (including in-conversion land), 2007–2012 (million hectares)**

Year	Asia	SAARC	China	India	India as per cent of Asia	China as per cent of Asia	India as per cent of SAARC
2007	2.90	–	1.55	1.03	35.5	53.5	–
2008	3.36	–	1.85	1.02	30.3	55.2	–
2009	3.58	1.23	1.85	1.18	33.0	51.8	95.9
2010	2.77	0.83	1.39	0.78	28.2	50.2	93.4
2011	3.69	1.15	1.90	1.08	29.4	51.5	94.3
2012	3.22	0.57	1.90	0.50	15.5	59.0	88.5

Data on SAARC was obtained from SAARC Statistical Year Book, 2012 while that for Asia, China and India is from the FIBL-IFOAM Survey, 2014.

Agricultural land under organic cultivation in Asia as well as in the SAARC countries has been fluctuating during the five year period 2007–2012. A steep decline of agricultural land under organic cultivation has been observed in 2010 and 2012, largely because of a huge reduction reported for India. Further, agricultural land under organic cultivation in India when compared with Asia, has reduced by more than half from 35.5 per cent in 2007 to 15.5 per cent in 2012; whereas agricultural land under organic cultivation in China increased marginally by 0.22 per cent from 1.55 million hectares in 2007 to 1.90 million hectares in 2012. A comparison of the proportion of agricultural land under organic cultivation in India and China shows that China has more than half of the land under organic cultivation in Asia; this share has increased to nearly 60 per cent in 2012, while India's share total organic agricultural land was a mere 15 per cent in 2012. While the percentage of land under organic cultivation in India may not be very high, it has the largest number of organic producers in the world (FIBL-IFOAM Survey, 2014).

Table 3.2 below presents a comparative picture of the number of organic producers in Asia, China and India and it can be observed that India's organic farmers constitute more than 80 per cent of those are in Asia. The number reported for China is only for 2007 and is also very small.

**Table 3.2 Number of Organic Producers, 2007–2012**  
(millions)

Year	Asia	China	India	India as per cent of Asia	China as per cent of Asia
2007	0.23	.002	0.19	82.6	0.01
2008	0.41	--	0.34	82.9	--
2009	0.73	--	0.68	94.4	--
2010	0.46	--	0.40	86.9	--
2011	0.62	--	0.55	87.1	--
2012	0.68	--	0.60	88.2	--

**Table 3.3 Distribution of All Organic Areas in SAARC, 2012**  
(hectares)

	Total	Agricultural Land	Aquaculture	Forest	Grazed Non-Agricultural	Wild Collection
Afghanistan	61	61	--	--	--	--
Bangladesh	16,198	6,860	9,338	--	--	--
Bhutan	21,760	6,156	--	--	--	15,605
India	5,200,000	500,000	--	--	--	4,700,000
Maldives	--	--	--	--	--	--
Nepal	34,695	10,273	--	--	--	24,422
Pakistan	22,397	22,397	--	--	--	--
Sri Lanka	19,517	19,517	--	--	--	--

(FiBL-IFOAM Survey, 2014)

From Table 3.3 it can be observed that of the total organic areas, much is in the form of wild collection. It is important to note that some countries with large organic areas like Brazil, Australia and India have little or no information on their land use (FiBL-IFOAM Survey, 2014). India, however, has a huge potential to expand organic cultivation in its Northern and North-eastern regions where farming is mostly done with a very minimal use of chemical inputs and also where farming is already naturally organic. Estimates indicate that almost 18 million hectares of farming land can be utilised to grow crops organically and India could emerge as a major supplier of organic products on the world market (Ramesh, et.al, 2005).

An important dimension of the data regarding the area and number of organic producers in India is the varying estimates from different sources. For instance, the Food and Agricultural Organisation (FAO) in mid-2003 estimated that there were 1,426 certified farms/producers, while International Fund for Agricultural Development (IFAD) in the same year (2004)

estimated the number of producers to be 15,000 with 2.5 million hectares under organic cultivation. The Government of India (2005) reports 77,000 hectares, while Agricultural and Processed Food Products Export Development Authority (APEDA) in 2012–2013 notes that of a total of 5.2 million hectares only 10 per cent (0.50 million hectares) is under cultivable area while 90 per cent of organic land (nearly 4.71 million hectares) is under forests and wild areas. This figure of APEDA matches with that of the FiBL-International Federation of Organic Agriculture Movements (IFOAM) Survey of the same period (2014).

## Horticulture

Horticulture, traditionally, refers to the study of four areas viz. pomology (fruit culture), olericulture (vegetable culture), floriculture (culture of ornamental crops), and post-harvest technology (management of produce after harvest). However, over the years, horticulture has expanded to include cultivation of mushrooms, bamboo, plantation crops like tea, coffee, spices and rubber. Bee keeping, which is one of the tools that improves productivity of horticultural crops through enhanced pollination is also being taken care by the horticulture division. Hence, horticulture is now redefined as the ‘Science of growing and management of fruits, vegetables including tubers, ornamental, medicinal and aromatic crops, spices, plantation crops, their processing, value addition and marketing’ (Government of India, 2007).

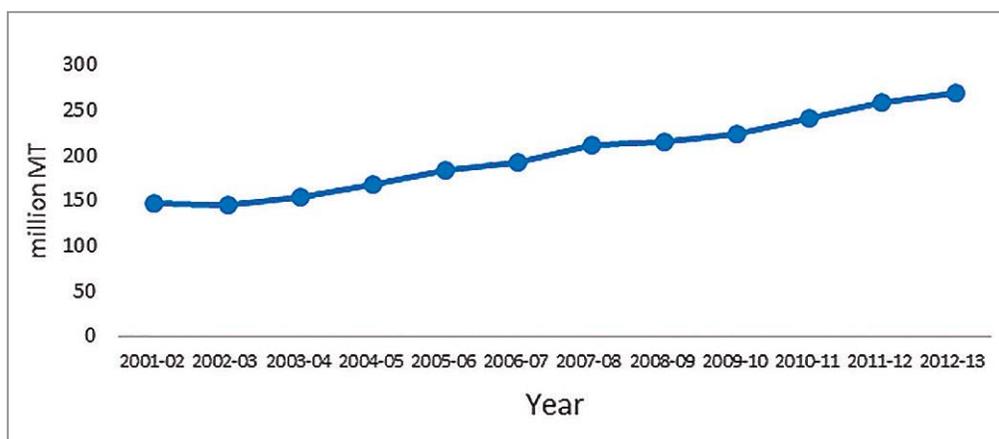
Although the production of horticultural crops has been expanding since independence, a substantial increase both in the area under horticulture and production has been witnessed since the Eighth Plan period as is evident from Tables 3.4 and 3.5. The area under horticulture has almost doubled from 12.7 million ha in 1991–1992 to 23.6 million ha in 2012–2013, while production has increased by about 51 per cent from 96.56 million MT in 1991–1992 to 145.78 million MT in 2001–2002 and to 268.84 million MT in 2012–2013 – an increase of over 80 per cent from 2001–2002. Figure 3.1 shows production in horticulture.

**Table 3.4 Area under Horticulture in India: 1991–1992 to 2006–2007**  
(million hectares)

Year	Area	Year	Area
1991–1992	12.7	2007–2008	20.2
2001–2002	16.5	2008–2009	20.6
2002–2003	16.2	2009–2010	20.8
2003–2004	19.2	2010–2011	21.8
2004–2005	18.4	2011–2012	23.2
2005–2006	18.7	2012–2013	23.6
2006–2007	19.3		

Source: indiastat.com

**Figure 3.1 Horticulture Production**  
(million metric tonnes)



Currently, India is the second largest producer of fruits and vegetables in the world and stands at number one in the production of fruits like mango, banana, sapota, pomegranate and aonla. India's fruits and vegetables production in 2011 stood at 233 million tonnes, its share in world production of fruits and vegetables being 12 per cent and 10 per cent respectively (EXIM Bank, 2013). Much of this success seen in the 2000s can be attributed to the National Horticulture Mission<sup>45</sup> which was launched in 2005–2006 as a Centrally Sponsored Scheme (where the Government of India contributes 85 per cent with the remaining 15 per cent share coming from the state governments). This called for regionally differentiated strategies and a harmonisation of the various on-going horticulture development programmes so as to augment and exploit the potential of horticultural crops and create employment opportunities. All categories of farmers, including women beneficiaries are covered under the NHM. The State Horticulture Missions (SHM) have been directed to ensure that at least 30 per cent of the budget allocation is earmarked for women beneficiaries and farmers. During the last financial year 2013–2014, Rs.12.87 billion (approximately \$0.21billion) have been released to NHM-implementing states.

Another Centrally Sponsored Scheme, 'Horticulture Mission for North East and Himalayan States (HMNEH)' is being implemented for the overall development of horticulture in the North-east region as well as the Himalayan states of Jammu & Kashmir, Himachal Pradesh and Uttarakhand in a mission-mode approach. The mission consists of four mini missions which individually address specific goals and covers the entire spectrum of horticulture, right from production to consumption through backward and forward linkages (Government of India, 2014).

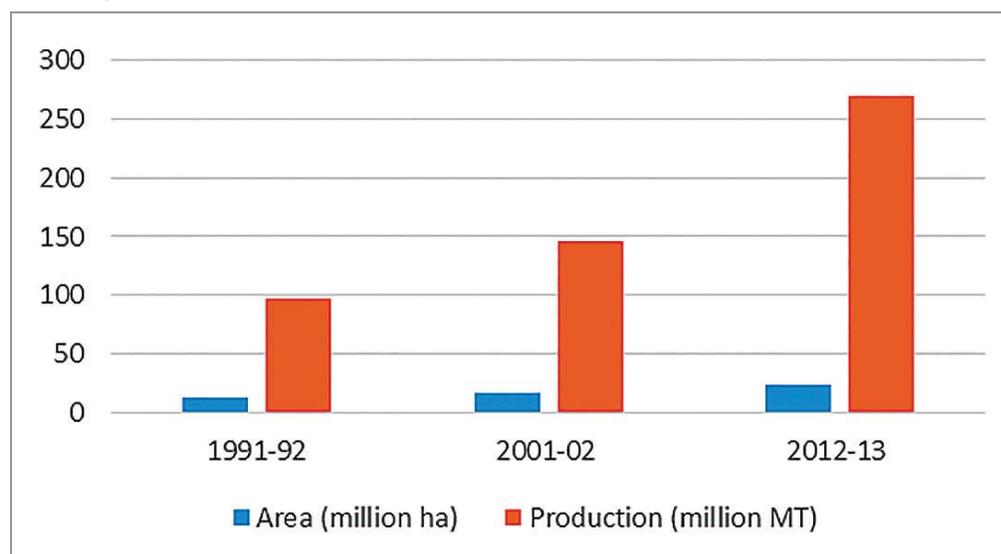
The area under horticulture has shown a gradual but substantial increase over the period 1991–1992 to 2012–2013. While the area under horticulture has almost doubled from 12.7 million hectares in 1991–1992 to 23.6 million hectares in 2012–2013, production under horticulture has increased by 2.7 times from 96.56 MT 1991–1992 to 268.84 MT in 2012–2013 (Table 3.5 and Figure 3.2).

<sup>45</sup> With effect from 2014–2015, the National Horticulture Mission will be subsumed with several other horticulture missions and schemes and operate under the umbrella of the Mission for Integrated Development of Horticulture (MIDH).

**Table 3.5 Decadal Growth in Horticulture: Area and Production**

Year	Area (million ha)	Production (million MT)	Growth in Area	Growth in Production
1991–1992	12.7	96.56	–	–
2001–2002	16.5	145.78	29.92	50.97
2012–2013	23.6	268.84	43.03	84.41

Source: indiastat.com

**Figure 3.2 Horticulture in India: Area and Production Over the Decades**

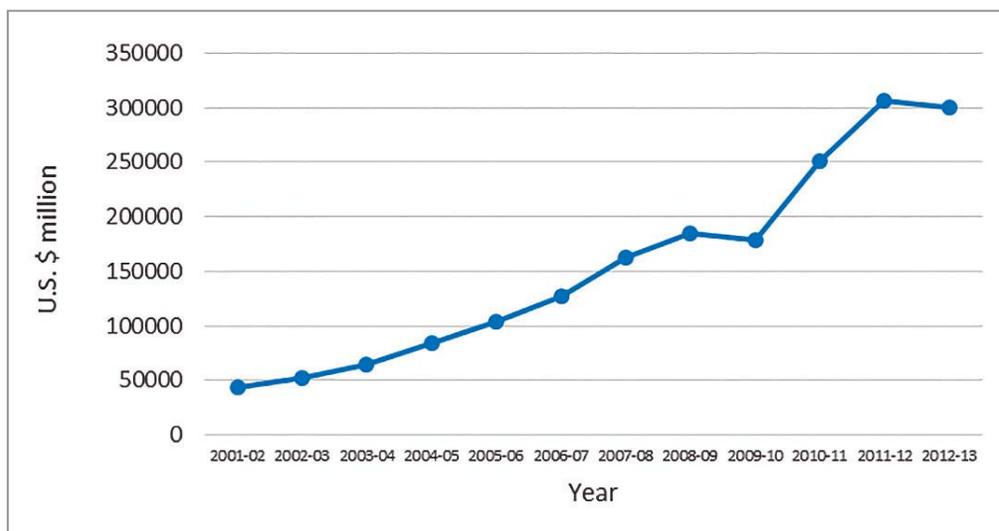
Before studying the horticulture exports of India, it is useful to first look at its exports for the period 2001–2002 till 2012–2013. Table 3.6 and Figure 3.4 present India's total exports during the 2000s. India's total exports on an average for the period 2001–2002 to 2012–2013 grew at a rate of 19.8 per cent. It can be observed from Figure 3.3 that there was a gradual increase during 2001–2002 to 2009–2010, the fall in 2009–2010 being a consequence of the global financial crisis. Exports picked up again in 2011–2012 but turned sluggish in 2012–2013.

**Table 3.6 India's Total Exports: 2001–2002 to 2012–2013**  
(US\$ million)

Year	Total Exports	Year	Total Exports
2001–2002	43,826.7	2007–2008	162,904.3
2002–2003	52,719.4	2008–2009	185,295.0
2003–2004	63,842.6	2009–2010	178,751.4
2004–2005	83,535.9	2010–2011	251,136.2
2005–2006	103,090.5	2011–2012	305,963.9
2006–2007	126,414.1	2012–2013	300,570.6

Source: DGCIIS

Figure 3.3 India's Total Exports: 2001–2002 to 2012–2013



Efforts under the NHM resulted in a substantial rise in horticultural production and also an increase in horticulture exports as can be seen from Table 3.7. Horticulture exports rose quite dramatically by 110.4 times from \$ 1.08 billion in 2006–2007 to \$119.8 billion in 2007–2008, and increased by 1.5 times from \$119.8 billion in 2007–2008 to \$185.5 billion in 2011–2012. The major export partners are Bangladesh, Nepal and United Arab Emirates (UAE) for fruits; and Bangladesh, Nepal, UAE, UK and Malaysia for vegetables. Other export partners are Saudi Arabia, Netherlands, France and Singapore (Mittal, 2007, pp.13–14, EXIM, 2013, pp.17–30).

Table 3.7 Horticulture Exports: 2000–2001 to 2011–2012 (US\$ billion)

Year	Horticulture Exports	Year	Horticulture Exports
2000–2001	0.53	2006–2007	1.08
2001–2002	0.49	2007–2008	119.8
2002–2003	0.51	2008–2009	147.4
2003–2004	0.63	2009–2010	161.7
2004–2005	0.58	2010–2011	155.9
2005–2006	0.77	2011–2012	185.5

Source: India Trades

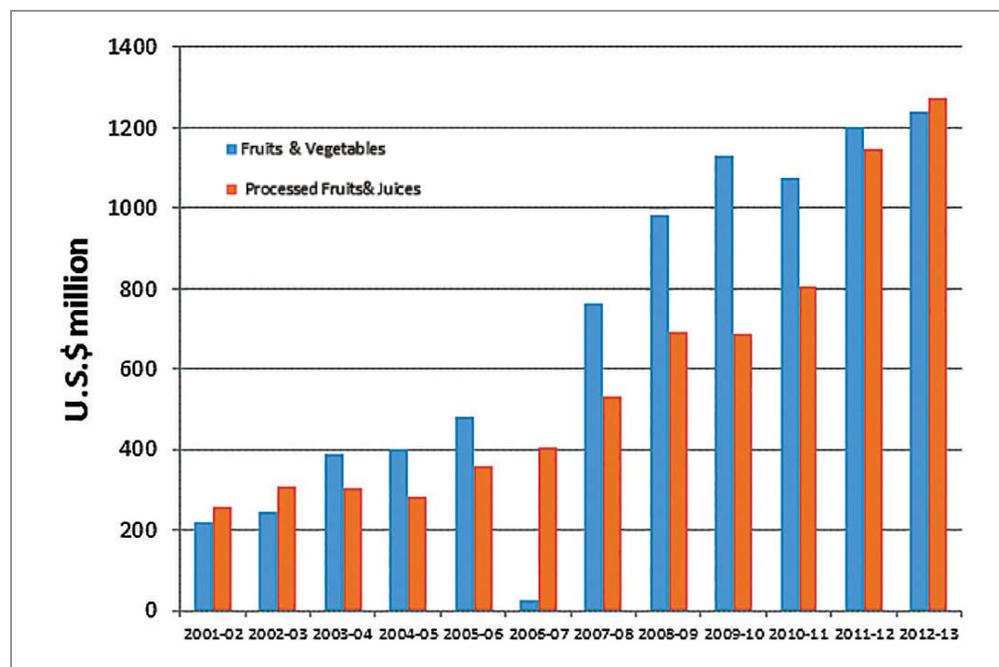
Within horticulture, the focus is on the exports of fruits and vegetables and exports of processed fruits, juices and miscellaneous processed items. Table 3.8 shows the exports from these two items, its graphical presentation being depicted in Figure 3.5. It can be seen that exports of both fruits and vegetables and processed fruits and juices have been showing an increasing trend during the 2000s. It is interesting to note that while the exports of fruits and vegetables have dominated since 2000–2001, in 2012–2013 the exports of processed fruits, juices and other items exceeded that of fresh fruits and vegetables indicating the importance of value-addition.

