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Study Report on Selection and Analysis of Value Chains (Final) For South East Region - Cox's Bazaar



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USAID's Climate-Resilient Ecosystems and Livelihoods (CREL)

Component 4: Improve and diversified livelihoods that are environmentally
sustainable and resilient to Climate Change

Winrock International

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Abbreviations

Acronym	Abbreviation
AED	Agriculture Extension Department
ASA	Action for Social Advancement
BAASS	Bangladesh Ayurvedic Aushadh Shilpa Samity
BADC	Bangladesh Agricultural Development Corporation
BARI	Bangladesh Agricultural Research Institute
BBS	Bangladesh Bureau of Statistics
BDT	Bangladeshi Taka
BFRI	Bangladesh Forest Research Institute
BHFCA	Bangladesh Herbal Food & Cosmetics Association
BHMMA	Bangladesh Homeopathic Medicine Manufacturers Association
BHMOA	Bangladesh Hotel and Motel Owner's Association
BHPMA	Bangladesh Herbal Products Manufacturing Association
BRAC	Bangladesh Rural Advancement Committee
BRDB	Bangladesh Rural Development Board
BSA	Bangladesh Strawberry Association
BSCIC	Bangladesh Small and Cottage Industries Corporation
BUASS	Bangladesh Unani Aushadh Shilpa Samity
CCC	Co-Management Committee and Council
CMC	Co-Management Committee
CPG	Community Patrol Group
CREL	Climate-Resilient Ecosystems and Livelihoods
CWS	Chunati Wildlife Sanctuary
DAE	Department of Agricultural Extension
DDWS	Dudpukuria-Dhopachari Wildlife Sanctuary
DFO	District Fisheries Officer
DLO	District Livestock Officer
DOC	Day Old Chick
DOF	Department of Fisheries
ECA	Ecologically Critical Area
ECOTA	Economic Corporation Organization Trade Agreement
EPB	Export Promotion Bureau
FAO	Food and Agriculture Organization
FAOSTAT	Food and Agriculture Organization Statistical Database (United Nations)
GDP	Gross Domestic Product
GI	Geographical Indicator
GOB	Government of Bangladesh
ICS	Improved Cooking Stoves
IDF	Integrated Development Foundation
IGA	Income Generating Activities
IPAC	Integrated Protected Area Co-Management
JDPC	Jute Diversification Promotion Center
MoA	Ministry of Agriculture

MOEF	Ministry of Environment & Forests
MOFL	Ministry of Fisheries & Livestock
MT	Metric Ton
NGO	Non-Government Organization
NP	National Park
NSP	Nishorgo Support Project
PA	Protected Areas
PF	Peoples' Forum
PPI	Pro-Poor Income
R.Ex.	Resource Extractor
RF	Reserve Forest
SHED	Social Health and Education Development
SME	Small and Medium Enterprise
SRDI	Soil Resource Development Institute
SWOT	Strengths, Weaknesses, Opportunities and Threats
TOR	Terms of Reference
ToT	Training of Trainers
TRIPS	Trade Related Intellectual Property Rights (TRIPS) Agreement
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VC	Value Chain
VCA	Value Chain Analysis
VCF	Village Conservation Forum
WS	Wildlife Sanctuary
WTO	World Trade Organization
Bigha	33 decimal
Chikankari	Hand embroidery
Hajarbuti	Thousand dots on the body
Kani	40 decimal in Cox's Bazaar
Karcupi	ornamental needlework on clothes
Lakh/Lac	100,000
Runner	Sapling of Strawberry
Sadar	Administrative center of a district
Upazila	Sub-District

Executive Summary

Background

USAID Bangladesh's Climate Resilient Ecosystems and Livelihoods (CREL) is a five-year project with the aim to scale up and adapt successful co-management models to conserve and protect ecosystems, improve governance of natural resources and increase resilience to climate change. The objective and mandate of the project is to strengthen the ability of the poor and disadvantaged who rely on forest and wetland resources to adapt to climate change, and to improve and diversify their livelihoods, through environmentally sustainable means. In order to identify the alternative livelihoods on which the project can work on, a value chain selection and assessment was carried out. The main objective of the study was to find out the potential value chains and analyzing the value chains to come up with strategies and interventions to ensure sustainable livelihoods for the project beneficiaries of southwest region that lead to reduce pressure on natural resources. The study was conducted in two phases where in phase-1, three potential value chains were identified that meet the project objectives and in phase-2, in-depth value chain analysis of the selected value chains were done.

Methodology

The study was conducted in line with the USAID guideline for value chain analysis as available on microlinks wiki (<http://microlinks.kdid.org/>) in almost every step. CREL proposed a series of criteria for value chain selection which was adopted by Innovision for the selection exercise. However, due to the special considerations for choosing climate resilient value chains for the project beneficiary who were already selected (listed), slight modifications were made to serve the project's purpose. In the first phase, we used funnel approach to identify and select three potential value chains for the region. The approach used five steps; first, we have reviewed relevant secondary literatures, interviewed CREL staffs and reviewed potential site-wise value chains identified by CREL regional staffs and develop a long list of value chains. Then using cut-off criteria the team has selected 5-10 value chains. The cut off criteria that used was '*Value chains that deplete forest and/or wet land directly will be ineligible for selection*'. Besides cut off criteria 12 more selection criteria were set and weightage assigned against each criterion. Then the team conducted a rapid assessment of the short listed value chains in the field. Overall, 22 in-depth interviews with influential stakeholders along with 8 FGDs with 96 beneficiaries were conducted. In addition, 100 beneficiaries were individually profiled to get a sense of their economic situation and available resources. The findings then were validated with key stakeholders and project staff in a validation workshop. The set of mandates and economic criteria were used to rank the attractiveness of the short listed value chains. Each value chain was given a score against every criterion. Then the highest scored value chains were selected for the region. However, for the region some specific value chains were chosen which are not within this region but will be very profitable for the beneficiaries and in line with the CREL objectives.

The main challenge of the study was to reach all the selected beneficiaries through the selected three value chains which was quite difficult as a significant number of beneficiary do not have minimum resource to engage in any value chain. In this context, consultation with CREL management, the consultants looked at other trades opportunity to the beneficiary for skill development along with the in-depth value chain analysis of the three selected value chains and nature based tourism. A separate report was generated for the nature based tourism.

In southeast zone 2 Cox's Bazaar, the selected value chains are Sewing & Stitching, Tailoring, Dress Making, Nakshikantha, Fish Net Making, Hand Crocheted Prayer Caps, Embroidery, Capsicum, Strawberry, Medicinal Plants, and Floriculture & Apiculture. Our estimation is that these value chains and trades will cover majority of the target beneficiaries, if not all of the target beneficiaries of this region. With the list of selected value chains, a team consisting of lead consultant, value chain analyst and research assistant went to the study region again; Southeast region. To analysis the selected

value chains; the consultants followed the USAID microlink guidelines for value chain analysis. The value chain analysis covered end market analysis, value chain mapping, constraints and opportunities analysis and strategies to address the constraints and utilizing the opportunities. In total, 122 respondents of different type of actors of these three value chains were interviewed in this phase to have in-depth information about the value chains.

Findings

Sewing & Stitching, Dress Making, Hand Embroidery, Nakshikantha, Hand Crocheted Prayer Caps, Fishing Net Making

Sewing & Stitching, Dress Making & Hand Embroidery, Nakshikantha, Hand Crocheted Prayer Caps, and Fishing Net Making (VC-1) are the existing value chain. Growth opportunities exist for Sewing & Stitching, Dress Making & Hand Embroidery, and Hand Crocheted Prayer Caps because of the government help. In these value chains, there is high involvement of women, with challenges in developing market linkages for selling their products. Producing in large volumes is a challenge that cannot be met by a single small group of producers. Currently the mainstream market is completely catered by the regional and national market actors. However, there is scope for entering it since there is a huge demand for simple products that can be catered to by the local target groups. Some of the major constraints are bulk production, time frame, design and high quality raw materials (stones, glass beads, pearls, vegetable dye, etc.) are required which are not available in local market. On the other hand, despite of the enormous demand for fishing nets, the development of the fishing net making has been very slow and has not kept pace with the development of fisheries. The supply of fishing net is largely conditional and is based on the tradition, quality, and price, leaving much scope for improvement.

There is no reliable estimate of total number of enterprises and related market actors and value chain members in Chakaria, Himchari (Cox's Bazaar) and Teknaf. However, the team during the study has gathered some discrete information about the number of enterprises in Chakaria, Himchari (Cox's Bazaar) and Teknaf. There are about 19,000 different enterprises having trade-licenses from Municipal Corporation in Cox's Bazaar, Chakaria and Teknaf. Makers of Sewing & Stitching and Dress Making in the region purchase dresses from Chittagong and Dhaka, local sourcing is limited due to poor quality. The consumers of different inner wears and other clothing articles are mostly used by the local and regional (people in the working area as well as in adjacent districts – Ctg) consumers. A few articles are sold in the adjacent districts because of price competitiveness. The local products cannot reach the national markets because of volume and price competitiveness from other districts particularly Northern regions of Bangladesh.

The local hand embroidery and nakshikantha is a very new and limited effort undertaken by a few producers especially in Teknaf region. However, lack of volume, quality and non-conformity with standard unique stitching styles the products are generally used in the local and neighborhoods. Only a negligible amount of the produce is actually traded in the local market. Majority of the hand embroidery and nakshikantha products found in the local market are fed by the national market. There is moderate demand for this sub sector in the region. However, the local products cannot reach the national markets because of volume, price competitiveness as well as quality from other districts particularly South Western and Northern regions of Bangladesh.

The primary competition is machine knitted crocheted prayer caps available at a much lower price. The local demand favors the machine knitted prayer caps. The hand crocheted prayer caps are extremely high export market. Volume and contract production from a few buyers is one of the primary impediments in enhancing profitability. Organizing the groups, engaging other buyers, improving negotiating skills, providing market information regarding price, quality, and consumer preference can substantially improve the present impediments. The local products often reach the national markets

because of better price competitiveness as well as quality. The other competing districts are Shitakunda, Mirshari, Comilla, Feni, Kishorejong, Jessore, Bogra, and Rangpur of Bangladesh.

For Fishing Net Making, a part of the local fishing nets market is catered by the locally produced handmade fishing nets by the women. However, the market is not very large and demands are negligible in the market. The hand knitted fishing nets are mostly used by the local small scale fishers. The local products cannot reach the national markets because of volume, price competitiveness as well as quality from other districts particularly Southern Coastal regions of Bangladesh.

Vertical linkage among Sewing & Stitching and Dress Making, Hand Embroidery and Nakshikantha, Hand Crocheted Prayer Caps and Fishing Net Making sub sectors for the beneficiaries in Cox's Bazaar Region is low to medium depending on the location of the beneficiaries. As mentioned above they have certain problems to take the risk of expanding their operations both in volume and also level of business. Horizontal linkages among makers were accessible in some delicate structures. In large, the beneficiaries have been under previous projects and there is a level of cooperation among them, yet casual in nature. However, all the sub sectors have potential for upgradation with the help of project and support services given by the government. Because of the unique strengths and shortcomings of the beneficiaries as well as the implementing organization in certain operational areas, the team feels that relatively easy products be chosen as an entry point to maximize the impact through market synergy, leveraging the strengths of each other to create a high impact strategy.

Strawberry, Capsicum and Medicinal plants

Strawberry, Capsicum and Medicinal plants (VC-2) are proposed/ additional value chains that can be introduced to the farmers in these regions. Most farmers are unaware of the new production technology of many of the high value crops that has potentially high market opportunities both at local and national markets. To be able to operate successfully, these small holders are required to be equipped with training and orientation on production and marketing of high value crops. The region is vested with the right agro-ecological conditions for intercropping of other crops with strawberry cultivation. There is also high demand of these crops in the national market with the potential to start exporting them. Once again the practice of traditional medicine is deeply rooted in the cultural heritage of Bangladesh and constitutes an integral part of the culture of the people of this country, with a growth rate of 25% per year. Thus with these additional value chains project will be able to meet up the target for the beneficiaries.

Absence of organized market chain, low price at the farm gate and lower profit earning, absence of association of small farmers or producers is the major phenomenon in Bangladesh agriculture. CREL's organized groups and producers' can enable the target small farmers to mobilize their resources in a secure environment, increase their efficiency, enhance bargaining capacity and earn greater profit. The local farmers in the target area, grows traditional staples and vegetables at a lower profit results in lower income opportunity. Most farmers are unaware of the new production technology of many of the high value crops that has potentially high market opportunities both at local and national markets. To be able to operate successfully, these small holders are required to be equipped with training and orientation on production and marketing of high value crops.

The Cox's Bazaar region is vested with the right agro-ecological conditions for strawberry – sunshine, sandy loam soil structure, balanced pH condition (6-7), a well-drained soil type and higher organic matters in the soil are found in the target area. It is possible to do intercropping of other crops with strawberry cultivation. The fresh strawberries are mostly used by the local hotels and resorts as well as regional (people in the working area as well as in adjacent districts – Ctg) and national consumers. In the target areas, the primary consumer of fresh strawberry is still limited to large number of hotels and resorts in the tourist district of Cox's Bazar.

Other than strawberry, a short growing and harvesting period makes capsicum more competitive as it is easy for other farmers to enter into the market. As capsicum is a very high value crop and gaining popularity in the super markets of Bangladesh and has got export potentiality, the commercial farmers

can adopt this technology for quality production. Capsicums are mostly used by the local hotels and resorts as well as regional (people in the working area as well as in adjacent districts – Ctg) and national consumers. In the target area, the primary consumer of capsicum is still limited to large number of hotels and resorts in the tourist district of Cox's Bazar.

Five major medicinal plants which can be produce in Cox's bazaar within 6 months are Holy Basil (Tulshi Pata), Aloe vera (Ghrito Kumari), Stevia, Mentha (Pudina Pata) and Indian Pennywort (Thankuni pata). Preconditions for improved production of medicinal plants are generally balanced pH 5.5-6.5 and a fertile land for medicinal plants and so far study confirms that Cox's Bazaar has balanced pH in the soil. Medicinal plants are consumed by the national processors as well as the local processors. Sometimes local inhabitants consume medicinal plants for their better health condition but negligible in amount.

Vertical linkage among strawberry-producing farmers in Cox's Bazaar Region is very low. Only 15 to 20 farmers are involved in the strawberry production. For capsicum and medicinal plants there are few farmers are producing these products as an experimental state. Horizontal linkages among beneficiaries were present in some weak forms only for the strawberry subsectors. However for capsicum and medicinal plants it was not visible. The three value chain products strawberry, capsicum, medicinal plants has excellent prospect considering the local capacity of CREL staff and the beneficiary, as well as the demand for the product in local, regional and national markets. However, it may be noted here that CREL should consider that the cultivation season particularly for strawberry and capsicum is October/November and should make important decision fairly quickly to launch the demonstration in the sites and provide the technical know how to the beneficiaries.

Floriculture and Apiculture

Floriculture and Apiculture (VC-3) is also a proposed value chain for this region. The demand for flowers especially rose and marigold is growing all over the country and especially in Cox's Bazaar district. Regardless of the rising local utilization, the primary market of locally cultivated flowers is Dhaka and Chittagong with almost 80% being imported from the Cox's Bazaar. To complement floriculture this project can initiate apiculture in the future as well. Beekeeping and honey production is a low-tech, easy to start, highly profitable enterprise and is used in Bangladesh as a livelihood strategy for generating self-employment and supplement cash income among rural poor and subsistence farmers including indigenous minorities and women. Through appropriate interventions and modest technological improvements, honey producers can increase their income significantly. However, the major constraints are lack of nectar producing crops and fruit cultivation in the area and lack of trading of queen bee in the local market.

The demand for flower specially rose and merry gold is growing all over the country and especially in Cox's Bazaar district. In the last 5 years the flower sales in Cox's Bazaar has increased more than 300 times. Despite the increasing local consumption, the primary market of locally cultivated flowers is Dhaka and Chittagong. Almost 80 of the locally produced flowers are sold to Dhaka market. The fresh cut-flowers are mostly used by the local as well as regional (people in the working area as well as in adjacent districts – Ctg) consumers. In the target areas, the primary consumer of fresh cut-flowers is still limited to special events such as weddings and festivals. A large number of hotels and resorts in the tourist district of Cox's Bazar also use a large amount of fresh cut-flower for their daily use.

In Cox's Bazaar apiculture is quite rare to find. There are only few collectors or bee hunter but the number is quite low and some of the ethnic community in Whykkong still practice apiculture but not in a commercial way. They just sell them to the local villagers and use for themselves. Despite its potential for cultivation, high income opportunity and enormous benefits, apiculture is almost non-existence in Cox's Bazaar. They (almost armature, as a hobby) are farming bees and collecting honey. The fresh honey is mostly used by the local as well as regional (people in the working area as well as in adjacent districts – Ctg) consumers.

Vertical linkage among floriculture farmers in Cox's Bazaar Region is high although there is no seemingly visible linkage for apiculture in Cox's Bazaar. Horizontal linkages among beneficiaries are not present in floriculture same goes for apiculture. However, horizontal linkage among the farmers by increasing the land size can benefit the farmers in the project area.

CREL can continue to target high-value agricultural products such as flower cultivation and apiculture to enhance value chains' competitiveness, and increase employment and incomes for the targeted poor, and at the same time build private sector agribusiness capabilities. Implementation of value-added strategies such as processed products and new product development and provide agro processors and producer groups with the knowledge and skills to meet buyer requirements can be an extremely useful intervention. Making the producers to understand and differentiate their products through market segmentation strategy as well as way to identify and cater special niche markets can significantly improve their livelihood.

Table of Content

Acknowledgment	ii
Abbreviations	iii
Executive Summary	v
PART I: INTRODUCTION.....	1
1. Background and Context of the Assignment	2
2. Objectives.....	2
3. Scope of Work.....	3
3.1 Geographic Scope	3
3.2 Demographic Scope	3
3.3 Methodological Scope	3
3.3.1 The changing face of poverty	3
3.3.2 Need for market-based approach.....	3
3.3.3 Market-based approach: Challenges and opportunities	4
3.3.4 Need for Value Chain Analysis.....	4
3.3.5 Climate Resilient Value Chain Analysis	4
3.3.6 Advantages of Livelihoods Development with Value Chain Approach	6
4. Methodology.....	7
4.1 Approach of the Value Chain Selection.....	7
4.1.1 Secondary Literature Review and KII to generate first list of potential value chains and value chain Selection criteria	7
4.1.2 Screening using cut-off criteria.....	9
4.1.3 Primary Field Investigation	10
4.1.4 Validation Workshop and Ranking Exercise	11
4.2 Approach to Value Chain Analysis	11
4.2.1 Literature Review.....	11
4.2.2 In-depth Interviews	12
4.2.3 Questionnaire Surveys	12
4.2.4 Data Analysis.....	13
4.2.5 Strategy Workshop.....	14
PART II: VALUE CHAIN SELECTION FOR SOUTHEAST REGION 2 (COX'S BAZAAR).....	15
5. Value Chain Selection for Northeast Region	16
5.1 Climactic Assessment of Target Area	16
5.1.1 Overview of Natural Resources and Biodiversity in the Area	16
5.1.2 Environmental and Climate Change Issues in the target area.....	20
5.2 Community Profile of the Target Area	21
5.2.1 Benefciary Profile	21
5.2.2 Infrastructure & Operating Environment.....	22
5.2.3 Status of Natural Resource Dependency	24
5.2.4 Engagement in Commercial Activities.....	25
5.3 Value Chain Selection	26