**Table 3.8 Exports of Fruits & Vegetables, and Processed Fruits & Juices:  
2001–2002 to 2012–2013  
(US\$ million)**

Year	Fruits and Vegetables	Processed Fruits and Juices
2001–2002	221.1	259.3
2002–2003	245.5	306.7
2003–2004	389.9	305.2
2004–2005	398.7	284.3
2005–2006	481.9	359
2006–2007	26.9	405.8
2007–2008	761.6	530.5
2008–2009	982.6	690.7
2009–2010	1128.9	686
2010–2011	1076.5	805.4
2011–2012	1200.3	1145.3
2012–2013	1238.1	1273.5

Source: DGCIS

**Figure 3.4 Exports of Fruits & Vegetables, and Processed Fruits & Juices:  
2001–2002 to 2012–2013**



However, it is pertinent to note that India's share in the world trade of fruits and vegetables is insignificant compared to its potential; the focus of its export markets is Asia as nearly 48 per cent of fruits and 70 per cent of vegetable exports are to Asia (EXIM Bank 2013, pp.17-30). The EXIM Bank (2013) study noted that the challenges faced by the fruits and

vegetables sector are across the value chain, from the supply side (production, and post-harvest management) to the demand side (which includes non-tariff barriers). One of the major challenges on the production side is low productivity. The average productivity of most fruits and vegetable crops in India is very low compared to international standards. The other challenges to productivity include very high wastage rate; poor pest and disease management; technology suitable for small holdings; lagging Research and Development (R&D) capability; poor farm mechanisation for horticulture crops; low levels of precision and protected farming; and poor extension services.

Another study by the World Bank, Mattoo et.al (2007) highlights the paradox of India being a large, low cost agricultural producer but with a small share in the global agriculture exports. As regards trade in horticulture, India's share in the world exports of vegetables is only 1.7 per cent and in fruits a mere 0.5 per cent. The study after an in-depth analysis of the horticulture sector (from farm to market), based on primary surveys with farmers, agents and exporters across fifteen Indian states, identified three important factors (i) the high cost of delivery costs of getting agricultural produce from farm to market; (ii) the huge gap between the international health, safety, and quality standards and the weak standards and assessment mechanisms in India; and (iii) malicious/pernicious forms of trade protection and a system of special safeguards which is a source of considerable uncertainty for successful exporters.

## Assessing Patterns of Trade and Women's Participation in the Green Sector: Micro Perspective Introduction

This entire chapter is analysed from an integrated perspective of secondary and primary data. It begins with the assessment of women's participation in the selected green growth sector by explaining the importance of the plant Sea Buckthorn, and the current practices of its cultivation, harvesting, processing and marketing.

### Green Sub-sector: Sea Buckthorn

In its first visit to the region, the study team interviewed a large number of governmental and non-governmental functionaries, including the Divisional Commissioner (DC); the Chief Horticulture Officer (CHO) of the state as well as the District Horticulture Officer; the Department of Cooperatives; the Divisional Forest Officer; the Defence Research and Development Organisation-Field Research Laboratory (DRDO-FRL); the Defence Institute of High Altitude Research (DIHAR); the Ministry of Defence; the Ladakh Renewable Energy Development Agency (LERDA); the Ladakh Autonomous Hill Development Council; and the Ladakh Environment and Health Organisation (LEHO). After detailed discussions, it was decided to select the rare and purely organic product called Sea Buckthorn, which is almost exclusively the domain of women, and is traded both within and outside the country.

Growing primarily on forest and 'uncultivable' land, the Sea buckthorn thrives in waste and 'degraded' land conditions; as chemical fertilisers and pesticides are obviously not applied in what is essentially a common property resource, the fruit is truly organic. The plant lasts for at least 15 years, after which its productivity begins declining. The spread of the tree is

affected by deforestation, as pollination takes place via the Chunka bird which feeds on the berries and spits out the seeds.

The uses of the Sea buckthorn tree, even in an unprocessed state are numerous: the leaf for tea, animal feed and fodder; the stem and root for firewood, charcoal, and wood for handles of agricultural implements; the berry for herbal medicines, nutritional supplements and oil for household lighting; and twigs and branches for shed-roofs, tree guards and fencing of fields.

The plant itself plays an extremely crucial role as a protection against water and soil erosion, a major issue in cold desert conditions. Its extensive root system is ideal not only for containing erosion but also for land reclamation, habitat enhancement and farm protection. The Divisional Forest Office has in fact been planting the Sea buckthorn on a somewhat regular basis in order to contain environmental degradation. For instance, 70 hectares have been planted recently in the study team's sample village of Hunder for fixation of sand dunes; this has also been done as recently as 2013 in the hills of Durbuk and Nyoma villages in the Changthang Valley.

Flowering in June and ripening in late August, harvesting has to be completed within a short period of three weeks. Plucking of the berries is done either early in the morning before sunrise or late in the evening after sunset; this is because the strong sun-rays cause the fruit to develop turgidity. As individual picking is not possible due to the small size of the berry and the extremely thorny nature of the plant, branches are beaten with a stick and fruits are collected on plastic sheets spread on the ground. In the second method, fruits are harvested after breaking off the branches from the mother plant; this obviously severely damages the plant.

Post-harvest processing and marketing is done almost exclusively by the Department of Cooperatives and Primary Cooperative Societies (PCSs) which are located in major villages. A common date for commencement of harvesting as well as the rate per kilogram is publicly announced by the District Deputy Registrar of the Department of Cooperatives in consultation with the Department of Horticulture and the Divisional Forest Office; the PCSs then contact the village headman (lambardar) to publicise the date and the rate.

Collection trays and sticks are distributed to the berry-collectors who are invariably and exclusively women, almost all of them constituted into Self-Help Groups (SHG). These groups, each with about 8 to 10 women and teenage girls, meet at a pre-fixed spot at about 5 a.m., and jointly enter the wasteland where they use their batons to hit the thorny branches, gathering the berries in large plastic sheets that are laid out on the ground. As soon as an approximate ten kilos each has been collected which takes about half an hour, the sheets are carried for sale to the nearest outlet of the PCSs. These outlets can be either direct pulping centres, or mobile vans which carry the collection to the nearest pulping centre, where the berries are graded according to sweet and sour, the only determining factor being the colour. Processing is conducted till evening, and continues uninterrupted for the 20 days of the harvest season.

The pulper is operated by electricity whenever available, but often by diesel as power in Ladakh is a major obstacle; this also affects the possibility of harvesting the Sea buckthorn in the evenings after sunset when it gets dark, thus reducing dramatically the huge production potential that exists. In its visits to the villages as well as to the research laboratory of the DRDO, the study team were informed that although solar energy is possible for processing machines, the cost is prohibitive; the DRDO-FRL is now attempting to develop

cheaper solar-based pulpers which would be affordable by individual households, especially if a small subsidy is built into the cost.

In any case, several officials who were interviewed lamented that barely 5 per cent of the berries are harvested due to various reasons, including outdated technology, erratic and intermittent electricity, bad roads, limited transport, and of course the general lack of information pervading all levels regarding the huge market that exists both nationally and internationally.

The pulp is packed in hygienic containers which have a 50 kg capacity. Potassium-Meta-Bisulphate is the only preservative used to avoid acidic reaction; apparently the berry is so potent that its juice can scour cement flooring. The Council has set up three units in Ladakh – two in the Nubra block and one in the capital Leh. Additionally, block level Cooperative Consumer Stores as well as twelve village level Cooperative and Marketing Societies have been assigned the task of collecting and processing berries under the overall guidance of the Registrar of Cooperatives.

The pulp is then taken to the Department of Cooperatives in the district headquarters at Leh, where it is sold to traders at prices fixed in consultation with the Ladakh Autonomous Hill Development Council. The process of selecting the trader for value-addition is quite transparent, being based on the highest bid after advertising in newspapers; if the contract is for over a year, then an annual 5 per cent price increase is built into the bid.

Marketing and processing by Cooperatives fulfils the fundamental ethic believed in – that there should be public benefits in appropriating the products of what is essentially a common property resource. Profits accrue from the Sea buckthorn as well as vegetables for which there is a large and assured market due to the long-standing presence of the Army.

As of today, the profits accruing to cooperatives are shared in a rather remarkable manner. Membership fees that are collected are used for maintenance, and for paying wages to those employed – Rs 500 per day to skilled workers and Rs 300 to unskilled workers, these rates being significantly higher than the stipulated minimum wages pertaining to the region, and in some places even higher than prevailing market rates. However, the most impressive feature about these cooperatives is that dividends to shareholders are not paid in cash but in kind – environmentally friendly lamps, bulbs or solar equipment. The lead author of the study acknowledged that there has not been – in her somewhat considerable fieldwork experience of over three decades – a better illustration of collective people-oriented and people-centred environmental responsibility linked to processes of production and sale, with no concern for individual profit or gain.

Although a few private traders have entered the business, most restrict themselves to purchasing for primary processing and sell the pulp to firms located outside the region. The Sea buckthorn industry is just about a decade old, when research on this wonder-plant was initiated by the DRDO, Ministry of Defence. Till a few years ago, a large industrialist from Delhi negotiated with the Council and set up a pulping unit; the product was air-lifted to the capital where it was converted mainly into the then-famous brand of the juice 'Leh Berry'. This entrepreneur apparently took advantage of the several subsidies offered, and then abruptly stopped buying the pulp; the Council has since filed an First Information Report (FIR), and there are cases of cheating pending against him. The study team was informed that he has now begun importing the Sea buckthorn pulp from China which purportedly sells at a price lower than what Ladakh offered. The custody of his machinery

in Sumoor village has been given by the court to the Leh District Cooperative Department, which has rented out the unit to a private trader at the rate of Rs 35,000 per annum. Today, there is only one major private trader who purchases almost 90 per cent of the pulp, and airlifts it to the southern state of Kerala where it is used in the pharmaceutical industry for both allopathic and Ayurveda medicines, as well as beauty products.

As sea buckthorn cannot be consumed fresh due to the highly acidic taste, processing is fundamental to its usage. The main value added product currently produced in Ladakh is juice, which can be stored up to a year and does not freeze even in minus 22 degrees, and which requires no added colouring or flavouring agent. A wide variety of other products are made today, although in a limited quantity – nectar, jam, sauce, pickle, tea, jelly, wine, antioxidant herbal supplements, U-protective oil, creams, soaps, shampoos, and also bakery products like buns, bread, biscuits, and cakes.

The process of cultivation to marketing of the sea buckthorn can be depicted in a supply chain as follows:



## Gender and Trade

This section now proceeds with a detailed analysis of the role of women in trade in the specific context of the Sea Buckthorn, examining additionally and importantly, the implications for their contribution to the growth of both capital and labour. This is particularly crucial in order to unravel the vexed issues of unrecognised and hence uncalculated contribution of women to development, both nationally and internationally.

The extensive fieldwork involved a total of nine villages – Turtuk, Chamshan-Charasa, Diskit, Hunder, Panamic, Skuru, Penchimik, Chemrey and Sumoor. Several other villages

were also visited though not for in-depth analysis. The study team met and interviewed all stakeholders, using all forms of primary methodologies which have been integrated into analysis as presented below. Information on the number of respondents interviewed for the field study is presented in Annex 3.1.

The Census defines Workforce Participation Rate as the percentage of total workers (main and marginal) to total population. The Workforce Participation Rate (WPR) of women would represent the percentage of women workers in the population. A comparative assessment of the WPR for the 2011 Census at the all-India and state level, along with that computed for the district of Leh (Ladakh) and its sub-districts, is presented in Table 3.9.

**Table 3.9 Workforce Participation Rates: Rural-Urban**

	Total	Rural	Urban
India	39.8	41.8	35.3
J&K	34.5	34.2	35.2
Leh (Ladakh)	56.2	55.1	58.5
Sub-districts			
Khaltsi	--	42.2	--
Leh	--	52.2	--
Nubra	--	62.7	--

Note: Data for India and J&K are from the Census 2011, while for Leh (Ladakh) and the sub-districts they are computed by the authors using Census 2011 data.

It can be observed from Table 3.9 that at the all-India level, rural WPR is higher than urban WPR but at the state level for Jammu and Kashmir (J&K), both rural and urban WPRs are very close. However, at the district level of Leh (Ladakh) not only the urban WPR but even the rural WPR is much higher; this can be attributed to the tourist attraction of Leh and that it is the headquarters of the autonomous council area; furthermore, the overall WPR both for the rural and urban areas is much higher than that at the all-India and state level. A deeper look at the WPR in the sub-districts of Leh, viz. Khaltsi, Leh and Nubra which are largely rural, indicate that the WPR is much higher than the all-India level and that for the state of J&K. The rural WPR in the Nubra Valley is as high as 62.7 per cent.

Table 3.9A presents a gendered and rural-urban perspective of the workforce participation rates. At the all-India level, J&K and district Leh (Ladakh) the male WPR is much higher than the female WPR at all three levels – overall WPR, rural WPR and urban WPR. For instance, the overall WPR (53.3 per cent) is more than double than of the female WPR (25.5 per cent) at the all-India level. Likewise, at the sub-district level too, in Khaltsi and Leh, rural male WPR is higher than the rural female WPR. However, in the sub-district of Nubra, rural female WPR is much higher than rural male WPR; in fact, it is almost three times that at the national level. The issue of feminisation of especially the rural labour force thus gains prominence.

**Table 3.9A Gendered Workforce Participation Rates: Rural-Urban**

	Male			Female		
	Total	Rural	Urban	Total	Rural	Urban
India	53.3	53.0	53.8	25.5	30.0	15.4
J&K	48.1	46.3	52.7	19.1	20.8	14.5
Leh (Ladakh)	67.4	63.9	73.1	40.0	44.3	28.9
<b>Sub-districts</b>						
Khaltsi	--	56.3	--	--	49.6	--
Leh	--	62.1	--	--	40.4	--
Nubra	--	73.6	--	--	83.3	--

Source: Same as Table 3.9.

Table 3.9B presents the gendered WPR for the villages selected for the field visit, most of which are in the sub-district of Nubra.

**Table 3.9B Gendered Workforce Participation Rates: Selected Villages**

	Overall Rural	Rural Males	Rural Females
Chamshan-Charasa	58.9	58.3	59.3
Diskit	52.7	57.8	47.0
Hunder	62.2	63.1	61.5
Panamic	78.1	87.6	52.2
Skuru	64.3	62.0	66.2
Sumoor	35.3	48.1	20.2
Turtuk	67.5	80.4	34.1
Chemrey	86.6	95.0	27.5

Note: WPR computed by authors from Census 2011 data

A look at Table 3.9B indicates that except for Sumoor, which has an overall rural WPR of 35.3 per cent, all other villages have a rural WPR greater than 50 per cent. Chemrey reports an astounding WPR of 86.6 per cent. A comparison of the rural male and rural female WPRs in the selected villages indicates that except in Chamshan-Charasa and Skuru, in the remaining six villages, rural male WPR was higher than rural female WPR. The gender gap in WPR was highest in Chemrey (67.5) followed by Turtuk (46.3), Panamic (35.4) and Sumoor (27.9).

The contention of the study is that WPRs for women are much higher than that reported in secondary data; their contribution to both economic growth and trade is thus heavily unrecognised and uncalculated in the absence of incorporation of the harvesting of the Sea Buckthorn. Each village is detailed individually, in an attempt to capture both labour participation as well as income earned, and the entirely unusual manner in which this income is utilised. It needs to be pointed out that all villages were not locatable in the Census tables, and hence WPRs could not be compared via an integration of secondary and primary data in every case.