5.3.1	Long list of value chain activities	26
5.3.2	Current Value chains passing cut-off criteria	28
5.3.3	Attractiveness Measure of Eligible Value Chains.....	29
5.3.4	Ranking and Short listing of Value chains (site wise & regional)	30
5.3.5	Tentative Outreach with the Shortlisted Value Chains and Trades	31
5.3.6	Potential Trades	33
PART III: VALUE CHAINS ANALYSIS FOR SOUTHEAST REGION 2 (COX'S BAZAAR)		34
6. Value Chain Analysis for VC1: Sewing & Stitching, Dress Making, Hand Embroidery, Nakshikantha, Hand Crocheted Prayer Caps, Fishing Net Making		35
6.1	Brief Overview	35
6.2	End Market Analysis	37
6.2.1	Market Size and Penetration	37
6.2.2	Main Market, Buyers & competition.....	40
6.2.3	Demand-Supply Situation.....	41
6.2.4	Market opportunities	41
6.3	Value chain map and analysis of value creation activities	43
6.3.1	Value Chain Overview	43
6.3.2	Value Chains Actors, Functions and Map	45
6.4	Value Chain Performance	51
6.4.1	Business Enabling Environment.....	51
6.4.2	Vertical Linkages	51
6.4.3	Horizontal Linkages.....	52
6.5	Assessment of the regulatory environment and support services.....	54
6.6	Value Chain Governance	55
6.7	SWOT Analysis.....	56
6.8	Constraints Analysis	56
6.9	Potential Interventions	57
6.10	Recommendations.....	57
7. Value Chain Analysis for VC2: Strawberry, Capsicum and Medicinal Plants		59
7.1	Brief Overview	59
7.2	End Market Analysis	65
7.2.1	Main Market, Buyers & Competition.....	67
7.2.2	Demand-Supply Situation.....	68
7.2.3	Market opportunities	69
7.3	Value chain map and analysis of value creation activities	70
7.3.1	Value Chains Overview	71
7.3.2	Value Chains Actors, Functions and Map	71
7.4	Value Chain Performance	76
7.4.1	Business Enabling Environment.....	76
7.4.2	Vertical Linkages	77
7.4.3	Horizontal Linkages.....	77
7.5	Value Chain Governance	79
7.6	Assessment of the regulatory environment and support services.....	80
7.7	Poor/Resource Dependent, Youth and Gender Analysis	82
7.8	SWOT Analysis.....	84
7.9	Constraints Analysis	84
7.10	Potential Interventions	86
7.11	Recommendation.....	88

8. Value Chain Analysis for VC3: Floriculture and Apiculture	90
8.1 Brief Overview	90
8.2 End Market Analysis	91
8.2.1 Main Market, Buyers & competition.....	92
8.2.2 Demand-Supply Situation.....	93
8.2.3 Market opportunities.....	94
8.3 Value chain map and analysis of value creation activities	97
8.3.1 Value Chain Overview	97
8.3.2 Value Chain Actors, Functions and Map	98
8.4 Value Chain Performance	102
8.4.1 Business Enabling Environment.....	102
8.4.2 Vertical Linkages	102
8.4.3 Horizontal Linkages	102
8.5 Value Chain Governance	104
8.6 Assessment of the regulatory environment and support services.....	105
8.7 Poor/Resource Dependent, Youth and Gender Analysis	106
8.8 SWOT Analysis.....	107
8.9 Constraints Analysis	108
8.10 Potential Interventions	108
8.11 Recommendations	109
9. Status of Ethnic Communities.....	110
10. Introduced Technology / Methods.....	111
ANNEX.....	112
Term of Reference.....	113
Detailed Field Plan	118
Data Collection Tools	121
Respondent List.....	124
References & Bibliography	188

List of Tables

Table 1: Geographic distribution of study areas	3
Table 2: Criteria Definition, Relative Weightage and Justification	8
Table 3: Category of respondents in each region	12
Table 4: Composition of primary data collection	13
Table 5: Overview of Natural Resources and Biodiversity in the Area ²	19
Table 6: Snapshot of the Available Bio-Diversity Conservation ²	20
Table 7: Economic status	22
Table 8: Justifications for the elimination of other value chains.....	29
Table 9: Site-wise Prevalence of VCs selected for ranking exercise.....	29
Table 10: Attractiveness Measure of Eligible Value Chains	30
Table 11: Final Value Chains	31
Table 12: Potential outreach of VC 1	31
Table 13: Potential outreach of VC 2	32
Table 14: Potential outreach of VC 3	32
Table 16: SWOT Analysis of VC 1	56
Table 17: Constraints Analysis of VC 1	56
Table 18: Potential Interventions of VC 1	57

Table 19: Demand-supply situation of medicinal plant	69
Table 20: Number of industry and practitioners	70
Table 21: Assessment of the Regulatory Environment and Support Services	80
Table 22: SWOT Analysis of VC 2.....	84
Table 23: Constraints Analysis of VC 2	84
Table 24: Potential Interventions of VC 2	86
Table 25: Implementation Plan for VC 2.....	87
Table 26: SWOT Analysis of VC 3.....	107
Table 27: Constraints Analysis of VC 3	108
Table 28: Potential Interventions of VC 3	108
Table 29: Introduced Technology / Methods for All Value Chains	111
Table 30: Annex-Scope of Work	114
Table 31: Time Frame.....	115
Table 32: CREL Field Plan: Phase 1	118
Table 33: CREL Field Plan: Phase 2	119
Table 34: Phase 1-Beneficiary Profile.....	121
Table 35: Phase 2-Beneficiary Profile.....	122
Table 36: Respondent List of Cox's Bazaar.....	124

List of Figures

Figure 1: Normal Value Chain Process.....	5
Figure 2: Climate Resilient Value Chain Process	6
Figure 3: VC Selection Funnel- The Step by Step Approach for Value Chain Selection	7
Figure 4: Respondent Type.....	10
Figure 5: Type of respondents	10
Figure 6: Steps of the Study Process	11
Figure 7 : Himchari National Park	16
Figure 8: Fashiakali Wildlife Sanctuary	17
Figure 9: Medhakassapia National Park	17
Figure 10: Teknaf Wildlife Sanctuary	18
Figure 11: Age Group.....	21
Figure 12: Literacy Status	21
Figure 13: Resource Extraction.....	24
Figure 14: Present Activities Engaged in	25
Figure 15: Knowledge on Commercial Activities.....	25
Figure 16: Comparative matrix on the ROI of the different sub-sectors	42
Figure 17: Value Chain Map for Sewing & Stitching and Dress Making.....	46
Figure 18: Value Chain Map for Hand Embroidery and Nakshikantha	47
Figure 19: Value Chain Map for Hand Crocheted Prayer Caps.....	49
Figure 20: Value Chain Map for Fishing Net Making	50
Figure 21: Sewing & Stitching/ Dress making/ Hand Embroidery/ Nakshikantha - Cost of Production and Sales Revenue / Profit per piece	53
Figure 22: Cost for Producing Hand Crocheted Prayer Caps.....	54
Figure 23: Cost for Producing Fishing Net.....	54
Figure 24: Process of Strawberry Cultivation.....	63
Figure 25: Market Opportunities of Strawberry, Capsicum & Medicinal Plants	69
Figure 26: Value Chain Map for Strawberry.....	73
Figure 27: Value Chain Map for Capsicum	74
Figure 28: Value Chain Map for Medicinal Plants.....	76

Figure 29: Strawberry - Cost of Production and Sales Revenue / Profit per 40 decimal land	78
Figure 30: Investment Vs Return on Investment	79
Figure 31: Constraints Analysis	85
Figure 32: Value Chain Map for Floriculture	99
Figure 33: Value Chain Map for Apiculture	101
Figure 34: Flower (Roses/ Peak Season- Winter) - Cost of Production and Sales Revenue / Profit per 40 decimal land for initial farming	104
Figure 35: Flower (Roses/ Peak Season- Winter) - Cost of Production and Sales Revenue / Profit per 40 decimal land for subsequent farming	104

Part I: Introduction

1. Background and Context of the Assignment

Traditionally, rural inhabitants in Bangladesh relied on the resources extracted from natural sources like forests, wetlands, rivers, and sea for their livelihood. Till date, livelihood of the poor, especially, those having limited or no access to land is still dependent on these resources. However, the increase in population means more extraction of these resources. Hence, relying only on natural resources for livelihood has become difficult for the resource extractors. At the same time, due to excess resource extraction, the sources are not being replenished naturally, resulting in adverse climatic effects. Under this circumstance, alternative livelihood options are required for these resource extractors, which will reduce their dependence on natural resource extraction, as well as improve their livelihoods through increased income.

From March, 2013 Winrock International and the partners have started implementing the Climate-Resilient Ecosystems and Livelihoods (CREL) project to conserve ecosystems and protected areas in Bangladesh. They aim to improve governance of natural resources and biodiversity, and to increase resilience towards climate change through improved planning and livelihoods diversification. The project works on the four broad geographic areas/regions in Bangladesh targeting beneficiaries that are disadvantaged, poor/ultra-poor, women and youth who are dependent on natural resources.

This study intended to identify and analyze value chains in the target areas that can potentially reduce pressure on natural resources through enhancing the livelihoods of the target beneficiaries through alternative income sources. Innovision Consulting Private Limited has conducted the study according to the guidelines provided by CREL and executed the proposed assignment through submission of this Value Chain Selection and Analysis Report.

2. Objectives

Phase 1: Analyze all potential Value Chains and select 4 Value Chains (including nature based tourism which is preselected) for full analysis from each region according to the criteria mentioned below;

- Climate Resilient – Value Chains that are climate resilient and/or has the potential to reduce risk from climate change threats.
- Potential to reduce extraction of natural resources
- Ensured Market Demand and/or Opportunity to link with markets
- Potential to increase income of the marginal and vulnerable populations who have small amount of land or totally landless
- Potential to create employment throughout the value chain
- Potential to incorporate women and youth
- Potential to involve MSMEs
- Potential for growth
- Potential to be benefited from the available support services
- Suitable for the economically disadvantaged area particularly in the landscape/wetland area of CREL regions

Phase 2: A detail analysis of the selected value chains to get a vivid picture of each value chain and to formulate the strategy/interventions to strengthen the value chains and create scope for sustainable livelihoods.

3. Scope of Work

3.1 Geographic Scope

The assignment was carried out in the protected areas, core zones and buffer zones of the forests and wetlands in the following specific geographic locations:

Table 1: Geographic distribution of study areas¹

Regions	Districts	Upazilas	Sites
Southeast Region 2	Cox's bazaar	Cox's Bazaar Sadar, Ramu	Himchari NP
		Chakaria	Fashiakhali WS
			Medhakachapia NP
		Teknaf	Teknaf WS
		Ukhiya	Inani proposed NP

3.2 Demographic Scope

We understood that the target beneficiaries for the project are disadvantaged poor/ ultra-poor households, including women and unemployed youth, dependent on natural resource extraction for their livelihood. To analyze the prospect for inclusion of these communities in formal value chains, it was essential that all existing actors in the prospective and selected value chains are interviewed as respondents in addition to the target beneficiaries. Therefore, the scope of the study included all value chain actors irrespective of their social and economic conditions, in addition to the core target beneficiaries of the CREL project.

3.3 Methodological Scope

3.3.1 The changing face of poverty

The general understanding of poverty has changed in the past two decades. It is now widely accepted that poverty is dynamic (people move in and out of poverty) and multidimensional (limited access to services and social networks are as important as insufficient incomes). Vulnerability is an important concept in understanding poverty. It relates to risk and people are vulnerable to poverty when they are more at risk than others, due to factors at household level (e.g. ill health), community/ regional level (e.g. drought) and national level (e.g. policies which affect the costs of goods and services).

3.3.2 Need for market-based approach

Establishing a new value chain or entering an existing value chain are both challenging endeavors for smallholder marginalized groups. Even if a market opportunity is recognized, smallholders still require entrepreneurship, business skills, education, and a range of other assets to start an enterprise to commercially compete with the market actors. Business and entrepreneurship skills and orientations are usually challenging to acquire in the rural areas particularly for the smallholder marginalized groups. There is often a high degree of illiteracy, poor understanding of market dynamics and market interface, inadequate access to capital and finance, lack of appropriate resources such as land, tools and equipment, as well as poor negotiating skills and poor economy of scale that increases the difficulties faced by smallholders in starting up a value-adding enterprise. Thus, one-time solutions to the current problems facing these individuals lack lasting impact as the market dynamics change, bringing new challenges and new problems. Consequently, there rose a need for market-based approach which, instead of providing direct assistance to these individuals for immediate solutions;

¹ Terms of Reference

provides technical and facilitating assistance to enable the individuals to solve their current problems as well as future ones for a more sustainable impact.

3.3.3 Market-based approach: Challenges and opportunities

Although the focus of CREL has been to increase the participation of smallholder marginalized groups in higher-valued product value chains, a particular emphasis has been on the promotion of market-oriented, often of specialized products, with support from either the private sector or public sector, and facilitated through NGO's and other international development agencies. However, in such high-value product value chains, the targeted smallholders have limited control. Power is often concentrated among one or a few chain participants that coordinate market activity. As the high-value product is based on consumer assurance, high standards for quality and safety, competitive price, and reliability of supply, lead actors in retail or export often coordinate the value chain members. The ability of smallholder farmers to take the lead is limited, as is their ability to maximize economies of scale. The market is also constantly changing, requiring rural farms and firms to respond and innovate by, for example, switching market channels, changing how they are organized, or investing in equipment. Such value chains may thus be less appropriate for many smallholder actors, who may lack the ability to handle dynamic markets and comply with their increasing amount of cultures, customs, regulations and standards.

The focus is on identifying the potentials of local value chain development through in-depth analysis of successful smallholders.

Local value chains that meet growing local demand might be more within the reach of smallholders. Local markets may also be characterized by new consumer demands due to changing lifestyles and increased knowledge of the benefits of a more diversified products. Recently local value chain development has been advocated by environmentally conscious consumers demanding local farm products that they perceive as being of higher quality, leading to a rise in the number of specialty and local markets. Many producers have taken advantage of this trend by selling their produce at the growing number of local farmers' markets and/or directly to customers, thus creating local product value chains. The present study primarily focuses on identifying the potentials of local value chain development in the CREL working areas through an in-depth analysis of successful smallholder initiatives in local value chains that could give valuable insights on how to develop value chains based on local resources and context.

3.3.4 Need for Value Chain Analysis

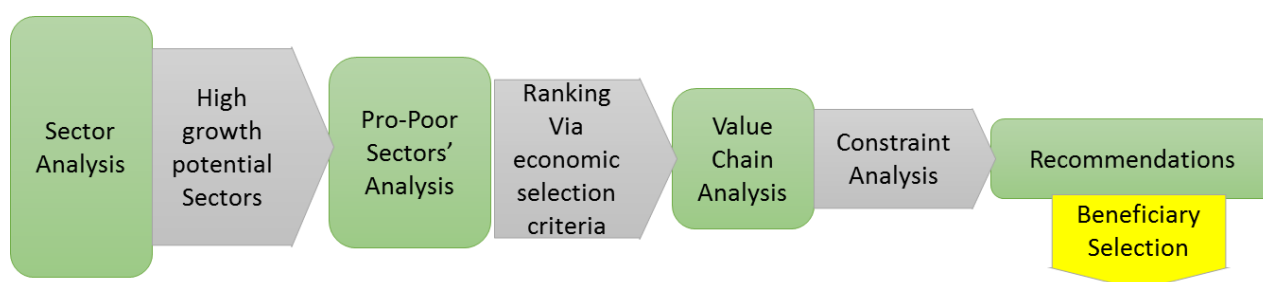
Although Bangladesh presents a story of decline in rural poverty during recent times, coupled with expansion of the non-farm sector, a stagnant agriculture output (and also low productivity) as well as low growth in wages, the expansion of workers in the non-farm sector, though an encouraging trend about the potential of the sector in terms of employment, has however not demonstrated the capacity of the sector to provide growing wages and incomes to the workers. There is thus pressing need for looking more closely at the possibilities of promoting rural livelihoods in specific regions such as the working areas of CREL. The present study may thus be seen within the above larger canvas of poverty, livelihoods and employment.

3.3.5 Climate Resilient Value Chain Analysis

The objective of the project is to strengthen the ability of the poor and disadvantaged who rely on forest and wetland resources to adapt to climate change, and to improve and diversify their livelihoods, through environmentally sustainable means. The study was aim to identify three potential value chains that have significant income increase and employment opportunity for the CREL targeted beneficiaries who are already listed by the project.

In traditional value chain analysis process we start at the end-market to find the most lucrative pro-poor value chains and then work backward through the value chain to reach the beneficiaries of the selected value chains, wherever they may be. The process is summarized below:

Figure 1: Normal Value Chain Process



However, this process is not perfectly suited to VCA for Climate Resilient Value Chains due to the following reasons:

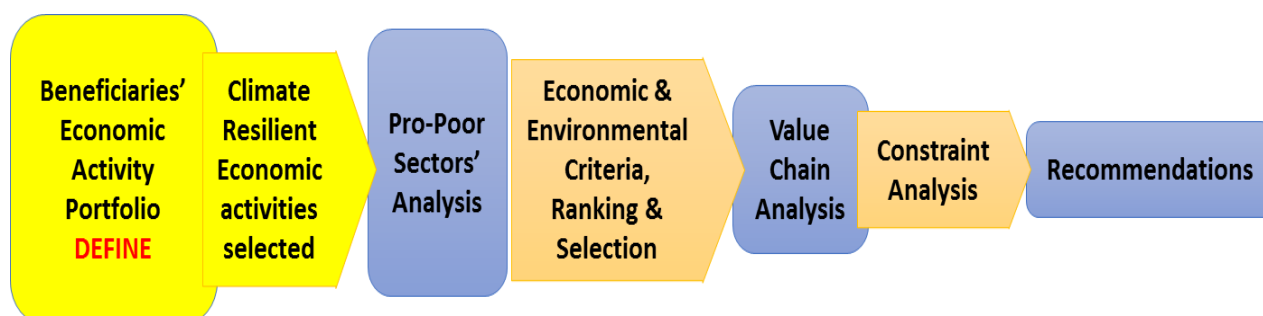
1. The beneficiaries of CREL have already been selected, limited to specific areas.
2. They live within Protected Areas, which due to infrastructural challenges and special institutional constraints mean that the identified end-market is often completely irrelevant to their current economic situation.
3. The project has diversified and wide range of working areas (4 regions with 23 sites, 1000 Village conservation forum, 45 Co-management committee, 8 RMOs) adjacent to protected and wetland area.
4. Location and beneficiary of the project are preselected and their capabilities well known
5. The selected value chains should have climate resilience and supportive to the natural resource management
6. The value chains should have year round income opportunity with a minimum market facilities and support to better NRM
7. Most disaster prone and vulnerable location VS functional market
8. Sustainability VS local practice and behavior
9. Value of Natural resources VS opportunity of exiting localized market
10. Many of the constraints are known like- commercial practice, private sector interest, volume of production, scale of production, assets, access to support market, vulnerability extent, survival condition, existence of market player and infrastructure, stakeholders
11. Region specific target beneficiaries to reach through value chains
12. The project will not provide any direct subsidy to the beneficiaries
13. The project has a provision of skill based capacity building