Turtuk is an utterly beautiful village, nestled between two densely forested mountains and located near the India-Pakistan border. Till recently, inhabitants were almost fully dependent on agriculture, done mostly by women; having become a part of India as recent as less

than three decades ago, most men in Turtuk generally work either as porters for the Indian Army or micro traders; they also get work for the mandatory 120 days under the National Rural Employment Guarantee Act (NREGA). Turtuk has recently been identified as a tourist hot-spot, with a significant proportion of women now moving out of agriculture in order to operate home-stays and also small food stalls. The Sea buckthorn in this village is not a source of livelihood as there is little degraded land, the high proportion of extremely fertile land ensuring substantial income even with a single harvest. All who were interviewed, however, are quite keen on developing what they call the Sea buckthorn 'business', as it would give them an assured and 'self-respecting' source of livelihood. As a 70-year old said, "Sea buckthorn has huge potential; we have equally huge eagerness" (sic). The major constraint the villagers identified, which needs rectification before planting of the Sea Buckthorn, is the lack of good, all-weather roads – as is the bane of those who reside in Nubra and are cut off for half the year.

The main problem for the women of Hunder is not poverty but a rather low age at marriage, reportedly being as low as 8 years in some instances. The State Rehabilitation Council has in fact identified Turtuk for special focus and has already begun work there targeting especially the issue of child marriage.

Hunder is the second largest centre for the collection of the Sea buckthorn in the Nubra Valley, if not in the entire state of Jammu & Kashmir. The study team was fortunate enough to be able to meet one of the most knowledgeable persons associated with the Sea buckthorn movement, as it were; the team gathered more of its industry-specific information from him than from any other of the several hundred that they interviewed. This retired Assistant Manager of the Primary Cooperative Society is in fact one of the pioneers of the production-market-environmental intersection practised by the Cooperatives in the region, and has been part of the Cooperative Department's drive to increase awareness by organising seminars on the issue of expansion of the Sea buckthorn market both as a primary product and for value addition.

Hunder has an approximate 280 households, 200 Buddhist and 80 Muslim. About 30 households each source their livelihood from the Army; as temporary employees of the General Reserve Engineer Force of the Border Road Organisation of the Central Government; as pensioners; as teachers, and as camel safari owners. About 10 households own shops, while more than 20 operate homestays. All, however, are involved in agricultural activities.

As per the 2011 Census, the WPR in Hunder is an extremely high 61.5 for women, just a percentage point less than that of men. The study team, however, found that the Female Work Participation Ratio (FWPR) would in fact be even higher at a massive 90 per cent, with almost all able-bodied women and also girls involved in agriculture; 80 per cent of village women are 'officially' cultivators. They, along with some others, also earn additional income from berry collection. This village produces a large amount of vegetables, a minimum of Rs 50 lakhs worth being sold through the Cooperative every year to the Army.

Till about a year ago, all were involved in the collection of the Sea Buckthorn, irrespective of community or religion. Apparently in 2012, a well-known Llama instructed his followers not to harvest berries, saying that this would lead to the killing of insects that reside on the plant; as a result, Buddhist households in Hunder and also in Skuru withdrew from the Sea buckthorn collection. In response, the Ladakh Autonomous Hill Development Council (AHDC) and the Directorate of Cooperatives requested another Llama to come on to the public domain in the form of radio talks and clarify these issues; most households are now

back to collecting berries. The approximate earning per woman per year from harvesting the Sea buckthorn is averaged at approximately Rs.20,000 to Rs.25,000, a not unsubstantial amount for 15–20 days of work, each labour-day involving just about 3 hours.

Skuru is a small picturesque village located on the main road but partially hidden from view because of the immense Sea buckthorn plants. All 56 households are agriculturists, and all women from all households used to be engaged in berry plucking till last year, when the followers of the Llama withdrew, leaving only about half these households sourcing income from the Sea Buckthorn. Apparently many more women wanted to return to berry collection, but have been strictly forbidden by some of the village elders. The WPR for women in Skuru is reported to be 66.2 by the 2011 Census, the highest among all the sample villages. The team found this to be an underestimation as of that year itself, and would add another 15 per cent. The contribution of women to trade is thus more than somewhat substantial. However, for the one year of 2013, women's WPR was significantly lower at about 50 per cent, in view of the Llama's diktat.

Just beyond Skuru and Hunder lies another major centre, the village of Diskit; at least one-third of its 300-odd households – all Muslims – are involved in Sea buckthorn collection. The remaining 200 families are Buddhists, and plan to collect berries this year onwards after the second Llama's appeal. The strategy of the Council and the Cooperatives appears to have convinced people, and most are now returning back to the collection of berries. Women's WPR which was reported to be a rather low 47 per cent as per the 2011 Census, fell to about one-third in 2013, but is expected to rise back to its normal 80 per cent in the current year.

Diskit has two private processing units, apart from the Primary Cooperative Society; all three process fruits and vegetables throughout the year, the bulk of the produce going to the Army. 47,400 kilograms of berries were collected by Diskit women in 2012, for which they were paid Rs.25 per kilogram. In the following year, the output decreased to 35,100 kgs as a result of the Llama's directive; 21,400 kgs of pulp was processed, valued at Rs 95 per kg. Seeds too have begun to be sold, but at an extremely low rate of merely Rs. 100 a kilo. If there was no lack of information regarding the international prices of seeds, the value would be much higher.

The Sea buckthorn in Chamshan-Charasa is processed in the village itself by an all-women Self Help Group which was set up under the guidance of the Primary Cooperative Society through the Watershed Project, the Department of Rural Development and National Bank for Agriculture and Rural Development (NABARD). The Chamshen Leh Berry Juice Factory comprises of 40 women who work in groups of thirteen to both harvest and process the raw material into juice. The collection of berries is carried out every day during the season from 6 am to 8.30 am, and again from 6 pm to 7 pm: this is one of the rare instances where an evening collection is conducted. The profit from juice isn't very large, although the SHG did earn Rs.75,000 last year.

The constraints to the expansion of business are several: bad roads; intermittent bus service; the fact of delivering and then returning to collect the juice bottles; the weight of the glass bottles; the limited number available; etc. Support for their endeavours, however, comes from all homestays and hotels in the region, which stock the juice and have also begun requesting for the Sea buckthorn Jam.

The president of the factory is one of the founder members, and has both the vision and the strength to develop it; what is missing is the availability of technology and the predictable

infrastructural constraints. Even so, all SHG members who were interviewed as well as their husbands are quite happy at the results, especially for two reasons. One, with the majority of the men being employed as tourist and Army guides and porters especially in the Siachin Glacier for at least 9 months of the year, most households are virtually female-headed, and have to fend on their own as there is very limited postal service which implies several months delay in money-orders reaching the village. Two, this factory ensures enough ready cash for daily consumption needs, for the urgent purchase of seeds, and for paying for children's education. The husband of an SHG member and a guide with the Indian Army, says he is a much relieved 'head of the household' who does not now have the tension of worrying about his family's daily struggle for survival.

The village of Panamic is situated just a few kilometres before the Siachin Glacier. Renowned for its Hot Springs, the women here have three major sources of income – agriculture, tourism and Sea buckthorn. As all own land, agriculture is the mainstay especially for purposes of self-consumption. About 45 women have formed an SHG to run the Hot Springs Eatery which is indeed quite popular. There is not a single of the 350-odd households that did not report collection of berries; all are involved in harvesting and then selling the Sea buckthorn for which they have to travel quite far as there is no processing unit here. The female WPR of 52.2 per cent as recorded in the 2011 Census is heavily underestimated, the actual, as women insisted during the field interviews being 'at least 90 per cent'. What is indeed fascinating is that most of these women do not save and spend their entire income on children and household expenses; being a fairly well-off village, basic necessities are taken care of.

And this is where the linkages between the various sectors identified for this study intermesh in a truly intriguing manner. All the women we interviewed had one major suggestion – that of solar lighting in the wastelands at least during the Sea buckthorn season so that they could double their production. Also – and this is indeed fascinating – that all of them had total control over their Sea buckthorn earnings, and saved it all to visit Buddhist pilgrimage sites.

Penchimik – another village untraceable in the Census tables – has about 70 households, over a hundred women and girls from 40 of these households being involved in the Sea buckthorn 'business'. They collect a minimum of 30 kilograms of berries each per day, for which they receive the stipulated price of Rs 25 per kg; the income they each earn thus touches almost Rs 1,000 per day, totalling Rs 20,000 per season, much more than they would derive from cultivation. Interestingly, this is one of the few villages where the purchaser is both the Cooperative and the private trader; the rate both pay, however, is the same, preference being given to whoever approaches them first and whoever sends the transport sooner. These women, therefore, can in no way be accused of either lack of bargaining knowledge or awareness regarding their produce, which they know is highly perishable.

Two SHGs operate in Penchimik, one with 10 members and one with 13. They started functioning about five years ago with the help of the Block Development Officer (BDO) as the predictable sewing-machine groups, and have graduated rather fast to processing units, or factories as they like to refer to their SHGs. As these factories are rather small, berries that cannot be processed in the village are taken to Sumoor. For a period of time – and this is extremely important to note – the Cooperative used to send a mobile pulping machine which reduced the drudgery as well as the cost of traveling to Sumoor.

The study team also met a group of 10 women who have formed an 'unofficial' SHG; they are brick-shifting experts, and the group is paid Rs 2000 per day for 6 hours of work. Each saves at least a rupee every day, which they accumulate to travel to nearby Buddhist pilgrimage

sites. This group has named itself 'Rang Skyong' – the literal translation being 'The Star of our Labour'.

Sumoor is a fairly large village, and is the place where the entrepreneur from Delhi had located his processing unit which has since been handed over by the court to the Leh District Cooperative, and which has now been rented to a private trader. In this village, the researchers focused on interviewing the private trader who also operates a small hotel. He used to work directly for the entrepreneur earlier, but since the legal issues began, he started buying the Sea buckthorn directly from the women, who reported that at least 75 per cent of them work, instead of the ridiculously 20.2 per cent as the Census of 2011 records for the village.

The private trader then processes the berries in his rented unit, the output being sold to the Ladakh Autonomous Hill Development Council. He claims that he purchases them at a price, which is Rs.3 higher than what the Cooperative gives, and is thus able to increasingly corner the market. However, it was rather disheartening to note that he has little knowledge of the huge demand for the Sea Buckthorn, especially the value added components.

Chemrey lies outside the Nubra region in Changthang Valley and is located on the main road leading to the famous Pangong Lake. As in most villages, almost all women here are engaged in Sea buckthorn collection, and, again, as in most villages, irrespective of class or clan distinctions. Additionally, as seems to have become the norm, women here insisted that at least 90 per cent of them work if the Sea buckthorn harvesting is counted as work – that is, a WPR three times higher than the 2011 Census data, and matching the rural male WPR of an astounding 95 per cent.

Interestingly, this village has a fairly large number of single women, for reasons that were not fully understandable, except to link the cause to a relatively significant number of men from Chemrey becoming monks, located as this village is, very near to several renowned monasteries. The majority own at least some amount of land. There appears to be no alienation of even unmarried women from the chief means of livelihood; also, land can be inherited equally by men and women, irrespective of their location in the patriarchal family slot. In fact, the study team came across several instances where husbands owning little or no land had moved into their wife's homes. And when both women and men have migrated, the plot is rented out to – interestingly – generally a group of women who cultivate the land and give a share of the produce to the owners.

The Chemrey Village SHG is located on top of a cowshed in the large hamlet of Sapchak. Although the major sources of livelihood are agriculture, dairy, and of course the Sea Buckthorn, members of the SHG have begun to earn an additional income from knitting. The team was fortunate to be able to interview most of the members including the President.

The group is affiliated to the Women's Alliance of Ladakh (WAL), which was established in 1994 by the International Society of Environment and Culture (ISEC) with the focus on two objectives – raising the status of rural women, and strengthening local culture. WAL today has over 4000 members in almost a hundred villages. It holds regular 'clean-up' campaigns aimed at encouraging community responsibility for the environment, and has succeeded in making Ladakh one of the few regions in the entire country that has managed to ban plastic bags. Annual festivals are also held to celebrate local knowledge and skills, including traditional spinning, weaving and dyeing, as well as the preparation of indigenous food. The attempt is now to enhance group-based income earning capacity primarily through small scale enterprises.

Of the 15 member group that the study team met in Sapchak-Chemrey, only 3 are unmarried, while 6 are illiterate. Lack of literacy and numeracy is however no constraint on income-earning and account-keeping, as the younger school-going girls have taken it upon themselves to teach and train the illiterate elders. The office is dotted with charts depicting alphabets and numbers, and not one of the women is ashamed to be learning at the age of 35-plus; rather, they are all extremely proud of their newly-gained knowledge, and insisted on practising on with the team.

The SHG began informally about 15 years ago, and was formalised by the Block Development Officer in 2005. Each member contributed Rs 2400 each; their first purchase was a steel trunk in which they store their documents and also materials. Their choice of economic activity is quite rational, even if viewed in purely economic terms; living in a culture that is minimalistic and located in a village that is surrounded by monasteries, hand-knitting of sweaters and socks is a natural outcome of the existing market and a skill that is traditional. Raw wool is purchased from Choklang, and cleaned and processed by the members themselves in order to reduce the cost of production. With a somewhat pre-determined output resulting from the requests put forward, often in advance by the monasteries, Rs 1625 was spent in the last financial year on raw wool, and after deducting the cost of other inputs such as soap and oil valued at Rs 550, a total of 25 sweaters were knitted and sold for the pre-determined price of Rs 650 each for large and Rs 500 for small sweaters. The costing has been displayed proudly on the board – “Profit Earned: Rs.11,575”.

That women are rational economic beings – the female ‘Homo Economicus’ – is borne out by the fact that they have saved all their earnings over several years, apart of course for emergencies, and have rented a plot of cultivable wasteland on which they produce potatoes and sell to the Indian Army through their SHG.

## Ways Forward: Region, Country, Sector

This last section does not attempt to either summarise or suggest broad generic recommendations. Rather, the attempt is to respond to the felt needs at the field level, and to suggest possibilities of enhancing both the recognition and the valuation of women in trade at all three levels – national, regional, and global. Also, the ‘Ways Forward’ that are being put forth are related to the several Research Questions, either independently or as interconnected.

However, before beginning, it is essential to assert that the research is going beyond the issue of poverty, generally assumed to be central to the situation of women in underdeveloped countries. The economic and resource-linked position of women in the state of J&K and especially the research region is not as weak as it is in most of India. This is because the state is probably the only one that has fully implemented land reforms, and that too without compensation. Almost all inhabitants own at least some amount of land; landlessness is virtually absent in J&K. Also, with the movement of men away from the agricultural sector in view of the conflict situation, whereby they have greater access to job opportunities via employment with the permanently stationed India Army in the research region, women constitute the essence of the agricultural sector in terms of capital as well as labour, and therefore also in terms of trade, whether local, national, regional or global. Closely intertwined are issues of expansion of renewable energy, de-greening and greening, environmental degeneration and regeneration.

The study now spells out the several multi-layered paths that intermingle, both as responses and as entry points, in order to unravel the interconnections between Gender and Trade, and develop these for benefit of the region, the country, and the sector. Several are listed, and while not necessarily in order of priority, within a certain pertinent internal logic.

#### 1. Data Sources and Methodological Biases:

Seen in overall terms, there has been a rise in all components of agriculture, especially organic agriculture – area, production and share of exports. This also holds true of employment of women, although their role needs to be recognised and quantified. What is evident is that there appears to be a strong degree of feminisation of both horticulture and organic horticulture, a sector that has not been examined in depth till now. Secondary data sources have not taken these aspects seriously, and hence there is often not only non-availability of information, but also non-comparable data. Further, there is an urgent need to clarify and differentiate the concepts of work, employment and livelihood, accompanied by identifying and isolating methodological data biases so inherent in information systems and sources at all levels of national, regional and global. The data-invisibility issue here is not only in relation to gender, but in fact to the entire world of green industries and green sectors.

#### 2. 'Wild Harvest' and 'Conscious Cultivation':

Given the fact that production takes place on Common Property Resources, the urgent need is therefore to protect these areas in the form of environmental protection and regeneration, and control the possibilities of private appropriation of land. Added to this is the need to expand the production base through what the research has termed as 'Conscious Cultivation'; that is, the introduction of commercial cultivation but done with a consciousness that is based on environmental knowledge and concern. Central to this 'Way Forward' is the role of the State that must protect people's rights to both individual and commonly owned land and resources.

#### 3. Women and Resources: Individual

The issue of control over resources is central to the relationship that exists between Gender and Trade. It is in this context that several major factors emerge – environmental degradation, deforestation, appropriation of land for non-agricultural purposes, and of course the legal rights of women, over not only the chief means of production but also their legal rights over land as inherited property, as articulated in the succession laws of the nation.

#### 4. Women and Resources: Collective

One of the major defining characteristics of the primary Green Sector selected is that production takes place outside the private property domain in what is known as Common Property Resources (CPR). A central issue that therefore needs to be resolved is the definition of common rights; what are the collective rights that individuals must be either guaranteed or denied; to what extent are these rights articulated in law; are these rights implementable and how best can they be protected. This aspect goes beyond that of the Sea Buckthorn, and links with the broader canvas of Non-Farm Forest Produce which is so central to development in all regions and similar sectors. This would also imply the exact role of the different entities that have rights over CPRs – the Ministry of Forests and Environment, of Women and Child Development, of Rural Development, of Finance, of Commerce, etc. The components that need defining and probably even judicial interven-

tion include quotas, user-based fees, quantity-based charges, taxes, royalties, etc. And, necessarily, punitive actions for infractions.