So we have limited scope to look at the community level rather look at the specific households who are listed as CREL beneficiary. We have kept our lens on the beneficiary of the project not to the region. In this context, we had to have preliminary idea about the CREL beneficiary's economic activities, experience in different income generating activities, existing resources and their demographic status. But in the traditional value chain analysis we need to start from the sectors where we identify the value chains that have maximum participations of the project target people who are not identified initially. Besides, if we follow the normal value chain analysis approach there might be a chance to select a value chain that have higher growth potential but low participation of the CREL targeted beneficiaries. For example, in Southwest region, Shrimp value chain has highest income increase opportunity and also has good growth potentiality but no participation of the CREL beneficiaries. This value chain is not suitable for them as well as its need high investment and improved technical know how for cultivation. The geographic dispersion of the project sites and dissimilarities of the project beneficiary interms of available resources and skill in potential value chains guide us to do the clubbing of potential value chains where multiple value chains were clubbed together to ensure maximum participation of the beneficiaries. For example, under vegetable value chain we clubbed different vegetables like raddish, okra, chili etc. that ensured maximum outreach for the project.

This approach was slightly modified in the value chain selection phase considering the special features of CREL project. The study began by looking into the beneficiaries' economic activities first

and then narrowing down the choices based on both economic potential and climate resilience to few VCs for deeper analysis via a rigorous selection process. The process is summarized below:

Figure 2: Climate Resilient Value Chain Process



3.3.6 Advantages of Livelihoods Development with Value Chain Approach

The key advantages of combining livelihoods and value chain analyses are summarized as follows:

- Livelihoods analysis goes beyond costs and prices, income and consumption to provide complementary information to assess (rather than measure) the choices that people make in particular contexts. It helps in explaining what is sometimes termed “weak supply responses” to trade liberalization, for example, when farmers have not responded to higher prices on one crop by producing more of it. It recognizes that other outcomes besides increased incomes are important to people – for example, food security, or more secure rather than higher incomes, or a more sustainable use of natural resources. It allows an assessment of possible trade-offs between outcomes.
- Value chain analysis, provides an essential picture of how the local smallholders interacts with the large markets and the way in which some firms may influence the workings of actors in other parts of the chain. The way in which pressure on prices and costs are often transmitted from retailers to producers has a critical bearing on the potential for enhancing livelihoods through supply chains for particular products.
- As a result both livelihoods and value chain analyses were combined and at the same time the entire assessment was conducted in a participatory way – either in the sense of generating data and understanding with different stakeholders or more powerfully, facilitating learning and action by people who are targeted by particular economic and trade issues based on the market dynamics. It was observed that increasing the involvement of different stakeholders, particularly those who are usually marginalized, contributed more in effectively in the process of designing interventions for income generation.

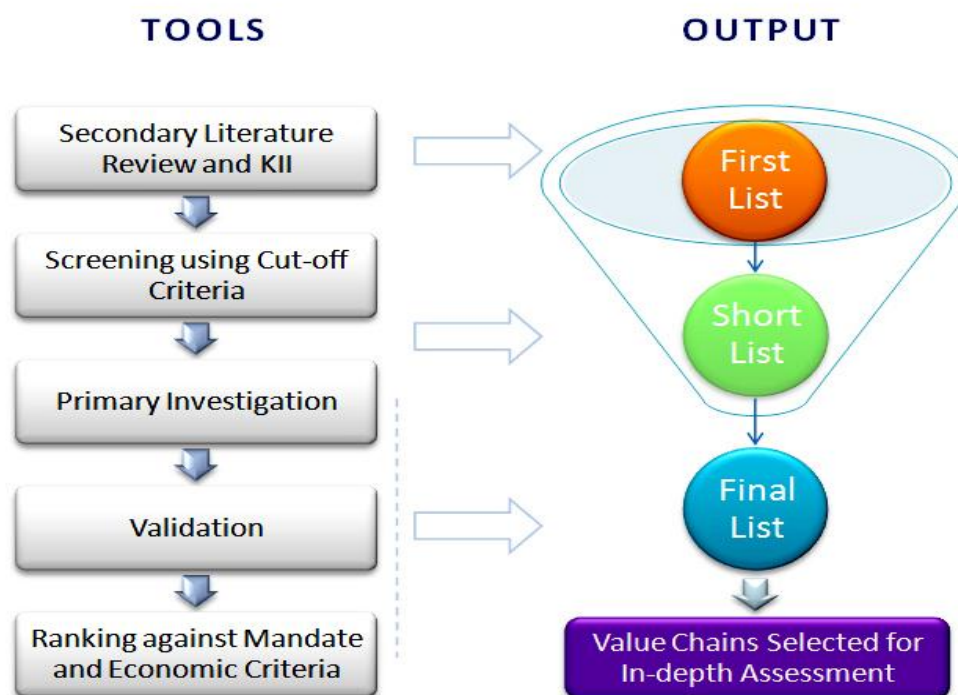
4. Methodology

The study was conducted in two phases where Value Chain Selection in Phase-1 and Value Chain Analysis in Phase-2. In each step of the process, the project personnel of CREL worked with the team in every step, validating the outcomes at each step.

4.1 Approach of the Value Chain Selection

Innovision used a funnel approach to identify, analyze and select potential value chains for a project intending to invest in value chain development. The approach (figure 3) uses five tools to generate three outputs the last of which are final list of value chains selected for in-depth assessment to design interventions of the project.

Figure 3: VC Selection Funnel- The Step by Step Approach for Value Chain Selection



4.1.1 Secondary Literature Review and KII to generate first list of potential value chains and value chain Selection criteria

The consultants reviewed all relevant literature on value chain analysis, sector and subsector studies, CREL project papers, policy documents, case studies that are relevant to development interventions in the selected regions. Several key informants interview were also conducted at this stage to develop the first list of potential value chains. The key informants also included CREL staffs having significant experience on value chains in the selected region. A first list of potential value chains for each region was developed.

Based on the literature and interviews with the CREL staffs, one cut-off criteria and twelve criteria for value chain selection were developed.

The cut-off criteria are usually those that are highly related to the project's mandate and therefore its capacity to deliver results. It is noted that the cut-off criteria are used so that value chains in which the project has least scope for contribution are eliminated. This helps increase relevance and efficiency of the screening process. The Cut-off criterion that was used in the screening of the first list of value chains is given below:

Value chains that deplete forest and/or wet land directly will be ineligible for selection

The relative weightages were given to each of the selected criteria based on the importance in consultation with CREL team. The following table depicts the definition, relative weightage and justification for each of the selected criteria:

Table 2: Criteria Definition, Relative Weightage and Justification

Criteria	Definition	Weight	Justification
Climate Tolerance (Low tolerance=1 High tolerance=5)	Climate tolerance is the ability of social or ecological system (<i>inside the value chain</i>) to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change. (IPCC.ch)	3	If there is low climate tolerance, it will likely have high resource requirements and thus not be chosen. Non-resilient crops will already be eliminated by the cut-off criteria.
Climate Resiliency (Low resiliency=1 High resiliency=5)	Climate change resilience is the capacity of an individual, community, or institution (<i>within the value</i>) chain to dynamically and effectively respond to shifting climate impact circumstances while continuing to function and prosper. (IPCC.ch)	3	Climate resiliency is one of the core mandates of CREL project which leads to its high weightage
Resource Extraction Minimization (Not minimized=1 Highly minimized=5)	The chosen value chain must reduce and minimize the pressures on the natural resources in the environment; it should be a more eco-friendly alternative to their current income-generating activity.	5	Since this is one of the core objectives of the project, it has the highest importance
Women and Youth Inclusion (Low inclusion=1 High inclusion=5)	The value chain involves women and youth in its operation and creates employment opportunity for them.	5	This is also one of the core project aims and thus has high weightage
Outreach (Low outreach=1 High outreach=5)	Number of beneficiaries the developing the value chain would directly and indirectly impact.	2	While being one of the main indicators of the Project's success, since the beneficiaries are limited within very specific areas, the outreach number is not the most important aspect of the project.
Growth potential (Low growth=1 High growth=5)	This criterion measures the estimated feasible demand for the value chain product/service in the local, national or international market and growth trend of that market.	5	One of the core market criteria, it is crucial for the chosen value chain product/service to have a lucrative and growing market to attract beneficiaries away from their current source of income. Entering a new source of income requires investment in terms of time, labour and money for tools, inputs etc. The value chain product/service must have clear potential to convince the beneficiaries that it will be worth it.
Income (Low income increase=1 High income increase=5)	Potential monthly income to be generated from choosing the listed value chain: <ul style="list-style-type: none"> Area farmed Yield Cost of production 	5	Regardless of how climate resilient a value chain may be, it must generate significantly higher income than their current source, or it will not be adopted. Thus, the highest weightage is assigned.