One of the most creative illustrations is that of using the income earned from a common property resource via the non-individual based strategy of SHGs, and then re-investing in the creation of an even more gender-empowering group through the cultivation of land that is collectively leased in and collectively worked upon.

#### **5. Common Property Benefits versus Private Appropriation:**

The basic argument is the ethics of private appropriation of what is essentially a common resource, and to what extent and if at all an individual can and should claim rights over earnings which should ideally accrue to a group. Added to this is the protection of the physical resource against privatisation that is exclusive and hence excluding, related aspects that need urgent clarification being sub-tractability and indivisibility.

The above are linked closely to the possibility of expanding trade via introducing private access and production on wastelands and forests. This has emerged as an area of conflict between local residents and entrepreneurs who hire outside labour; non-locals are unaware of the methods of harvesting and tend to break branches and even cut trees in order to increase output, especially as payment is on a piece-rated basis. The suggestion is not to ban imported labour, but to sensitise them to sustainable and environmentally friendly production methods.

#### **6. Cooperatives and Collectives:**

Strengthening of cooperative and group-based harvesting, production and processing appears to be one of the most sustainable and responsible strategies to democratise the relationship between gender and trade, and in fact of development itself. This is not to assert that the current forms and methods are ideal, but that while the base is strong, the administrative and managerial techniques need to be honed and outreach increased. Also to be debated in this context are degrees of homogeneity in terms of assets, skills and information, as well as patterns of reciprocity and non-reciprocity.

#### **7. Value Addition:**

The selected sector is almost exclusively the domain of women in collection as well as in trade; this holds true for both primary production and for value-addition. The few products that are made today are all, without exception, produced by women, although predictably men control the supervisory positions. There is a massive potential to increase value-addition, particularly in terms of products; China today produces over 200 items from the Sea Buckthorn. There are two interconnected aspects here – that of investing in R&D for increasing the number of goods, and that of improving backward and forward linkages. A simple illustration is that of using tetra-packs instead of glass bottles to store the juices and jams. This would not only reduce the burden and cost of transporting, but would also lay the foundation for the emergence of small labour-intensive manufactures.

#### **8. Pricing and Marketing Information:**

While pricing and marketing information is generally somewhat well-organised at the local level, there is a need to improve its efficiency and outreach, especially directly to women

and their SHGs. The ubiquitous radio/transistor is an excellent medium particularly as the power situation is extremely erratic for most of the day and the year; care, however, should be taken to transmit the information keeping in mind women's timings that invariably involve care and other unpaid activities.

An area that requires urgent intervention is that of international and national information. This relates primarily to price movements, both of primary products and of the value-added products. The Sea buckthorn kernels are often in fact given away for free to private traders, who of course will take advantage of such information asymmetry.

#### 9. Market Expansion: Local, National, International:

The eternal issue in growth and development strategies is the size of the market, and the possibilities of expanding it. In fact, as the women harvester-traders put it so appropriately with a better understanding of economics than several renowned economists today – 'production is according to demand'.

Although local markets are the mainstay of the Sea buckthorn products today, the potential is heavily under-realised. The demand would be immeasurably increased if this industry was linked in a more institutionalised manner with the tourism sector. Ladakh is among the most renowned for tourism in India, especially Ecotourism. The number of tourists have been rising rapidly, domestic traffic doubling in the last year to cross 2 lakhs, while simultaneously international visitors too have increased their footfalls. The numbers are expected to rise even further, consequent upon the proactive policies of the state government which is currently investing in restoring cultural heritage sites, in setting up tourist centres, landscaping, etc. A special feature of the region is the massive increase in the number of homestays, which, as is known, have a greater basis for a democratic sharing of the benefits of tourism.

The simplest and most immediate way forward for expanding the local market would be the formal linking of the Sea buckthorn products and tourism, by recommending the use of value-added products such as juices and jams in all hotels and homestays of all categories. This possibility was discussed with several hotels and eateries, and the study team was pleasantly surprised to receive very enthusiastic responses, often being asked why this hadn't been done before.

The national market is extremely limited, with very few having any knowledge whatsoever of this 'wonder-plant', even in the rapidly expanding cosmetics industry. A national publicity campaign will go a long way in popularising the Sea Buckthorn, apart of course from standard strategies, such as seminars, industry body linkages, etc.

Branding would give an entry into even the international market. The issue of certification often becomes a problematic Non-Tariff Barrier, particularly in the context of a primary product such as the Sea buckthorn which is grown on common property; how and on what basis can certification be done on what is essentially a wild harvest commodity. However, hygiene, health and nutrition standards of course can and should be implemented.

#### 10. Clean Technology: Solar Energy

It is indeed quite contradictory to the climatic conditions of the selected region to have to rely on power based on coal, petrol, diesel and other fossil fuels. The potential for solar energy is massive, so much so that the largest solar plant in the world is planned to be set up in Ladakh. People, in fact, are already quite heavily dependent on solar energy for heating purposes, with almost all households having solar panels for heating water, and sometimes

even for cooking. The aspect that the study would like to assert here is the use of solar energy for production purposes, a not impossible task given that much research and innovation has already been conducted. The issue therefore is that of accessibility and of course affordability.

In the context of the fact that the Sea buckthorn production can be harvested twice in a day, the lack of power at night acts as a major constraint on the potential output possible. Solar lighting in the harvesting areas in the post-sunset period would go a long way in increasing production and hence trade levels.

### 11. Mobile Technology

This term is commonly used by the people in relation to pulping machines that are transported to villages during the Sea buckthorn season for collection and instant pulping of this highly perishable product. Technology already exists and such solar-based machines are being used, but the frequency and number transported to collection centers are too limited, apart from being rather expensive. The DRDO-FRL has initiated the process of creating such solar-based pulping machines that are small and cost-effective enough to be operated at the household level.

### 12. Production Enhancing Technology

The entire process of harvesting, collecting, transporting and processing of berries needs an urgent technological and managerial up-gradation. Collection methods are archaic, and lead to a loss of over 60 per cent of the berries, while hitting of branches damage the berries, rendering them unusable for pulping. Apparently, merely 5 per cent of the current 'output' in the region is harvested. Other competing countries such as Russia and China have invested heavily in research in improving extraction methods, including the use of vacuum-like suction machines. Related factors are expansion of refrigeration facilities, quicker transport vans, etc.

### 13. Occupational Safety and Health:

Occupational safety issues also need to be urgently addressed. Although the women do wear gloves and sometimes spectacles, they lack any other form of protective gear; their arms are heavily scratched and covered with rashes, eyes often damaged. The interlinked issues are therefore of productivity, efficiency, technological improvement, and occupational safety and health. Russia, China and Mongolia have developed special protective gear, with full head masks, body suits and eye-glasses. And, of course, health safety measures that are immediately available.

### 14. Infrastructural Constraints:

One of the most significant constraints on the expansion of Green Growth is the lack of all-weather roads within the region, and also connecting the region to other parts of the country especially the major Sea buckthorn trade centers and export outlets. The terrain is probably the most difficult, but technology has advanced far enough to surmount these seemingly insurmountable difficulties. A region that is cut off from the rest of the country or even from its own local capital for six months of the year cannot hope to integrate either its people or its products into national or international developmental processes and paradigms.

### 15. Government Policies and Schemes:

The Indian Government has not remained insensitive to the crucial importance of the Sea buckthorn as a highly profitable trade product. In 2010, the Ministry of Environment and Forests and the Defence Research and Development Organisation (DRDO) jointly launched a major new national initiative for the Sea buckthorn which has great relevance for the Himalayan states, particularly J&K and Himachal Pradesh, where cold deserts of the Himalayas constitute 40 per cent of the area. Such an initiative would benefit not only the local community by securing secure livelihoods, but will also ensure conservation of the fragile ecosystem in the high altitudes. At the Leh Declaration (July 2010), it was decided to establish a National Sea buckthorn Initiative and bring one million hectares of land area under Sea buckthorn cultivation by the year 2020, and prepare an Action Plan under the leadership of the DIHAR and the Ministry of Environment and Forests with an initial allocation of Rs. 25 crores for the initiative in 2011 for initial preparatory work, awareness and pilot programmes etc. It was also decided that a pilot project would be launched in five districts including Leh and Kargil in Jammu & Kashmir where riverbanks and hill slopes would be prioritised for cultivation. The issue here is whether this Mission would be implemented and achieved, and to what extent it incorporates gender concerns seriously.

Other crucial suggestions include the expansion of the extent of intervention and investment by the State, the nature and extent of export incentives, and efforts to remove information as well as technology constraints. And, of course, the gendering of Green Sector policies, programmes and schemes. The Ministry of Agriculture and Cooperation has a rather active National Resource Gender Centre, which needs to be strengthened.

The National Horticulture Mission has already made several significant recommendations to gender green production, all of them imminently suitable for implementation in neighbouring countries with similar sectors and concerns. Some are listed below:

- Organisation and identification of women groups to act as a network for channelising horticultural support.
- Need-based assessment of women farmers in terms of horticulture support for inputs, technology, and extension.
- Prioritising activities of individual women groups on the basis of need-based assessment.
- Providing adequate organisational and financial support to women groups to form themselves into SHGs.
- Providing technical training in horticulture and allied areas to women farmers.

### 16. Regional Cooperation Projects:

The most urgent suggestion being put forward is that of forming a Regional Production Bloc as a Regional Cooperation Project relating primarily to Green Sectors. The selected sector of the Sea buckthorn is eminently suitable for cultivation in the similar climates of Bhutan and Nepal; in fact, this plant already grows to some extent but is not yet tapped. This Production Bloc could form the basis of shared technology and a shared information base, and prove to be a powerful cooperative bargaining tool for gaining trade advantages. The regions of Ladakh, Nepal and Bhutan are historically linked by culture and belief, and together they form an essential component of what is today popularly known the world over as Buddhist Tourism. The communication between these three regions is not too impossible to increase, whether via physical infrastructural investment or through soft tech-

nology. And, what is probably the most fundamental of the possibility of an interconnect, is the common geo-climatic conditions that have a shared potential for expansion of renewable energy, and is, as yet, environmentally sustainable and sustained by culture and belief; by values and ethics, and by policies and strategies.

The Model of the Regional Cooperation Project envisaged integrates all the three sectors of Organic Cultivation, Renewable Energy, and Ecotourism – with gender as the unifying foundation that is non-negotiable in the economic and extra-economic reality of the three regions. The ways forward are myriad and varied, achievable independently as well as in an integrated manner – but all lead to a single objective – that of Gendering Green Growth.

For every such Regional Cooperation Project, the following are also strongly recommended:

- i. Conducting of Pre-project Rapid Gender Assessment Surveys
- ii. Gender-sensitive Project Coordination Team and appropriate institutional structure
- iii. Formation of regional, sectoral and sub-sectoral wise Multi-Agency Steering Committees
- iv. Participatory project planning and implementation, including procurement activities
- v. Women's participation and decision making in community management
- vi. Women's participation in generating and operating funds
- vii. Promoting locally-based cooperatives and SHGs for provision of materials
- viii. Financial resources for capacity building and training of local authorities
- ix. Dissemination of guidelines in local languages for operation, management, and maintenance
- x. Systematic institutionalised evaluation via appropriate gender budgeting tools per project
- xi. Barriers and Non-Tariff Barriers identification and evaluation.

#### 17. A Green Growth and Gender Index

Finally, the study recommends the creation of the Green Growth Gender (G3) Index for every nation, every region, every Cooperation Project; enough comparable data is available at various levels across time, region, space, sector, sub-sector, category, sub-category to develop the G3 Index. The role of women in economic activity can extend beyond the rather constrained concept of 'work' and encompass not only main-marginal-primary-secondary employed/unemployed components, but also the nuances of the nature of women's participation as self-employed, as casual labour, as regular salaried.

The primary purpose of developing the G3 Index is to create a comparative and quantifiable standard whereby nations are compelled to incorporate gender issues that are essentially and centrally located in the integrated realm of international trade and growth, that cannot be isolated from green concerns which impact women more than men in terms of production, consumption, maintenance, and even as investors.

The G3 Index can be calculated on the basis of the following formula: G3 Index = (Gendered Work Participation Rates + Clean Energy in Production + Control over Resources both Individual and Collective).

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## Annexes

### Annex 3.1 Number of Respondents Interviewed for Field Study\*

Sl. No.	Details of People contacted	Organization	Profile	Contact/ Location
1.	9 respondents (4 males and five females)	SHG	SHG member	Turtuk
2.	18 respondents (3 males and 15 females)	SHG	SHG member	Skuru
3.	20 respondents (5 males and 15 females)	SHG	SHG member	Hunder
4.	18 respondents (8 males and 10 females)	SHG	SHG member	Diskit
5.	29 respondents (5 males and 24 females)	SHG	SHG member	Chamsen
6.	30 respondents (8 males and 22 females)	SHG	SHG member	Penchimik
7.	18 respondents (4 males and 14 females)	SHG	SHG member	Panamik
8.	20 respondents (4 males and 16 females)	SHG	SHG member	Sumoor
9.	16 respondents (4 males and 12 females)	SHG	SHG member	Chemrey
10.	22 respondents (3 males and 19 females)	SHG	SHG member	Sapchak
11.	3 male respondents	Local entrepreneurs and government staff at district and village level		Turtuk
12.	3 respondents (2 males and 1 female)	Local entrepreneurs and government staff at district and village level		Skuru
13.	4 respondents (2 males and 2 females)	Local entrepreneurs and government staff at district and village level		Hunder
14.	2 male respondents	Local entrepreneurs and government staff at district and village level		Diskit
15.	3 respondents (2 males and 1 female)	Local entrepreneurs and government staff at district and village level		Chamsen
16.	1 male respondent	Local entrepreneurs and government staff at district and village level		Penchimik
17.	1 male respondent	Local entrepreneurs and government staff at district and village level		Panamik
18.	4 respondents (2 males and 2 females)	Local entrepreneurs and government staff at district and village level		Sumoor
19.	4 respondents (1 male and 3 females)	Local entrepreneurs and government staff at district and village level		Chemrey
20.	3 respondents (1 male and 2 females)	Local entrepreneurs and government staff at district and village level		Sapchak

Sl. No.	Details of People contacted	Organization	Profile	Contact/ Location
21.	16 respondents (4 males and 12 females)	Local villagers		Turtuk
22.	16 respondents (1 male and 15 females)	Local villagers		Skuru
23.	5 respondents (2 males and 3 females)	Local villagers		Hunder
24.	8 respondents (2 males and 6 females)	Local villagers		Diskit
25.	6 respondents (2 males and 4 females)	Local villagers		Chamsen
26.	14 respondents (2 males and 12 females)	Local villagers		Penchimik
27.	13 respondents (3 males and 10 females)	Local villagers		Panamik
28.	8 respondents (2 males and 6 females)	Local villagers		Sumoor
29.	10 respondents (2 males and 8 females)	Local villagers		Chemrey
30.	13 respondents (3 males and 10 females)	Local villagers		Sapchak

Fieldwork \* All women collect Sea Buckthorn, except the 17 in Turtuk, and the 11 Local entrepreneurs and government staff at district and village level

### Annex 3.2 List of Sites Visited

Name of Village	Purpose
Chamsen	Field visit to sea buckthorn fields, interviews with SHG members and other stakeholders
Chemrey	
Diskit	
Hunder	
Panamik	
Penchimik	
Sapchak	
Skuru	
Sumoor	
Turtuk	



CHAPTER

# 4

## WOMEN'S PARTICIPATION IN ECOTOURISM IN THE ANNAPURNA (MUSTANG) REGION OF NEPAL

Saloni Singh



# Women's Participation in Ecotourism in the Annapurna (Mustang) Region of Nepal

## Executive Summary

As part of the larger South Asian research, the Nepal study aims to assess gender dimensions and its potential in regional trade integration with the prospect of furthering green growth and environment friendly ecotourism in Nepal. In comparison to other sectors, ecotourism in Nepal encompasses parameters of gender and eco-friendly industries with potential for intra-regional trade in South Asia.

Since the beginning of trade liberalization in the mid- 1980s, Nepal has sought to engage with the world economy through various multilateral, regional and bilateral trade agreements. It became the 147th member of the World Trade Organization (WTO) in April 2004, and recently signed two regional trade agreements, namely, Agreement on South Asian Free Trade Area (SAFTA) and Bay of Bengal Initiative for Multi-Sectoral Trade and Economic Cooperation Free Trade Area Framework Agreement (BIMSTEC). Nepal also has bilateral trade agreement with its largest trading partner, India, since 1950.

Travel and tourism are among the world's largest growing economic sectors contributing to foreign exchange earnings for many developing countries. Ecotourism is a niche market within the broader travel industry. Ecotourism has the potential of being an important sustainable development approach in the economy. Though it belongs to the same tourism industry, ecotourism operates quite differently because it is defined by its sustainable development results- conserving natural areas, educating visitors about sustainability and benefiting local people.

In an increasingly globalised world, the impact of trade and investment liberalization is a significant area of policy focus. Increased global integration affects groups of individuals differently; and due to gender relations, the impact of globalization is different on women and men. In the current scenario, the gender impact of trade policy must be paid serious attention; especially as it is increasingly evident that trade policy cannot remain gender-neutral.

This is because women's economic and social fallback positions are weaker, their rights are not well defined and a harshly competitive system hurts the weakest the most. Further, impact amongst women also varies because of existing intersectionalities. The impact on women is partly general and partly gender-specific, determined by the way they participate in specific sectors. In Nepal, women represent more than 50 per cent of the total population and roughly around 46 per cent of the total economically active population. Ecotourism has been selected as the subsector case study with the field research bring carried in Annapurna region. A sequential approach has been adopted whereby findings from quantitative survey informed the qualitative research and helped develop a deeper understanding of the Gender, Trade and Green Growth (GTGG) linkages. Further, the qualitative research explored underlying factors affecting the status of women in the GTGG. The analysis in the

report is based on primary data collected through surveys, focus group discussion and case studies from four districts (Kaski, Parbat, Myagdi and Mustang) in the western region along the Annapurna trek route.

The study attempts to examine the roles of women in the ecotourism subsector and identify trade linkages both within the country and in the South Asian region.

In a nutshell, the evidence generated from the study indicates that ecotourism has potential for green economic growth; however the findings also revealed:

- gender relations affect access to and control over income;
- involvement in ecotourism led to increase in women's workload;
- rise in tourism is linked with incidence and potential of violence against women
- women's work and contribution still remained unrecognized and undervalued
- invasion of local tradition, values and norms
- environmental pollution
- outward migration of young people from the area is a major challenges because tourism is not regarded as sustainable form of livelihood. Access to local employment opportunities and quality education is needed to stem the flow of outward migration
- Lack of high skilled employment opportunities
- Need for socially empowerment to be able to combat violence against women

Gender concerns from the tourism sector needs to be acknowledged and incorporated in the upcoming policies including - Three Year Plan, Employment Policy, Gender policy, Renewable Energy policy and R&D and Inclusive Growth Strategy, National Tourism Policies. Specific recommendations to Government of Nepal include - developing a road map with appropriate resource allocation to enhance ecotourism with a special focus on gender responsive ecotourism that mobilizes both national and regional resource potentials including SAARC and ASEAN .

## Abbreviations

WTO	World Trade Organization
SAFTA	South Asian Free Trade Area
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Trade and Economic Cooperation Free Trade Area Framework Agreement
LDC	Least Developed Countries
ACAP	Annapurna Conservation Area Project
WWF	World Wildlife Funds
USAID	United States Agency for International Development
OECD	Organization for Economic Cooperation and Development
GDP	Gross Domestic Product
NTC	National Trust for Nature Conservation
ICIMOD	International Centre for Integrated Mountain Development
TRPAP	Tourism for Rural Poverty Alleviation Program
NTB	Nepal Tourism Board
KEEP	Kathmandu Environment Education Project
ACAP	Annapurna Conservation Area Project
MCCC	Mother's Club Central Committee
WEAN	Women Entrepreneurs Association of Nepal
UNDP	United Nations Development Program
ILO	International Labor Organization
NATHAM	Nepal Academy of Tourism and Hospitality Management
FDI	Foreign Direct Investment
GON	Government of Nepal
GTGG	Gender, Trade and Green Growth
FGD	Focus Group Discussions
KAP	Knowledge, Attitude and Practices
NTNC	Nepal Trust for Nature Conservation
GATS	General Agreement on Trade in Services
RTA	Regional Trade Agreements
UN	United Nations
SAARC	South Asian Association for Regional Cooperation
FTA	Free Trade Area
SAPTA	South Asian Preferential Trade Arrangement
PTA	Preferential Trade Arrangement
SAFTA	South Asian Free Trade Agreement
HIMALI	Highest Mountain Agriculture and Livelihood Improvement Project

RRP	Regional Rangeland Development Program
R&D	Research and Development
ASEAN	Association of Southeast Asian Nations
NRNA	Non-Resident Nepalese Association
VAW	Violence against Women

## Introduction

“Globalization” can be referred to as the growing interdependence of countries resulting from increasing integration of trade, finance, people, and ideas in one global marketplace. International trade and cross-border investment flows are the main elements of this integration.

Increased global integration affects groups of individuals differently. The effects of trade on labor markets vary according to each country's specific growth patterns and strategies, their level of exposure to international trade and their relative capacity to adapt their national industries and productive sectors to international competition. National labor markets can only reap maximum benefits from trade liberalisation when a country's economic and social sectors are able to adapt to emerging patterns brought forward by international trade competition.

In an increasingly globalised world, the impact of trade and investment liberalization is a significant area of policy focus. Due to differential gender relations, the impact of globalization is different on women and men. In the current scenario, the gender impact of trade policy must be paid serious attention; especially since it is increasingly evident that trade policy cannot remain gender-neutral. This is because women's economic and social fallback positions are weaker, their rights are not well defined; and a harshly competitive system hurts the weakest the most. Furthermore, impact amongst women also varies because of existing intersectionalities. The impact on women is partly general and partly gender-specific, determined by the way they are integrated into specific sectors.

Since the beginning of trade liberalization in the mid-1980s, Nepal has sought to participate in the world economy through various multilateral, regional and bilateral trade agreements. It became the 147th member of the World Trade Organization (WTO) in April 2004, and recently signed two regional trade agreements, namely, Agreement on South Asian Free Trade Area (SAFTA) and Bay of Bengal Initiative for Multi-Sectoral Trade and Economic Cooperation Free Trade Area Framework Agreement (BIMSTEC). Nepal also has bilateral trade agreement with its largest trading partner, India, since 1950. It is believed that Nepal's membership to these trading regimes will expand market access, facilitate competition and create opportunities for growth and development of the country. However, potential benefits of trade liberalization depend not only on Nepal's ability to overcome supply side constraints but also on its capacity to negotiate in multilateral, regional and bilateral trade forums.

Trade negotiations have now evolved as a significant element of trade policymaking. As most countries across the world have been undertaking trade liberalization measures under different modes (e.g., multilateral, regional and bilateral), it is imperative that they pay increased attention in building their capacity for trade negotiations. This is, however, not an easy task for the Least Developed Countries (LDCs) like Nepal.

Travel and tourism are among the world's largest growing industries. The sector is also one of the major sources of foreign exchange earnings for many developing countries. The increase in economic significance of tourism has captured the attention of many countries. Ecotourism is a growing niche market within the broader travel industry. It has the potential of being an important sustainable development tool. Though it belongs to the same tourism industry, ecotourism operates quite differently because it is defined by its sustainable

development results: conserving natural areas, educating visitors about sustainability and benefiting local people.

Tourism in Nepal is centered on natural and cultural tourism, trekking tourism and religious tourism. On the one hand, the country offers a diverse range of different trekking tours catering to varying interests and demands of international tourists, and on the other hand, it offers some very important religious sites for Buddhists as well as for Hindus in different parts of the country. Ecotourism in Nepal is irrevocably connected to the Annapurna Conservation Area Project (ACAP). The project was started in 1986 with the help of the World Wildlife Funds (WWF) Wildlife and Human Needs Program and United States Agency for International Development (USAID). It was the first project in Nepal that tried to reverse the negative effects of trekking on the region.

## Research Objectives and Questions

The primary objective of this research is to identify and fill the gap on role of women in promoting green growth in Nepal, in the context of increasing regional trade and integration. More specifically, this research will identify “green industries” and study its impact on job and livelihood creation for women and will also conduct a gender analysis of regional trade with respect to green industries. The primary research question examined by this study is:

*How do we ensure that women’s participation in export-intensive, green sectors increases with an increase in regional trade?*

In addition to the primary research question, sub-research questions examined by the study are:

- *What are the green sector industries in Nepal and what are the trends of regional trade in these sectors?*
- *What is the contribution and participation of women in the green growth sectors of the value chain?*
- *What is the contribution and scope of ecotourism in promoting the participation of women and green growth in Nepal?*

## Significance and Scope of This Research

In Nepal, women represent more than 50 per cent of the total population and around 46 per cent of the total economically active population. Traditionally, women in Nepal have been contributing more actively than their male counterparts, specifically in domestic and household works termed as the “care economy” sector and the agricultural sector. But the economic contributions made by women at household level or in agriculture sector are “unpaid”, not recognized by society and/or the national accounting system, resulting in women facing unequal power relations to men. In this context, to address the research questions of the study, the scope of the research is as follows:

- To address the primary research question of the study, “ecotourism” was selected as the sector of research. Tourism in Nepal is export-intensive, i.e., it is dependent mostly on international tourists, green-based, i.e., culturally and environmentally sound; has visibly higher women’s participation, “Ecotourism” sector in Nepal was

- deemed most appropriate to address the primary research question of the study.
- To address sub-research questions a), desk research and expert consultations in trade and tourism sectors was conducted.
  - To address sub-research questions b) and c), quantitative (mainly, survey) and qualitative (focus group discussion, case studies, observation, etc.) research was undertaken. Use of gender statistics, gender-disaggregated data analyses and gender analyses, were carried out for analysis of data.

Ecotourism in many countries is still a nascent concept; it is now being considered a fast growing sector in the world tourism industry. Ecotourism in Nepal is in its adolescent stage, and therefore needs to be studied, investigated, and rigorously analyzed to document its impact on women's economic empowerment.

## Literature Review

Environmental degradation resulting from unsustainable business and consumption patterns is one of the greatest challenges facing the world. Ecological degradation and unsustainable natural resource management disproportionately affect the poor in developing countries. In response to this set of challenges, the concepts of a green economy and green growth are becoming increasingly popular across the globe.

Gender equality is acknowledged as smart economics.<sup>46</sup> It can enhance productivity, improve development outcomes for future generations, and increase the quality of societal policies and institutions, including more representative and democratic decision-making. Several studies indicate that gender equality and women's participation lead to economic growth, while a lack of women's participation results in a decline of growth rates.

While dealing with immediate problems such as high unemployment, inflationary pressures or fiscal deficits, we have to look to the future and devise new ways of ensuring that the growth and progress we have attained thus far are maintained and expanded in the years to come. A return to "business as usual" would indeed be unwise and ultimately unsustainable, involving risks that could impose human costs and constraints on economic growth and development. Strategies to achieve greener growth are mandatory to ensure progress in living standards.

## Gender and Trade

Over the last two decades, trade policy in most countries was geared towards trade liberalization and market opening. In the 1990's, the assumption was that free trade, combined with liberalization of investments, deregulation of the private sector and financial systems along with privatization of public-owned enterprises and services would facilitate the process of sustained economic growth and the development of productive capacities. Further, it was assumed that higher levels of growth and productivity would expand employment opportunities and sustain livelihoods for all, men and women, giving them equal chances of benefiting from macro-economic policies. Trade policy, along with other macro-economic policies, was however critiqued as being "gender neutral/ blind".

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<sup>46</sup> Gender Equality as Smart Economics: A World Bank Group Gender Action Plan (2007–2010), September, 2006

The effect of trade policy on economic and social activities tend to be different for men and women, as they have different economic and social roles as well as different access to and control over resources, due to socio-cultural, political and economic factors. Women tend to be more affected by the negative side effects of trade liberalization and face bigger challenges than men when it comes to taking advantage of the opportunities trade offers. This situation may be attributed to gender biases in education and training, gender inequalities in the distribution of income and command over resources, as well as unequal access to productive inputs such as credit, land, and technology, which translate into significant gender differences in occupational distribution.

### According to a European Commission's Definition, Gender Mainstreaming

*"Is the integration of the gender perspective into every stage of policy processes – design, implementation, monitoring and evaluation – with a view to promoting equality between women and men. It means assessing how policies impact on the life and position of both women and men – and taking responsibility to re-address them if necessary."*<sup>47</sup>

Mainstreaming goes beyond increasing women's participation or consulting 'women's groups'; it means bringing the experience, knowledge, and interests of women and men to the operation. Hence, gender mainstreaming is not just about including women in decision making, but is a means to re-conceptualize the policy, implementation and evaluation process.

Recent experiences in trade liberalization and their impacts on gender equality thus make a strong case for the need to incorporate gender perspectives into overall trade policy design and implementation. Incorporating (mainstreaming) gender considerations in trade policy means assessing the impacts of such policy on the wellbeing of men and women, evaluating how trade policies affect gender relations, for example by widening or closing the gender wage gap, and formulating and implementing trade policy in a gender-sensitive manner. Different policy measures in trade and other areas of economics provide specific entry points to mainstream gender issues in international trade. Specific instruments include: (a) trade liberalization agreements; (b) unilateral liberalization; (c) tax incentives (d) multi-lateral development assistance frameworks.

As trade policies interact and are mutually affected by many other domestic policies and international factors, there is a need for overall coherence in order to achieve development goals. For this to happen several coordinated and gender-sensitive policies are needed in areas such as fiscal policies, education, labor, training, innovation, financing, to mention a few.

## Green Growth and Ecotourism

For many economic policy-makers around the world, the term "green growth" has become a talisman, a way of invoking steady increases in output without adverse environmental consequences and adverse impact on human health and/or quality of life. However, it is not clear whether this new emphasis on "green growth" represents a paradigm shift or just spins to cover up inconsistencies between economic and environmental objectives of governments.

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<sup>47</sup> Gender Mainstreaming: A new challenge for the federal government and the administrations, OECD, May, 2009

Despite the widespread use of the term “green growth”, there is no universally agreed definition, but there is a broad consensus about what it means. It is very often treated as a synonym for or an aspect of sustainable development. For example, the Organization for Economic Cooperation and Development (OECD) defines green growth as “fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies”.<sup>48</sup> The World Bank regards green growth as “growth that is efficient in its use of natural resources, clean in that it minimizes pollution and environmental impacts, and resilient in that it accounts for natural hazards and the role of environmental management and natural capital in preventing physical disasters”.<sup>49</sup>

Green growth is about making growth processes resource-efficient, cleaner and more resilient without necessarily slowing them. Direct contributions of environmental protection to economic growth are possible because the environment, which we can also think of as natural capital, is an input into the national production function, and environmental conservation can lead to increased inputs of natural capital and thus to an increase in income. The use of environmental assets is generally characterized by market failures, – external costs and ill-defined property rights being common –correcting these market failures can increase the effective supply of natural capital, an important input to the production function, hence increasing output. It can also increase human well-being directly by improving air and water quality, something that is not necessarily captured by conventional Gross Domestic Product (GDP) statistics but is nevertheless the ultimate goal of economic policy.

Arguably more than any other sector, tourism has the ability to impact (both positively and negatively) on the very resources upon which it depends. Tourism in a green economy refers to tourism activities that can be maintained, or sustained, indefinitely in their social, economic, cultural, and environmental contexts, or in other words, to sustainable tourism. Sustainable tourism describes policies, practices and programs that take into account not only the expectations of tourists regarding responsible natural-resource management (demand), but also the needs of communities that support or are affected by tourism projects and the environment (supply). Making tourism businesses more sustainable not only benefits local communities, it also raises awareness and support for the sustainable use of natural resources.

There are a wide range of trends and developments that provide particularly promising opportunities to green tourism activities. For example, tourism is one of the most promising drivers of growth for the world economy. In fact, the size and reach of the sector makes it critically important from a global resource perspective, with even small changes toward greening having important impacts. Furthermore, tourism's close connections to numerous sectors at destination and international levels means that changes in practices can stimulate changes in many different public and private actors. For example, as one of the most global of economic activities, decisions taken by tourism enterprises to green their activities can have a significant impact on supply and distribution chains (at the local, regional or international level), wherein suppliers and distributors are encouraged, or required to adopt similar sustainable practices.

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<sup>48</sup> OECD, *Towards Green Growth*. Paris, 2011

<sup>49</sup> World Bank, *Inclusive Green Growth: The Pathway to Sustainable Development*. Washington D.C., 2012

## Ecotourism as a Trade Sector

Tourism is considered as one of the best green options for addressing poverty, employment and economic diversification initiatives in developing countries (Honeck 2012). Sustainable tourism, in particular, has the potential to create new jobs, reduce poverty and increase export revenues.

Sustainable development is concerned with acknowledging economic, social and environmental development aspects, catering for the current needs of society without damaging the well-being of future generations. Ecotourism is a niche market that emerged because of increased market demands for sustainable tourism practices. It serves to provide tourism products and services while accommodating for the economic, social and environmental aspects of society. However, earlier researches suggest that it is difficult to handle the three dimensions of sustainable development, indicating that trade-offs may occur. Further, as tour operators are able to affect local development prospects, it is of interest to examine how they handle sustainable development, and more specifically, contribute to trade-offs between the economic, social and environmental pillars of sustainable development.