	<ul style="list-style-type: none"> Quantity sold Revenue 		
Private sectors participation (Low interest=1 High interest=5)	<p>The presence of private sector firms who are willing to promote the listed product/service and work with the beneficiaries to develop the production base or market channel.</p>	3	<p>Presence of willing private sectors is important for the feasibility of intervention in an M4P approach to value chain development. However, generally if private sector firms are not present, they can be found and involved thorough linkage building interventions, while project support with financial and human resources makes them willing to cooperate. Thus, it is not as important for this factor to be present for value chain selection.</p>
Development priorities and favorable policy of government (Low priority & favorability=1 High priority & favorability=5)	<p>Government departments and offices located within project area along with others providing support services like NGOs and other project offices.</p>	3	<p>The project areas all lie close to protected areas identified by the government. Thus, there would be additional restrictions and legalities concerning economic activities, project operations etc. In particular, development of new value chain of products/services might be of particular interest to the government's policies concerning these areas. Thus, it is important for the chosen value chain to have the approval of the government policies and their favorability would be an added advantage.</p>
Synergy and potential collaboration (Low synergy=1 High synergy=5)	<p>Complementarities of value chains with other projects in the area</p>	3	<p>Protected areas remain in focus for other projects and initiatives. As such, if the chosen value chains match those of other projects, there lies a scope for CREL to collaborate with them for synergistic impact on beneficiaries.</p>
Risk (High risk=1 Low risk=5)	<ul style="list-style-type: none"> Entry barrier Capital intensive Business risk <p>Every value chain would have its own risk of failure attached with it. Generally, economic activities with greater risks and greater investment also have greater profits. This criterion would judge the potential return in each value chain in terms of sustainable income versus the risk of failure.</p>	4	<p>Considering the beneficiaries, who are very poor, the value chains selected must balance investment with return. The income generated from these potential value chains should be sufficiently higher than their current source while keeping the investment requirements and other risks low in order to make the beneficiaries willing to change. The project aims to facilitate these transitions and assist in minimizing the initial risk with better knowledge, market access and support services. Thus, slightly higher risks should not be a factor for which a value chain should be discarded; resulting in its lower weightage compared to other criteria.</p>
Scope for value addition (Low scope=1 High scope=5)	<p>This criteria judges the scope for developing the beneficiaries' current source of income to move them to a product/service with higher value addition</p>	3	<p>Current beneficiaries are involved in value chains which are not dependent on natural resource extraction. However, due to the limited income from them, they also engage in other activities of resource extraction to supplement their income. If these value chains can be developed for higher value addition and thus higher income, the beneficiaries would be more willing to stop or minimize the resource extraction based activities. However, these value chains may be promoted regardless of value addition since they do not depend on natural resource extraction and it will be more feasible to encourage income generating activities the beneficiaries already do rather than move them to a completely new one. Thus, a relatively lower weightage is assigned compared to other criteria.</p>

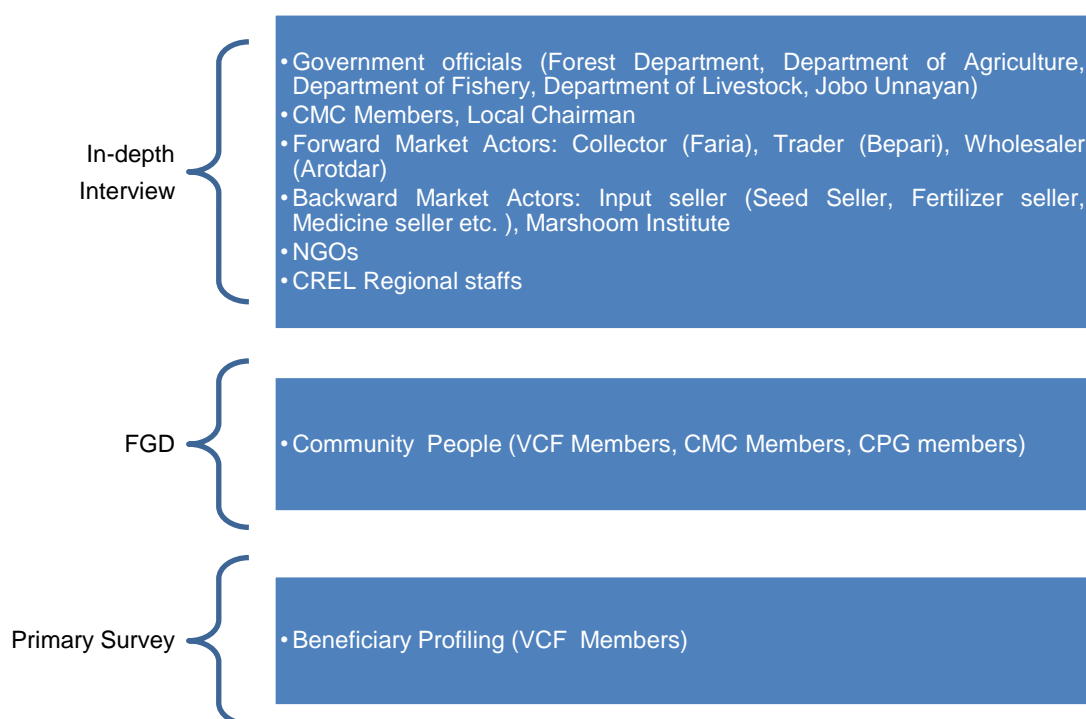
4.1.2 Screening using cut-off criteria

Once the first list of value chains developed, a short list of value chains is derived by using the cut-off criteria. That is, the value chains that have passed through the cut-off criteria were selected for the next step. A list of 8-10 value chains were selected for the region.

4.1.3 Primary Field Investigation

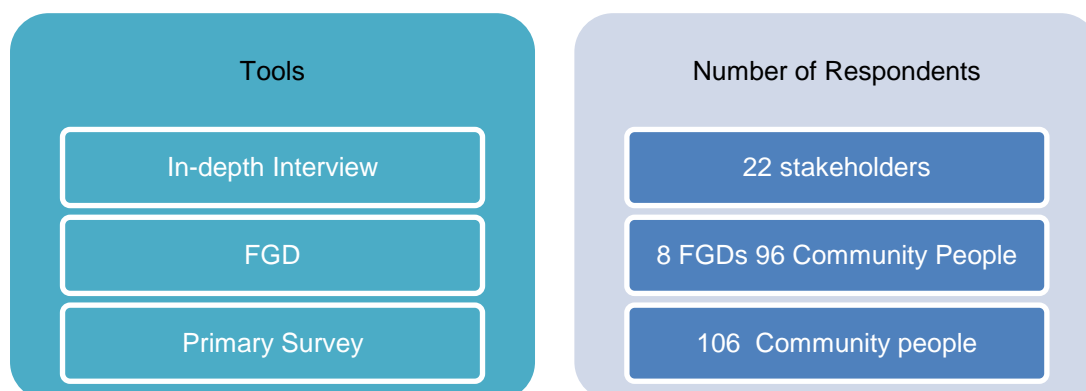
Once the short list was developed, the consultants prepared a checklist in light of the criteria that would be used to compare the attractiveness of the potential value chains. This checklist was used to collect information on all the short listed value chains in each region. During the primary investigation, the consultants conducted in-depth interviews with government officials, forward market actors and backward market actors in the region and in the country, NGO staffs, staffs from other projects engaged in the region and CREL staffs. In this stage, a beneficiary profiling is also conducted through the CREL regional staffs to have better understanding about the community people. Besides, project staffs were also joined in the primary investigation with the consultants and were updated about the findings. They had provided necessary recommendation to the consultants on the field. The tools that were used in the primary investigation and also the type of respondents in field are shown by the following chart:

Figure 4: Respondent Type



The following table summarized the total number interviews conducted in each zone:

Figure 5: Type of respondents



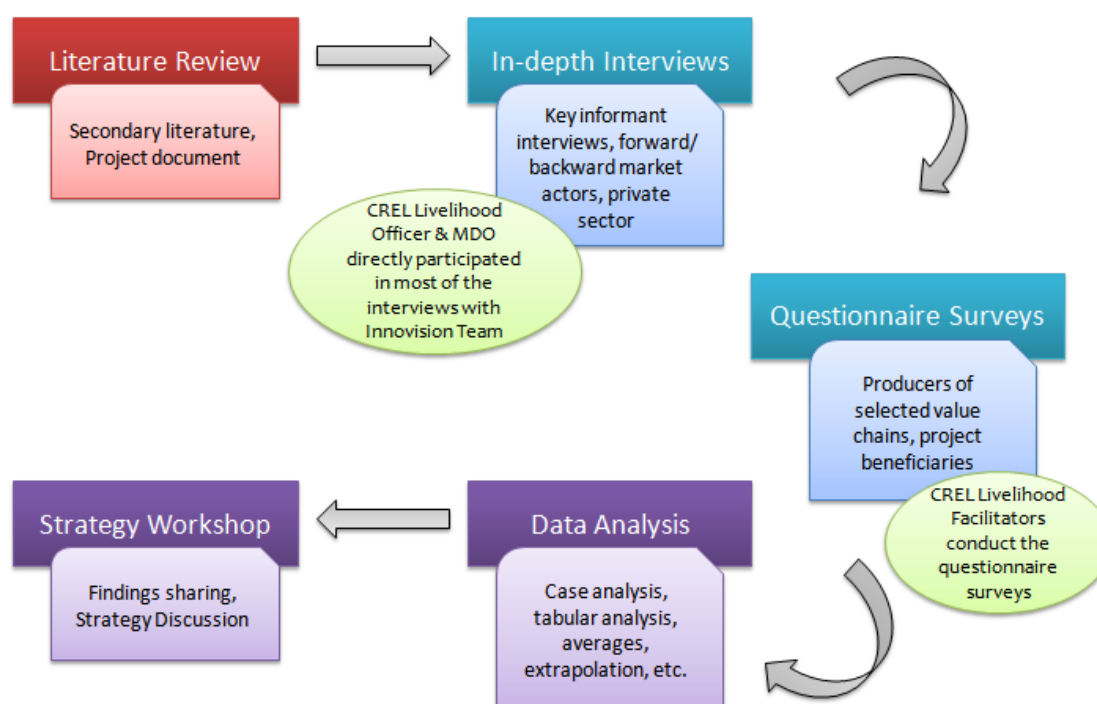
4.1.4 Validation Workshop and Ranking Exercise

After completion of field investigation the information were duly analysed and a daylong validation workshop was organized in Khulna where CREL staffs, different government officials of relevant fields, project beneficiaries, representative of local government, representative of CMC were present. The field findings were shared in the workshop and validated by the participants. Then a ranking exercise was conducted with the direct participation of participants and the top three value chains were derived based on the highest ranking.