## Tourism as a Key Export Industry

Tourism is considered as an export industry since foreign tourists who travel abroad purchase services with money from their home countries. Tourism markets are governed by national regulations. Liberalization of trade in tourism and travel-related services can also take place through the General Agreement on Trade in Services (GATS) of the WTO, at the multilateral level, as well as through Regional Trade Agreements (RTAs) covering trade in services at the regional level. Regulatory commitments under such agreements can play a significant role in promoting, including intra-regional tourism among developing countries. By reducing regulatory barriers through these agreements, countries can enhance the gains from tourism trade for firms, workers and consumers (UNCTAD 2010).

*“One of the most crucial aspects of international tourism is the cross-border movement of consumers. This permits even unskilled workers in remote areas to become services exporters — for instance, by selling craft items, performing in cultural shows, or working in a tourism lodge” (WTO 2012).*

## Ecotourism as Defined by UN WTO

As per the definition by the United Nations (UN), ecotourism or sustainable tourism can be defined as “Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities”.

Ecotourism is used to define forms of tourism which have the following characteristics:

1. All nature-based forms of tourism in which the main motivation of the tourists is the observation and appreciation of nature as well as the traditional cultures prevailing in natural areas.
2. It contains educational and interpretation features.
3. It is generally, but not exclusively, organized by specialized tour operators for small

groups. Service provider partners at the destinations tend to be small, locally owned businesses.

4. It minimizes negative impacts upon the natural and socio-cultural environment.
5. It supports the maintenance of natural areas which are used as ecotourism attractions by:
  - Generating economic benefits for host communities, organizations and authorities managing natural areas with conservation purposes;
  - Providing alternative employment and income opportunities for local communities
  - Increasing awareness towards the conservation of natural and cultural assets, both among locals and tourists.

## Tourism Versus Ecotourism

Tourism and ecotourism have a lot in common, as well as some decided differences. Both travel categories work toward the combined goal of fostering visitors, enjoyment and earning money for the destination. The primary difference between traditional travel and ecotourism is the earth-friendly focus in ecotourism.

Tourism can help countries with struggling economies earn more money and create jobs for their citizens. In countries where mass tourism is extremely popular, the economy and environment of the country can actually suffer. Ecotourism, on the other hand, is focused on improving the economy and well-being of the local people.

Tourism generally refers to travel from a home base to another destination for a stay of at least one night. The World Tourism Organization further defines it as: *“Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes.”* Tourism's economic impact includes industries that depend on travel, such as hotels, restaurants, airlines, trains, cruise lines, attractions, national parks and even roadside businesses on interstate highways.

While on the other hand, ecotourism is “responsible travel to natural areas that conserves the environment and improves the well-being of local people.” One main tenet involves minimizing impact, often called “responsible tourism.” Eco-tourists leave a tourist area much as they found it without impacting the environment.

## Ecotourism Goods Versus Ecotourism Services

According to this study, ecotourism goods have been classified as all physical goods whether natural (e.g., fruits, vegetables etc.) or human-made/processed (e.g., handicrafts, processed food etc.).

Further, ecotourism services have been classified as all services rendered in regards to ecotourism such as, cooking, housekeeping, transportation, hospitality, etc.

## Effects of Tourism on Inflation

Tourism is considered to be price and income elastic (Cooper et al, 1993), and therefore very responsive to economic conditions in both host and traveler-generating countries. Price decreases and increases in destination countries are likely to, respectively, encourage

or discourage some tourists from the traveler-generating countries from coming. Similarly, income rises and income falls will have a parallel effect, respectively encouraging or discouraging overseas visiting by citizens of the traveler-generating nations.

Although the economic effects of tourism are usually held to outweigh tourism economic benefits, the negatives can be significant. These negatives relate particularly to a likely increase in demand for imported goods once tourists begin to appear, revenue leakages out of the economy, over-dependence on tourism, and land value inflation.

Generally, the high cost of travelling in a country which incurs inflation will reduce the amount of both international and local tourists, including both business and leisure travellers. Moreover, this high cost of travelling may also reduce the attractiveness of other factors to the tourists, such as the innovative products from the tourism sector. In order to know this effect, we need a well-developed conceptualization of the tourism sector as a service industry in order to identify the potential effect of the inflation costs.

## Current Scenario of Gender, Trade and Ecotourism in Nepal

### Gender

Almost 86 per cent of the total population of Nepal (27 million) resides in rural Nepal. In recent years, there has been a fast growth in urban population. The trend of growth in urban area was 2.8 per cent from 1981 to 1991 and reached up to 4.7 per cent in 2001. This implies a flow of immigrants from rural to urban areas.

Although gender discrimination is all pervasive across the country due to socio-cultural constraints, in rural areas, mostly girls and women are marginalized in accessing resources and getting benefit from the opportunities. According to Central Bureau of Statistics 2009, women's participation in economic activities is 55.2 per cent versus 71.6 per cent of men, indicating a poor status of Nepalese women as economic actors and the challenge to meet gender equality in the country.

However, The Interim Constitution of Nepal (2007) includes provisions that support gender equality and social inclusion. It has a separate article for women's fundamental rights (Article 20) and is more inclusive towards Janajatis, Dalits, and Madhesis (the last was not even mentioned in the previous Constitution). It sets forth the right to equality and rights against untouchability, gender based and racial discrimination, and exploitation (e.g., forced and bonded labor). It refers to the need for all groups to be proportionately represented in the state structures (Article 21) and the right to education in one's mother tongue (Article 17). It also authorizes given directives to the State to implement measures for the "protection, empowerment and advancement of women, dalits, indigenous nationalities, and madhesis" (Article 13).<sup>50</sup>

Entrepreneurship for Nepalese women is often seen as a journey out of poverty and a march towards equality. Embedded structural and socio-cultural constraints challenge

<sup>50</sup> Government of Nepal, Nepal Law Commission. 2007. Interim Constitution of Nepal 2063 (2007).

women entrepreneurs and make it hard for them to realize their potential as owners and leaders in business. While struggling to improve their lives in an environment of high unemployment and political unrest for over a decade, more and more Nepalese women have entered into private enterprises in the tourism or ecotourism sector (still in informal service sectors like home stays, food stalls, street vending). In line with the 1995 Beijing Declaration, the government adopted the rhetoric of women's participation, and introduced various gender-based initiatives, increased microfinance support systems, and created an opening for the introduction of gender policies and gender-based programs.

The challenges faced by Nepalese women in tourism sector are similar to issues faced by many women in developing countries. For many women, the tasks of attending to tourists' needs add considerably to their daily household duties, especially when husbands and sons are away for extended periods working as migrant labor, trekking porters and guides. Still, some women manage to run small trekkers' lodges, home stays and tea shops/restaurants to earn their living.

Women's roles in ecotourism in Nepal are primarily concerned with home-stay facilities and guest caretaker responsibilities. Women operate lodges and tea shops along the major trekking routes, sometimes with their husbands or fathers, but often alone. As cooks and primary servers, they have the greatest contact with tourists and their trekking guides and porters. They are ever working, producing or serving others. Whatever time they have to sit down is spent knitting woollen caps, mittens, and socks, weaving bags, or making handicrafts to sell to tourists. Some mountain women work as porters or pack animal drivers for trekking or mountaineering groups, and a handful have even achieved up to the ranks of trekking guides and even mountaineers.

A number of organizations like National Trust for Nature Conservation (NTC), International Centre for Integrated Mountain Development (ICIMOD), Tourism for Rural Poverty Alleviation Program (TRPAP), Nepal Tourism Board (NTB), Kathmandu Environment Education Project (KEEP), Annapurna Conservation Area Project (ACAP), Mother's Club Central Committee (MCCC), Women Entrepreneurs Association of Nepal (WEAN), United Nations Development Program (UNDP), International Labor Organization (ILO), Nepal Academy of Tourism and Hospitality Management (NATHAM) and 3 Sisters Adventure Trekking (P) Ltd. etc. are found to be involved in enhancing women's participation in mountain tourism. These organizations through their continuous efforts in past and present periods have been creating awareness about local women's potentials in tourism, empowering them by offering training and capacity building activities and helping to increase their involvements in mountain tourism.

## Trade

Until the mid-1960s, Nepal's trade did not extend beyond India in the South and Tibet in the North. To expand trade and to improve the balance of trade, Nepal adopted export diversification and import substitution strategy during the third five year plan (1965–1970). This two-pronged strategy was meant to narrow down the trade deficit, promote industrialization and help diversify the economy. Other policy measures adopted by the government to promote exports include: the Dual Exchange Rate System of 1977, cash subsidy program, duty exemption on export commodities, special financial arrangement for production and export, simplification of licensing and customs procedures, and introduction of new industry and trade related acts etc.

In 1992, a new liberal Trade Policy was introduced to support the economic liberalization program. The major objectives of the Trade Policy 1992 are to promote internal and international trade, encourage private sector participation, diversify trade in terms of both commodity and destination, promote backward linkages, expand employment oriented trade and reduce trade imbalances.

Nepal's export policy seeks to raise production and quality of exportable products and make them globally competitive. The policy emphasizes the need to export high value added products and recognizes the need to identify new markets and products. In addition, the policy adopts a range of strategies to promote exports such as: removal of license (with some exception), exemption of duty on imported raw materials, exemption of income tax on income from exports, introduction of container service and expansion of bonded warehouse etc.

Despite policy initiatives to attract investment, the flow of Foreign Direct Investment (FDI) to Nepal is very low. Investment is limited to products that require low-technology and most foreign investors in Nepal are individuals rather than corporations. Nepalese foreign trade performance has so far been poor. Several factors seem to be responsible, and of these, the landlocked topography is one of the major causes for Nepal's weak production base, which is eventually linked with the growth of exports and imports of technology and raw materials. Not only the open border with India in the East, South and the West but also the limited transit facilities in one or other way have constrained its trade with overseas countries. Since transit through China bordering in the North is virtually impractical due to the Himalayan range, India is the only economically viable region for all commercial flows.

Counted among the least developed countries of the world, Nepal is bound on the vicious circle of poverty; almost 80 per cent of the population relies in agriculture wherein the marginal productivity of labor is almost zero. To shift the burden from high to low-density sector, foreign trade plays a vital role. The same is expected in specialization in production, division of labor and increase in the national income. Foreign trade also widens the market and increases the inducement to invest income and saving via more efficient resource allocation. However, the decade long armed conflict (mid 1990s to mid 2000s) destroyed the very fibre of whatever industrial advancement that Nepal had achieved during 1980s and early 1990s.

## Green Growth and Ecotourism

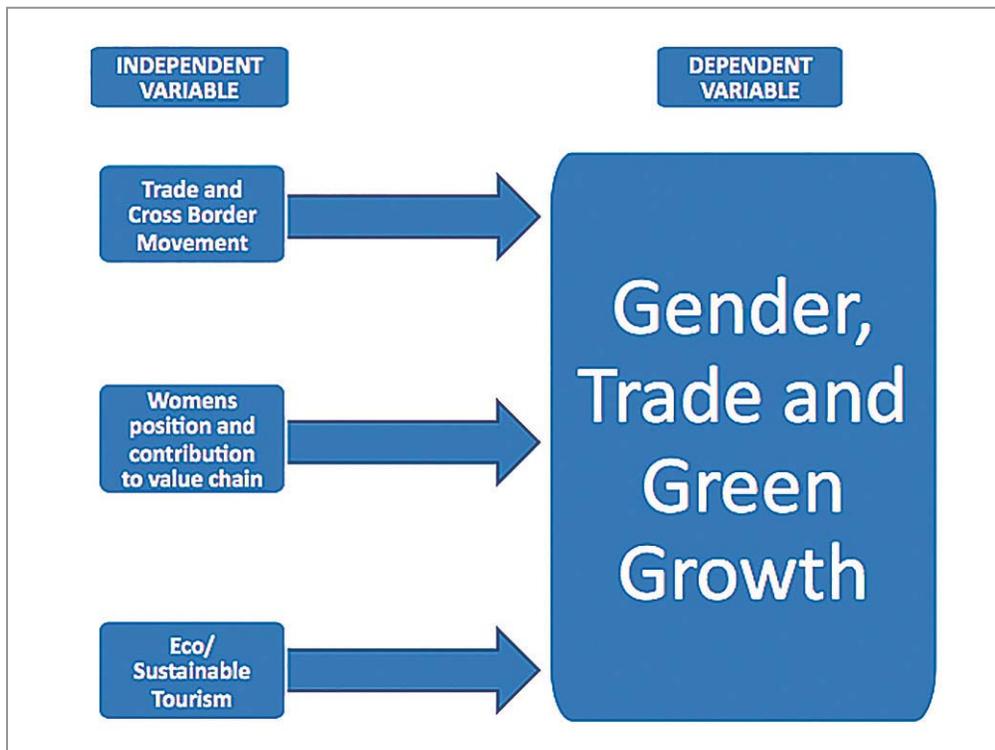
Nepal has always been a popular destination among trekkers and mountaineers. The number of tourists has grown exponentially in recent decades, and the government has encouraged mass tourism, impacting positively the economic growth but also bringing negative effect on both green and gray environment, resources and culture of local communities. Sustainable tourism appears to be one of the best ways to carry on economic development while transforming existing socio-political discriminations and preserving natural environment and community culture and heritage. Because of its combination of spectacular tourism resources and a very poor, largely rural based population, Nepal finds itself at the forefront of ecotourism development, and in particular pro-poor and gender equitable initiatives. The tourism products that are available in Nepal are not exploited optimally for the benefit of tourists or tourism operators. There is an opportunity for tourism operators and local and national beneficiaries to develop new and innovative models of tourism to deliver more equitably distributed benefits.

The Government of Nepal has recently formulated its Tourism Vision 2020 as follows: *Tourism is valued as the major contributor to a sustainable Nepal economy, having developed as an attractive, safe, exciting and unique destination through conservation and promotion, leading to equitable distribution of tourism benefits and greater harmony in society.*<sup>51</sup>

In the Nepalese context, the prime aim of ecotourism has been to promote a symbiotic relationship between tourism and the environment with a particular focus on uplifting the local village economies. One of the objectives of Nepal's tourism policy is to develop and expand the tourism industry by promoting the natural, cultural and human environments of the country. Although there is no specific mention of ecotourism in the policy, it does contain a policy for sustainable development of the tourism sector, which can be interpreted as the recognition of the importance of ecology and the overall equitable socioeconomic environment while promoting tourism.

It is the economy that enhances the productive efficiency to produce more wealth to the nation, so strategies must be socially just and economically feasible. Basic tourism infrastructure and facilities such as clean drinking water, sanitation, transportation system and roadways are fundamental to attract more tourists for sustainable tourism development in Nepal. If basic infrastructures and facilities are provided to bring tourists into the country, the flow of investment also increases. When the number of tourist increases, the ecotourism-based economy tends to grow and attention must shift to sustained public action that promotes gender equality and social justice.

**Figure 4.1 Conceptual Framework**



<sup>51</sup> Ministry of Culture, Tourism and Civil Aviation, Nepal, 2009

## Methodology and Data Sources

On the basis of the questions and objectives of this research, and discussions from the literature review, three main (independent) variables have been identified to have significant contribution and impact on gender, trade and green growth. This study closely analyzed all three variables to identify and understand how and at what levels it impacts women's participation in Ecotourism in Nepal. The study design, sample, data collection procedures, ethical considerations and data analysis are discussed below.

### Study Design

The study of the inter linkages between trade, gender and green growth is at a fairly nascent stage. This exploratory study seeks to establish new knowledge on inter-linkages of gender, trade and green growth. The study included a mix of qualitative and quantitative research tools like observation, case studies, interviews, focus group discussions, and surveys to collect data/information to analyse factors encouraging women's participation in ecotourism in Nepal.

A sequential approach has been adopted whereby findings from quantitative survey informed the qualitative research and helped to develop a deep understanding of the phenomenon of GTGG. The qualitative research aimed to discover underlying factors affecting the status of women in the GTGG. The study began with a comprehensive literature review that addressed women's participation and inclusion in Trade and women's economic empowerment.

The literature review also analysed the context of GTGG by exploring available resources including books, articles written in journals, National/state policy documents, and discussions and anecdotal experiences of women entrepreneurs, their family members, and women in the communities (where home stays for tourists are practiced) available. The qualitative survey included a range of in-depth interviews and focus group discussions (FGDs) to ensure integration of views, knowledge and understanding of the different categories of respondents. Structured questionnaires were used for key informant interviews to focus on current status and understanding of GTGG of institutional structures (both government and non-government). Detailed questionnaires were also administered to women and men to capture their demographic and socio-economic situations and their knowledge, attitude and practices (KAP).

### Participants

For the qualitative survey, interviews were conducted with key stakeholders. Separate FGDs were conducted with women and men from rural and urban communities, from Kaski, Parbat, Myagdi and Mustang districts of western Nepal.

### Sampling

The study uses stratified, purposive sampling in the selected geographic area. The sample is considered representative sample of the key national, state and local actors. Constituencies involved in ecotourism were identified and area sampling was drawn covering the

constituency for both FGD and survey to ensure a representative sample. Interviews were conducted with policy makers, regional and district level officers of ministry of industry and commerce as well as ministry of tourism and civil aviation including some prominent institutions promoting ecotourism and conservation like Annapurna Conservation Project (ACAP) and Nepal Trust for Nature Conservation (NTNC).

### *Primary data tools*

- Survey : Primary data through survey questionnaire form the mainstay of the data analysed in this report. The survey included questions on socio-economic and demographic variables; workload analytical variables in terms of time-use and drudgery; variables to measure access to and control over enterprise, access to and control over income, and use of income; variables for KAP on green and sustainable tourism; and variables to measure human factors like self-esteem and life satisfaction. Additionally, there were open-ended questions to capture individual women's voices (narratives) in the survey schedule.

In this study, primary data were collected through scientific sampling in clusters of the unit of analysis. All the respondents of the survey were Nepalese citizens working in the tourism industry sector in the above described regions. Permissions and consent of all the participants were taken in order to use the information provided by them for the study. The survey was carried out in the month of February, March and April 2014.

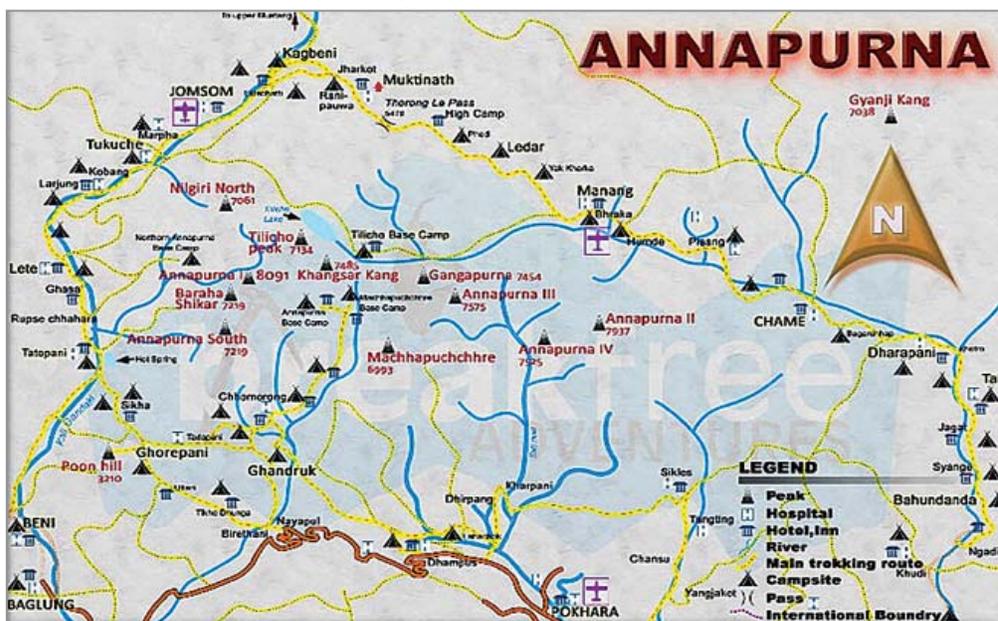
- Interviews : Primary data were also collected in the form of key informant interviews. In-depth interviews with key stakeholders (government officials, NGO) were conducted. In total, 27 interviews were conducted. In each district, five interviews were conducted, and 10 key informant interviews were also conducted at the national level.
- Focus Group Discussions and Case Studies: Along with conducting interviews, data and information was collected by conducting focus group discussions exclusively with women. These discussions mainly focused on women's participation in trade and ecotourism. Additionally, case studies were conducted to document best practices and lessons learned.
- Additionally, ethnographic observations were made and photographs were taken to record women's hospitality surroundings, their behaviour and work.

### *Note on differentiation between Labor, Worker, and Employee*

The study classifies human resources which provide continuous service in regards to ecotourism into three broad categories:

- Employee: A person who is hired on contractual basis to perform specific tasks in regards to ecotourism. He/she specializes in specific tasks and receives fixed salary on monthly basis and other fringe benefits as per the signed contract. Example: Cook.
- Worker: A person who performs duties of a support staff in regards to ecotourism but does not have any official contract and may or may not receive any salaries, wages, and incentives. Example: Wife working as a cook.
- Labor: A person who provides his/her services in the field of ecotourism but does not possess any specialization. He/she receives wages on daily basis. There is no fixed contract signed between the employer and labor. Example: Cleaner.

Figure 4.2 Study Area



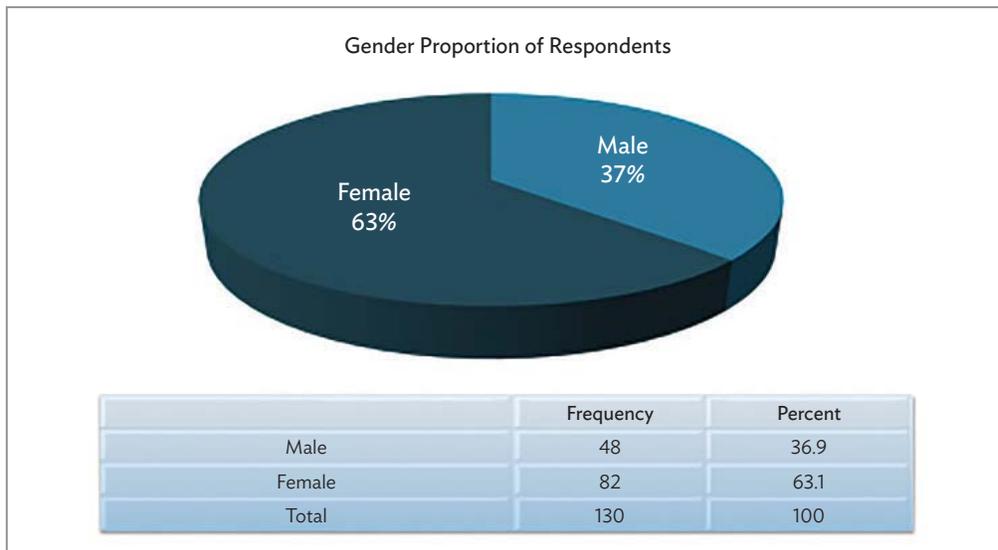
## Research Findings

The section below reports the main findings obtained from the primary data collection – using surveys questionnaire, FGDs and case studies.

### Key findings from the quantitative survey

#### Profile of respondents

Figure 4.3 Profile of Respondents by Sex

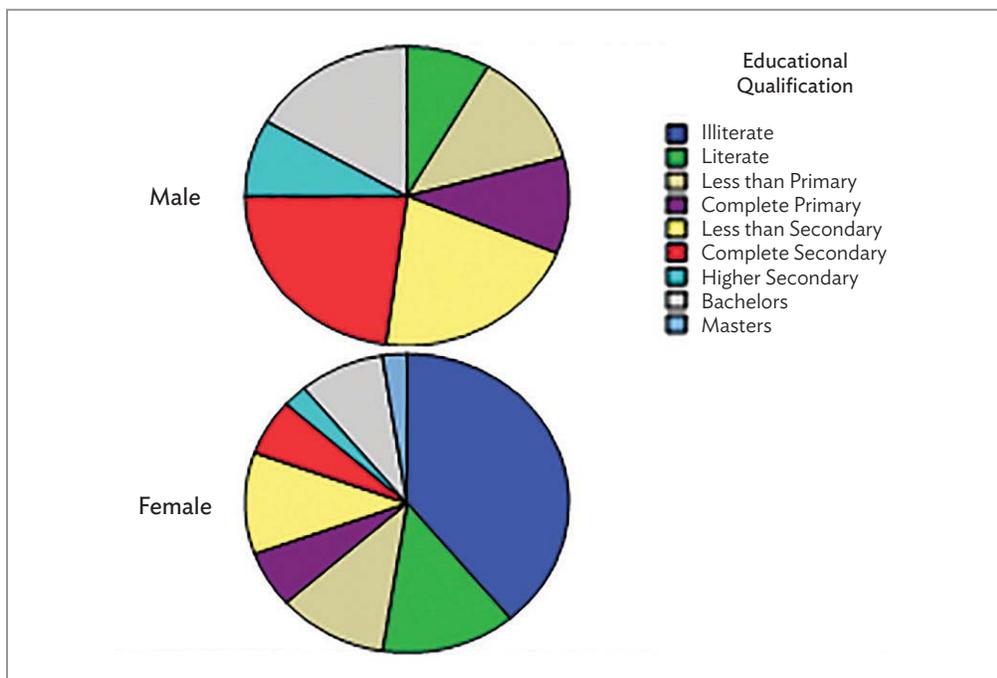


A total of 130 purposive research questionnaires were administered in four districts along the Annapurna Area; wherein 82 women (63 per cent) and 48 men (37 per cent) participated. There was higher number of women participants available to respond to research questionnaires.

*Gender differentials in education*

The overall level of education in the research area was not very high. However, looking at the gender differential, almost 40 per cent of female respondents was illiterate whereas all male respondents were literate. About a quarter of male respondents completed higher secondary and even college graduation. One of the reasons for gender disparity in education may be attributed to girls/women’s mobility being limited to their local rural education facilities. Further, the patriarchal structure of the society gives preference and priority for education to boys/men. The engagement, role, responsibility and work load related to ecotourism business is much higher for women than for men. Most women handle customer service at front door to the overall management of the enterprise.

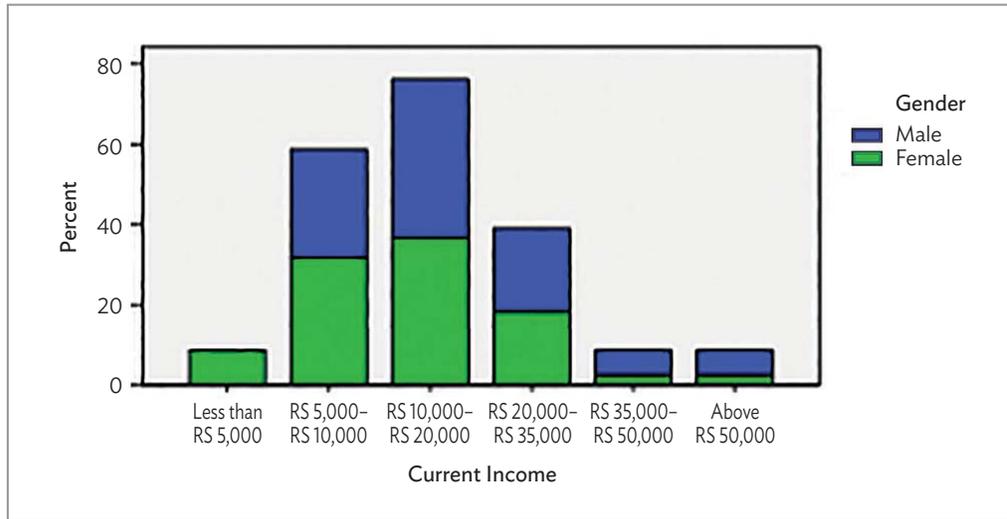
**Figure 4.4 Gender Differential in Education**



*Gender differentials in current income*

The findings show that most of the small scale enterprises are owned and managed by women who earn low income compared to men; bigger enterprises are owned by men. Higher the income level, the higher was the percentage of men as owners. For example, the bar chart shows that the lowest income level of NPR 5000 includes entirely women; however the level of NPR 50,000 income comprises more than two thirds of men.

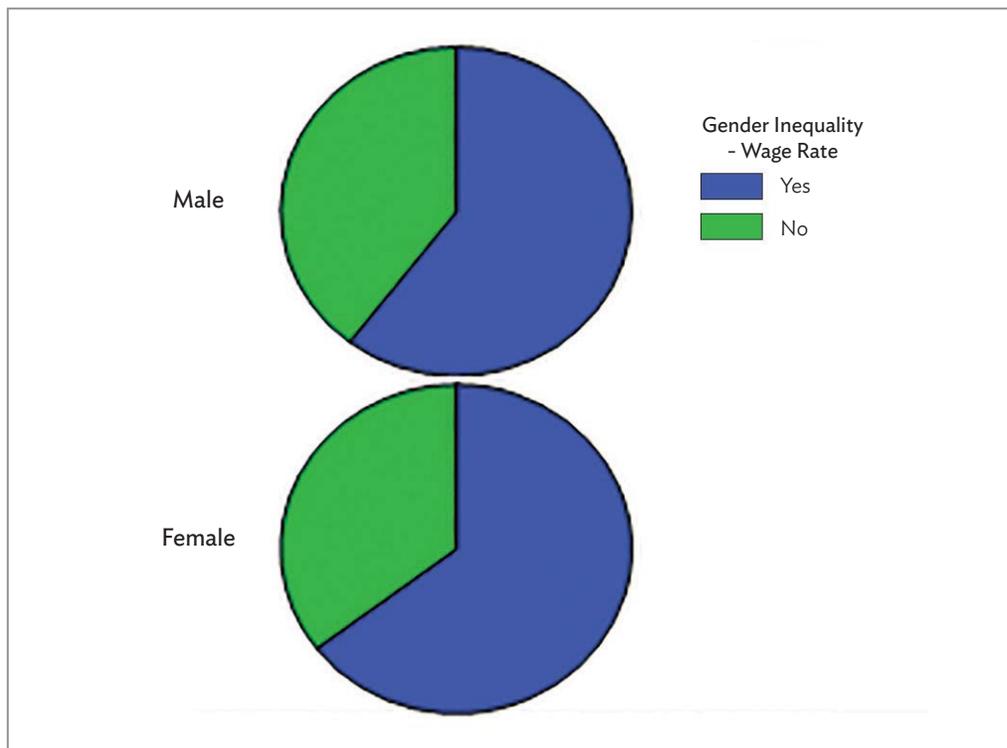
Figure 4.5 Gender Differential in Current Income



*Perception about gender equality in the wage rate*

More than half of the respondents (both men and women) reported that there is and should be different and unequal wage rate between men and women

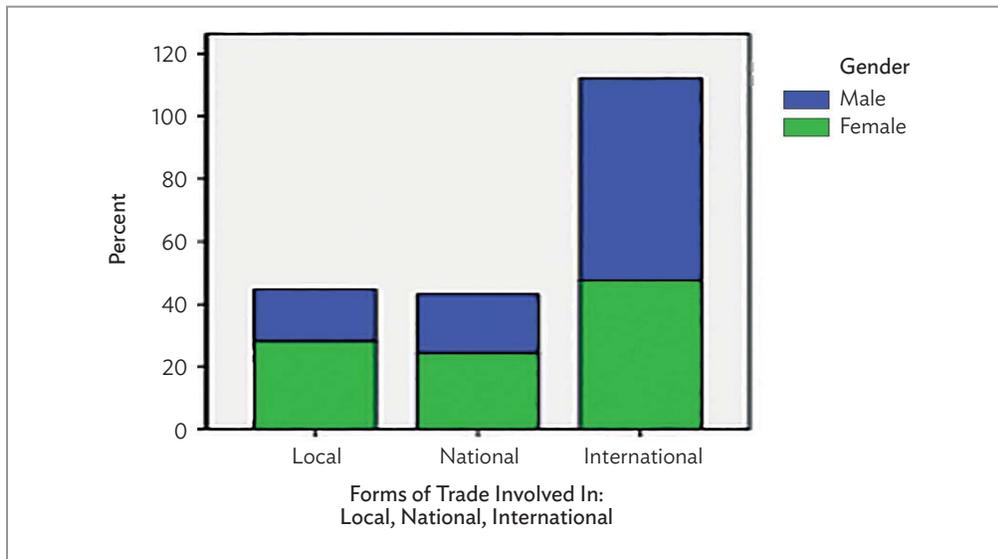
Figure 4.6 Perception about Gender Inequality in the Wage Rate



*Gender differential in forms of trade*

The table below shows that women are not only in small and low income enterprises but are also limited mostly to local and national level entrepreneurs; whereas men are all over and mostly involved in national and international levels.

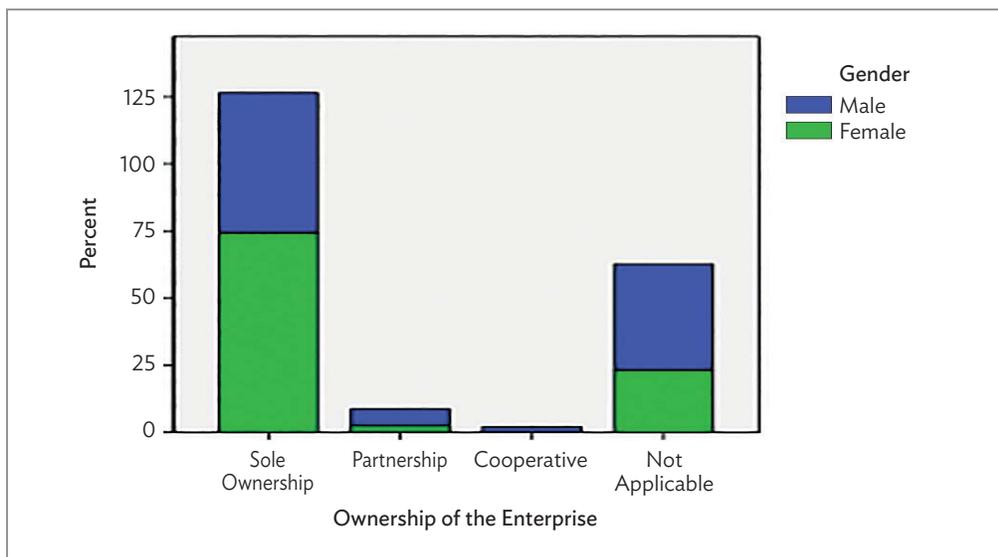
**Figure 4.7 Gender Differential in Forms of Trade**



*Gender differentials in ownership of enterprise*

According to the respondents, almost all of the sole-owned enterprises in the research area were owned by women, however most of them were small and local based enterprises.