4.2 Approach to Value Chain Analysis

Once the value chains were selected, we began with the analysis. The study process started with the literature review, followed by in-depth interviews and questionnaire surveys. The accumulated data was then analyzed and shared in the strategy workshop.

Figure 6: Steps of the Study Process



4.2.1 Literature Review

Literatures from different secondary sources like value chain reports, journals, government publications, newsletters on vegetables & medicinal plants, fruits, sunflower, fisheries, handicrafts, etc were studied to have a preliminary understanding on the end market, market segments and market potential of the value chains. Besides, the key informants for the value chains, different market actors, regulatory and development stakeholders were also identified through the literature review. The key-informants included stakeholders at different levels of the value chains like government officers, private sector representatives, researchers, NGO personnel, and projects who are working directly with these sub-sectors. A set of checklists for key informants and different value chain actors were developed at this stage of the study. It was also used as the guide to identify the production clusters, major markets and hence in designing the field plan for the in-depth interviews.

4.2.2 In-depth Interviews

In-depth interviews were taken of the different value chain actors of the selected value chains in the national and regional levels. The purpose of the in-depth interviews was to gather facts and information on the market systems of the aforementioned value chains to gain a more qualitative overview of the sub-sectors. The workshops and in-depth interviews helped the team to develop a general idea about the existing value chains and also to comprehend the market prospects, the constraints, and the strategies to ensure sector growth and also to identify the potential partners for the project to some extent.

The in-depth interviews were conducted on the program areas in Cox's Bazaar districts of four project areas Fashiakhali, Medhakacchapia, Himchari and Teknaf for the comprehensive situation analysis of the selected value chains. There were three team members from Innovision; lead consultant was accompanied by Value Chain Analyst and Associate. The program areas located in the predetermined sites were taken under the geographic coverage of the study.

For assessing the value chains, a set of checklists of different value chain actors was used. A total of sixty (60) respondents of different tiers of these value chains and support functions were interviewed through snowball sampling technique². The respondents included **backward linkage actors** like seed sellers, nurseries, fertilizer and pesticide sellers, other agro input sellers fruits & floriculture); **producers** (farmers, artisans); **forward linkage actors** like farias/paikers, arotdars, retailers; and **support functions** like government bodies.

Table 3: Category of respondents in each region

Actor	South East Region 2
Backward Linkage Actors	12
Producers	30
Forward Linkage Actors	12
Support Function & other actors	6
All	60

4.2.3 Questionnaire Surveys

Alongside the in-depth interviews, a set of questionnaires for quantitative and qualitative surveys were designed - based on the findings of the in-depth qualitative interviews - individually for producers, artisans and farmers of different value chains to capture the core issues in greater detail and quantifiable terms for analysis. Most of the respondents in the regions were interviewed during the in-depth qualitative assessment. Therefore, these actors were not included in the quantitative assessment.

A full day orientation session was facilitated by the lead consultant, accompanied by the whole team, for the program staff in each region, to brief them about the objectives of the research and the method of data collection. The session included briefing on the specific objectives of the study, presentation on the selected value chains, introduction of the different value chain actors, detailed field plan, sampling method (snowballing), team composition, and debriefing of the questionnaires and checklists, including rehearsal and mock sessions.

Total of 62 selected different value chain actors were chosen based on the sampling plan that was agreed with the head office decision makers of CREL before commencing the study. Data collection was conducted with the structured question guides along with a prepared check list for face to face

²Snowball sampling is a non-probability sampling technique where existing study subjects recruit future subjects from among their acquaintances.

interview. For acquiring more information from geographically distant locations, data have been collected by the project staff working in those particular program areas and sites. The core team directly participated in data collection process initially to facilitate the staff and ensure quality of the survey.

Table 4: Composition of primary data collection

Questionnaire Survey	South East Region 2
Producers	42
Extractors and other value chain actors	20

4.2.4 Data Analysis

The analysis of the collected data included: End Market Analysis, Value Chain Mapping and Opportunities and Constraints Analysis.

End Market Analysis

The end market analysis showed the market opportunities, gap in demand and supply and scope for value chain upgrading to be undertaken by the project. It involved an extensive consumer market research. Since a full scale consumer market research was too broad and resource intensive for the time and scale of this study, the study relied more on secondary information and information collected from value chain actors like retailers, wholesalers and collectors to get the information required for the end market analysis.

The analysis revealed the different market segments, size and share of the market segments (for the local, regional, national level markets), growth trends and gap in the end market.

Value Chain Mapping

The value chains selected in the 1st phase (selection of value chains) were scrutinized in the second phase and value chain maps were developed to illustrate channels through which the product flows from the conception stage to the production stage and finally to the end consumers through the traders. It identified the actors and support service providers, their roles and interactions within the value chain, and their performance. The maps revealed the scopes to upgrade and the bottlenecks in the value chains that restrict up-gradation.

The mapping was done based on the findings unearthed from the in-depth interviews and questionnaire surveys conducted through snow-ball technique.

Constraints and Opportunities Analysis

After mapping the selected value chains of different regions, the opportunities to include the target beneficiaries into the value chains while conserving the ecosystem and climatic condition in the target geographic areas were identified. A comprehensive cost benefit analysis has been done on each and every specific product in the selected value chains on specific sites under each of the regions. This cost benefit analysis revealed the strengths and weaknesses of every sub-sector to be worked on. As the geographical, topological, and climatic environment vary from site to site, the sub-sectors with high prospect in the program areas differed.

After identifying the opportunities, the study identified the reasons for which the beneficiaries are not utilizing the benefits of the value chain opportunities. The systemic dysfunctions in the market systems within the value chains that hinder a profitable and sustainable inclusion of the poor people were identified and a problem tree analysis was conducted.

Aside from identifying the value chains, the study identified the income generating activities (IGA) in and around the program areas. Analysis for each IGA has been done to illustrate the feasibility of

execution and inclusion in the intervention strategies. These IGAs are for the consideration of CREL management to be used for the beneficiaries that cannot benefit for value chain development activities in the selected value chains immediately.

4.2.5 Strategy Workshop

The findings and analyses were shared over a two-day strategy workshop. The valuable inputs from the core team members of CREL and the supporting allied organizations were taken into account to validate the findings and complete the analysis. In addition, broad intervention strategies were discussed in the open forum. The participation of all stakeholder organizations relevant with the project inspired the study to be aligned with the core objectives of the project. The outcome of the discussion was region-wise intervention strategies formed by the regional staff of CREL and guided by Innovision team.

Part II: Value Chain Selection for Southeast Region 2 (Cox's Bazaar)

5. Value Chain Selection for Northeast Region

5.1 Climactic Assessment of Target Area

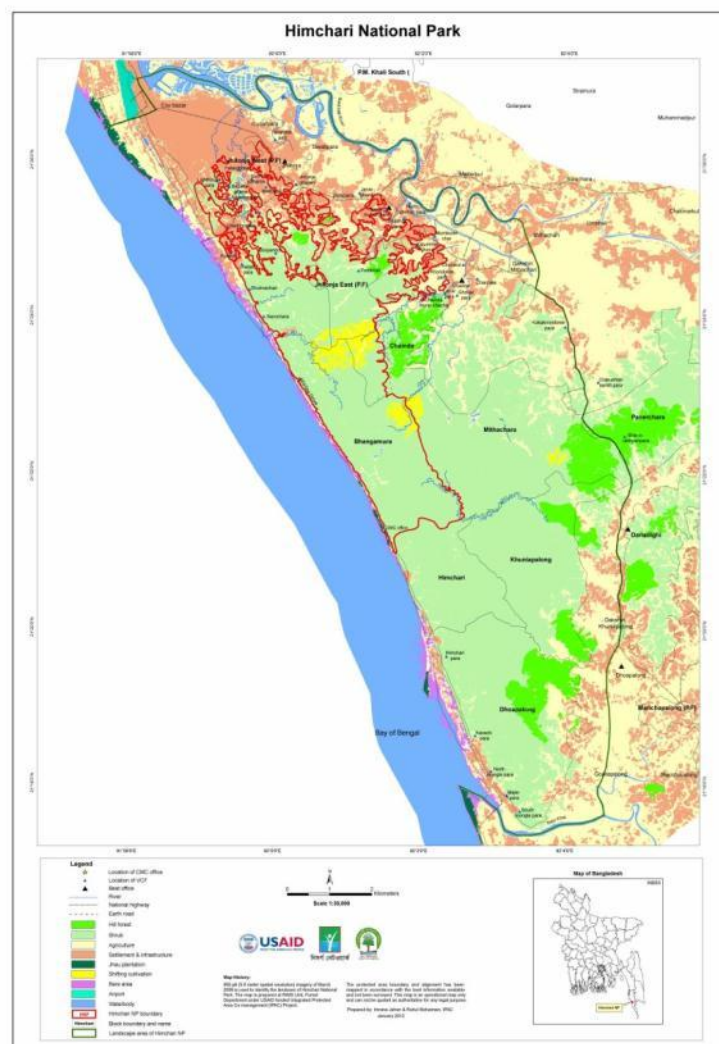
5.1.1 Overview of Natural Resources and Biodiversity in the Area

The study area of southeast zone 2: Cox's Bazaar comprised of four protected areas: Himchari, Fashiakhali, Medhakassapia, and Teknaf. The type of forests in Cox's Bazaar is mostly Hill forests and these forest lands are classified into mainly a) Tropical Wet Evergreen Forest b) Tropical Semi-Evergreen Forests and c) Mangrove forests. The Cox's Bazaar coast is rich in both renewable and nonrenewable natural resources. The main economically important coastal natural resources including land, mangrove forest, rivers, hills, islands, cliffs and sandy beach. The coastal flood plains are the most important resources that support multi-purpose use of coastal land for crop production, livestock rearing, salt production, shrimp/fish farming, tourism activities, infrastructure development, fishing crafts and gear manufacturing, and harbor activities. Despite of the natural resource extraction from these forests, it is still overwhelming and stunning. An overview of natural resources and biodiversity in the area is given below.