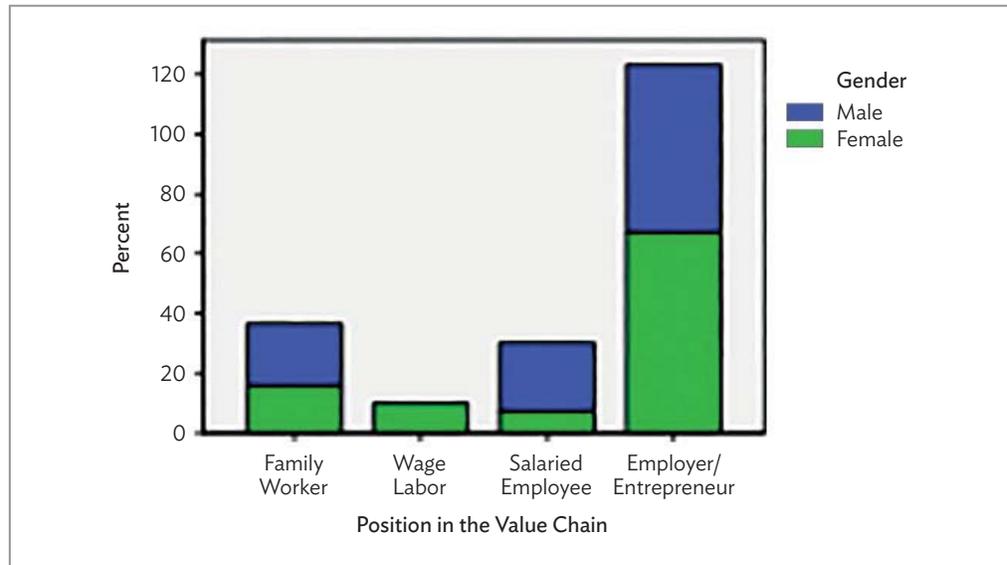
**Figure 4.8 Gender Differential in Ownership of Enterprise**



### *Gender differential in position in the value chain*

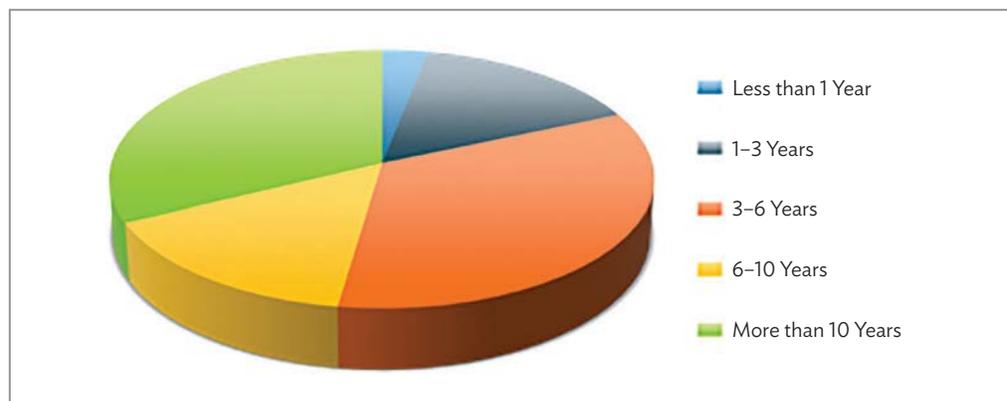
The study revealed that women are found along all categories of employment in the value chain such as family worker, wage labor, salaried employee and an employer. Women are in lesser numbers in salaried employment compared to men.

**Figure 4.9 Gender Differential in Position in the Value Chain**



Out of 130 respondents, almost two thirds have been involved in ecotourism since three to six years; majority of respondents have been in the sector for over ten years.

**Figure 4.10 Participation in Ecotourism**



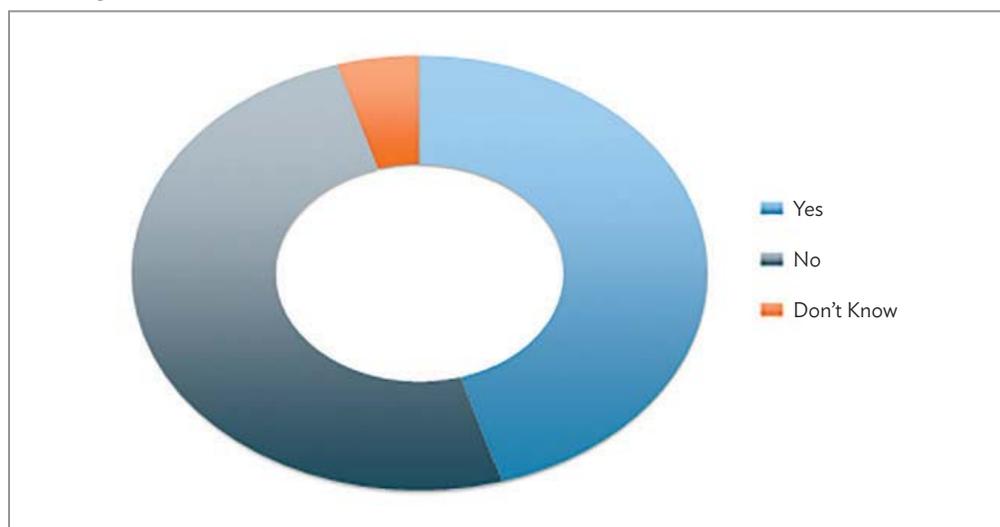
### *Aware of government initiatives to promote ecotourism*

Although ecotourism is one of the important sectors of the government of Nepal, nearly one-third women (29 per cent) of male respondents and two-fifth women (39 per cent) were not aware of the government initiatives to promote ecotourism. More than half of the total respondents reported that they did not know about ecotourism.

**Table 4.1 Awareness About Government’s Initiatives to Promote Gender Equality**

			Awareness about Government’s Initiatives to Promote Gender Equality		Total
			Yes	No	
Gender	Male	Count	34	14	48
		per cent within Gender	70.8 per cent	29.2 per cent	100.0 per cent
	Female	Count	50	32	82
		per cent within Gender	61.0 per cent	39.0 per cent	100.0 per cent
Total	Count	84	46	130	
	per cent within Gender	64.6 per cent	35.4 per cent	100.0 per cent	

**Figure 4.11 Awareness of Government Initiatives to Promote Ecotourism**



*Summarizing key findings from the survey*

Ecotourism is a major source of income for majority of the respondents (nearly 78 per cent) in the area. Almost half the respondents are engaged in ecotourism because it’s a traditional profession, while 28 per cent were attracted by lucrative profit margins. Almost all the female respondents reported that they were involved in this business because it is localized and home based allowing them to run their household, raise their children and manage their agricultural activities simultaneously at the same time, as well as freeing their male counterparts/ partners to migrate out of the village/ country for better earnings.

An interesting finding which was confirmed during focus group discussions is that nearly three-quarters of the women respondents (76 per cent) who are engaged in ecotourism were permanent residents of the study districts where as almost an equal number of male respondents (67 per cent) were migrant workers from non-study districts, working as owner

or employees. This points to the phenomena of high migration of young people from the tourist areas because of more attractive opportunities elsewhere.

While majority of the respondents were aware government schemes to promote ecotourism (nearly 76 per cent women and 67 percent men); only 35.4 per cent of the female participants reported that they participated in a training on ecotourism. No male respondent reported participating in any trainings on ecotourism. Also, a remarkably high proportion of respondents had not heard of any government programmes to promote ecotourism.

Most of the female respondents reported having access to income but also lacking control over income - about 24.4 per cent of female respondents reported being deprived of both access to and control over income. On a positive note, almost all respondents (96 per cent) intended to continue ecotourism activities in the future. However, it is unsure whether the reason for this was high income opportunities in the sector or lack of any other economic opportunities in the region.

## Findings from the FGDs

### POLITICAL-ECONOMY

- Families that engage in ecotourism tend to earn higher incomes than families engaged in agriculture
- Ecotourism has been recognized as the men's area of work and is valued as a 'big job'; while women perform all the essential multiple 'small tasks' in ecotourism aggravating heavy workload upon women. For example, organic kitchen gardening/ organic agriculture, use of improved cook stoves or alternative cooking fuel, eco-friendly disposal of the waste, natural resources management, maintaining tradition and culture for tourists' entertainment add upon women's workload.
- Even though more women are engaged in the subsector, men tend to control access to higher incomes. Women also tend to lack the decision making power within the family; impacting their position in the enterprise/ business.

### CONDUCT OF TOURISTS

- Misconduct by international tourists and local visitors was raised as a concern by the respondents.

### VIOLENCE AGAINST WOMEN

- Increase in incidence of violence against women due to vehicular movements providing easy access to all kinds of people into the village

### OUTWARD MIGRATION FROM THE VILLAGES

- Higher numbers of young men and women tend to migrate from the villages:
- Reasons for migration include better employment opportunities outside the areas and better educational opportunities for children and youth
- As a result of the migration, higher numbers of older people and young children are left behind in the villages and agricultural land remains uncultivated which in turn affects the food security from local agricultural product

#### INCREASE IN WASTE AROUND THE TOURIST AREAS

- Tourism tend to have aggravated the problem of garbage in the villages
- Cleaning and maintaining sanitation remain solely the responsibility of women
- Waste management system and infrastructure is not well developed

## Summary and Ways Forward for Women in Ecotourism

The study finds that there is limited employment opportunities in this area besides tourism. Since tourism does not provide year round income to the people, it has resulted in vast migration in the area. As a result of the outward migration of the youth, the ecotourism activities are being practiced by older women which places tremendous burden on them. Development of local employment opportunities for both women and men especially to stop the exodus of young men and women, along with skill training may reduce the rate of outward migration.

While promotion of tourism and skill training is important, our discussions revealed some downsides of tourism as well. Locals expressed the need for more cultural sensitivity on the part of tourists. It is also noted that in some cases rise of tourism has been accompanied by rise in violence against women and sex-trafficking.

Women form the back bone of local tourism industry and conservation. However, there is limited investment in their education, vocational skills and training including life skills, trek-kers guides. There is also need to provide easy access to credit for starting new business. Tourism related industries also need to be promoted. For instance, with increasing tourism there is demand for purified drinking water which can be produced through ozonated water purifying mechanisms. There is an opportunity to develop handicraft for the tourist markets such as high value non timber forest products (NTFPs). Access to alternative energy technologies will also reduce women workload and drudgery and increasing their productivity in agriculture and NTFPs.

As the ecotourism develops and becomes more profitable, there is need to ensure that local people and communities continue to benefit. Heritage/wildlife tourism and plan relevant projects like, Highest Mountain Agriculture and Livelihood Improvement Project (HIMALI) Project, Regional Rangeland Development Program (RRP), etc. have also become important sub-sectors. These sub-sectors should be developed to preserve and restore heritage and culture, and also attracts more tourists. In Nepal, there is ample opportunity to promote pilgrimage tours from the region like Buddha Circuit and Hindu Dhams. However, in order for women to take advantage of the increase in tourism, they need training, access to finance and infrastructure development, especially on sustainable tourism practices such as waste management.

## Conclusion and Way Forward

The report uses primary data from one of the most popular ecotourism destinations of Nepal, arguably in the whole world, the Annapurna Circuit. The purpose of the report is to provide a glimpse into the impact that tourism – conventional and sustainable – has on women working in this sector, identify challenges and opportunities. The government

of Nepal, in recent years, has taken a number of steps to promote conscious tourism in this region and the country as a whole. The report also seeks to capture awareness among the frontline workers involved in the tourism industry on some of these measures and the positive and negative impact of these measures on women working in this sector and the environment. The report is timely because the government of Nepal is in the process of re-drafting its National Tourism Strategy. It is hoped that the findings on the quality of life of women working in the tourism industry will inform this national tourism policy.

Evidence generated from this study indicates that though ecotourism has potential for green economic growth; however gender discrimination affected access to and control over income; involvement in ecotourism led to increase in women's workload; incidence and potential of violence against women increased in some instances as a result of increase in tourism; women's work and contribution remained unrecognized and undervalued; locals felt an erosion in their tradition, values and norms as a result of tourism; greater environmental pollution and waste generation.

Outward migration is a big challenge in the area. The respondents voiced the need for combating the high migration of young men and women for better employment prospects outside the region. Making tourism more attractive and increasing income potential will create opportunities for better local employment opportunities. The study also identified the need for developing and enhancing skill relating to the tourism sector.

As Nepal completes the process of democratic transition, a number of key policies are being reviewed and drafted. The findings from this report need to be acknowledged and incorporated in to the upcoming policies like Three year plan, Employment Policy, Gender policy, Renewable Energy policy and Research and Development (R&D), Inclusive growth Strategy, tourism related policies. The report recommends that the national government develop a road map to enhance tourism with special focus on gender inclusive ecotourism policy. Although India, China and Sri Lanka are the top tourist source countries, strategies should be developed on promoting tourism to other countries of South Asia and South East Asia through a conscious focus on Buddhist tourism from the ASEAN and SAARC countries. Linkages with Non-Resident Nepalese Association can also be forged to promote ecotourism.

Women's producer groups and travel and tour associations can organize national and regional conference of women involved in the tourism sector and private sector to discuss gender responsive tourism. These forums can also be tapped to provide training of personnel and individuals on gender responsive ecotourism. Creation of educational scholarships in ecotourism especially to girls/women at national and regional level; and opportunities for cross learning visits at the regional level. Opportunities for extension of ecotourism across all geographical areas to be explored. Special functional educational program to build capacity of women who are engaged in the ecotourism sector, including training of women in various vocations within the tourism sector including tourist guides, porters, drivers/vehicle owners, managers and owners of travel agencies.

Finally, the last set of interventions apply to the sector as a whole, not specifically to women. This includes improvement in infrastructure and improving access to hitherto unexplored areas through development of roads (feeder roads, rural roads, pathways, ropeways, etc.). But doing so in a socially and environmentally conscious way.

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## Annexes

### Annex 4.1 List of People Interviewed

Sl. No.	Name	Organization	Designation	Location/ Contact Details
1.	Abhishek Pandey	Himalaya Expedition	CEO	Kathmandu
2.	Archana Karki	Three Sisters		Pokhara
3.	Bhel Pun	ACAP	Conservation Officer	Ghasa
4.	Bidur Kuikel	ACAP	Conservation Officer	Jomsom
5.	Dinesh Khadka	Transport Co.	Owner/Driver	Beni
6.	Ganga Jang Thapa	NTNC	Executive Director	Kathmandu
7.	Jagdish Kuikel	WWF		Kathmandu
8.	Khyam B. Pun	Transport co.	Owner	Parbat
9.	Lal Prasad Gurung	ACAP		Pokhara
10.	Laxman Khanal	ACAP	Conservation Officer	Lawang
11.	Lekh Nath Gautam	ACAP	Conservation Officer	Lawang
12.	Narendra Lama	NTNC	Tourism Officer	Pokhara
13.	Paras B Singh	ACAP	Conservation Officer	Ghandruk
14.	Prajana Pradhan	WWF	Senior HR Officer	Kathmandu
15.	Purna C. Bhattra	Ministry of Tourism	Ex Joint Secretary GON	Kathmandu
16.	Pyari Gurung	Mother's Group Leader and organizer of Home stay		Lwang Gaun
17.	Raj Maya Pariyar		Wholesaler/Owner	Lumle
18.	Rupesh Gurung	Director	Director	Bhaduree
19.	Shanti Sherchan	HAN	Manager	Tatopani
20.	Shikha Shrestha	WWF	GESI Officer	Kathmandu
21.	Shyam Pariyar	TAAN	Post Incharge	Tatopani
22.	Som Bahadur Pun	TAAN /TIM	Check post	Birethati
23.	Yogendra Shakya	Nepal Tourism Board	Exe Member	Kathmandu

## Annex 4.2 List of Field Work Sites Visited

Location	Purpose
Birethati	Interviews/group discussions with stakeholders
Dhampus	Interviews/group discussions with stakeholders
Eklobhatti	Interviews/group discussions with stakeholders
Ghandruk	Interviews/group discussions with stakeholders
Jomsom	Interviews/group discussions with stakeholders
Lwaang Gawn	Interviews/group discussions with stakeholders
Marpha-Kagbeni	Interviews/group discussions with stakeholders
Pokhara	Meeting with concerned organizations in Pokhara (ACAP/NTNC/Govt. line agencies)
Pokhara	Interviews/group discussions with stakeholders
Tatopani	Interviews/group discussions with stakeholders
Kusma	Interviews/group discussions with stakeholders