Himchari

Himchari is one of the biggest upazila of Cox's Bazaar upazila. The total area of Himchari is 1,729 Ha; which comprises the reserve forest areas of Bhangamura and Chainda blocks under Cox's Bazaar Forest Department. Evergreen and semi-ever-green tropical forests are found in this area. There are 58 species of trees, 15 species of shrubs, 4 species of grasses, 19 climbers and 21 species of herbs altogether 117 plant species are available there. Besides, there are 55 species of mammals, 286 species of aves, 56 species of reptiles and 13 species of amphibians are found in this evergreen forest. Limited number of elephants found here too. Himchari is a unique place comprising the scenic beauty of green hills and blue waves of huge sea, which is the heaven of tourists. There is a big waterfall in the National Park which is a major attraction to the tourists. The local communities impose a large degree of dependency upon the park resources and as a result forest land encroachment has

Figure 7 : Himchari National Park



expanded steadily. There are about 8427 households around the park area. Maximum Peoples survive their lives by collecting firewood & roof leaf from the forest that are threats of forest conservation. Family size is usually 7-8 members and among them generally 1-2 members are earning. A very smaller number of populations depend on "small business".

Chakaria:

Chakaria is the biggest upazila of Cox's Bazaar zila in respect of area and population. The upazila occupies an area of 643.46 sq.km including 207.76 sq.km forest area. Only 34.30% of the dwelling households own agricultural land. Under this upazila one of the major site is Fashikhali The total area of Fashiakhali is about 1,302 Ha. The land pattern is degraded barren hills 324ha; plantations -

Figure 8: Fashiakhali Wildlife Sanctuary

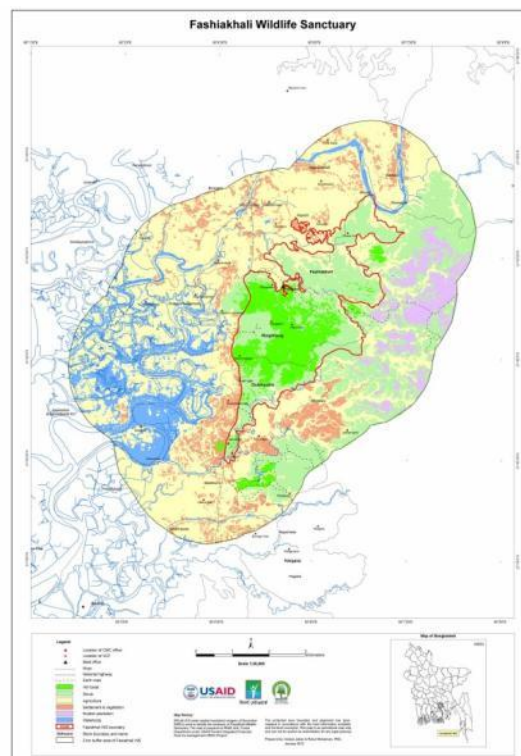
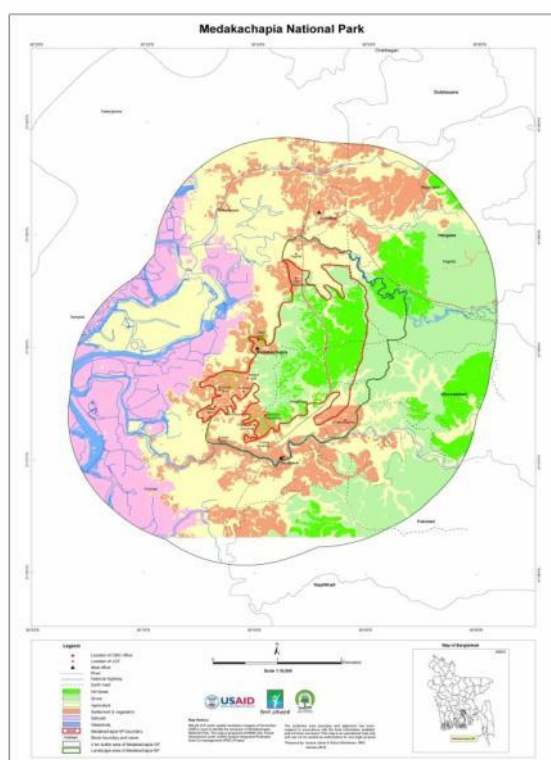


Figure 9: Medhakassapia National Park



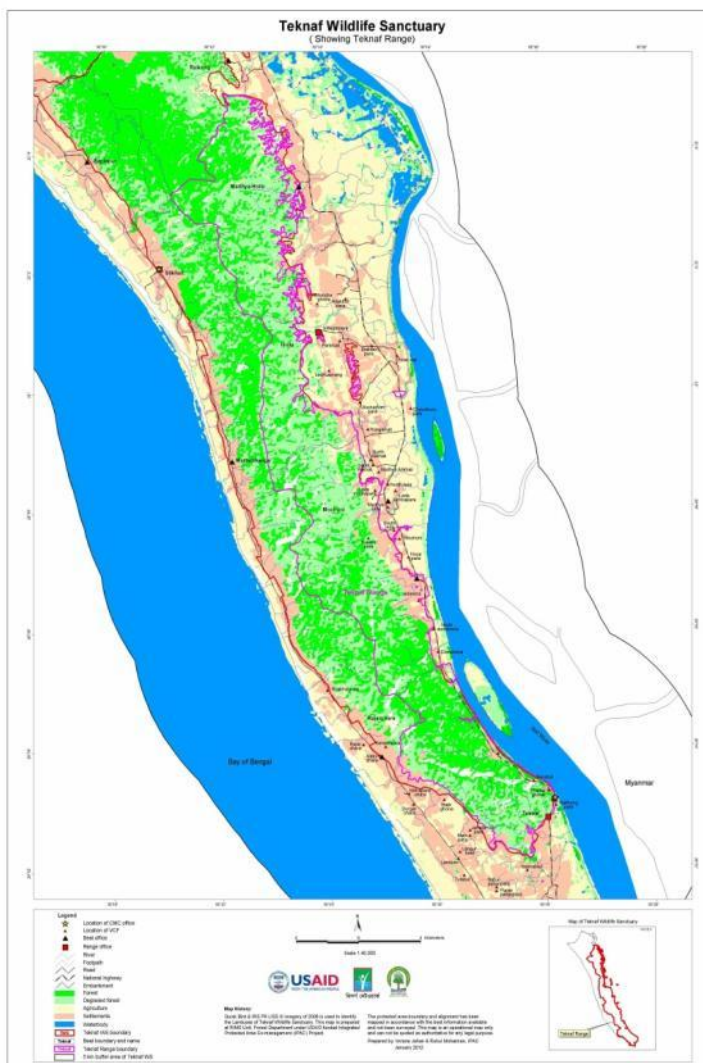
935.2.ha, water bodies -2 ha, settlements-40.5 ha significant amount of forest land has been encroached. Approximately 20,000 people rely on the WS for resources like fuel wood, sun grass, bamboo and medicinal plants. Two Forest villages consisting of 112 members were set up in the mid-1950s, by the Forest Department. There are 5500 HHs in 16 villages situated inside this WS and the total population is around 33,000. Nearly 25,000 more people live in the adjacent 4000 HHs. Most of the people live their livelihood by cutting wood

from forest. Illegally destruction of trees are also dominant in this area. Some people are involving in Small Business. In this area the ultra-poor households are not able to fulfill their basic needs. It has been seen that, most of the time this portion of the population is depending on the natural resource extraction rather than others.

Another important site in Chakaria Upazila is Medhakassapia. The total area of this place is 395.92 Ha and the forest range starts from Fulchari. According to data from Forest Department the total amount of forest land encroached is 5 Ha (Recovered 2 ha). The main floral species of this NP is Garjan and associated species are Bhadi and Dhakijam. Originally the entire park area was rich with Garjan forest with natural associates of Garjan in the area. Some other associated trees include Telsur (*Hopea odorata*) and Chapalish (*Artocarpus chaplasha*). Species of Laughing Thrush, White Throated Bulbul and Little Spiderhunter are some of the residents that attract avid bird enthusiasts.

Teknaf

Figure 10: Teknaf Wildlife Sanctuary



18

Reliable, up-to-date statistics on the quantity and quality of natural resources and biodiversity in the target area are lacking, and available figures often are contradictory. The establishment of protected areas as a tool to combat deforestation has not yet had a detectable effect.

The *Nishorgo* Support Project (NSP) and the Integrated Protected Area Co-Management (IPAC) Project have made progress in area-based conservation options (e.g., the Biosphere Reserve concept, which incorporates traditional land uses on a landscape scale, has not yet been incorporated in the protected areas system) although there is scope for introducing protected area categories that permit certain types and levels of human use.

Current threats to target area biodiversity include indiscriminate exploitation and loss of habitat, including but not limited to continued degradation and fragmentation of remaining forest cover; inadequate inclusion of the range of natural ecotypes in protected areas (exacerbated by extremely limited scope for addition of new areas); indiscriminate introduction of cash crops and plantations; indiscriminate use of pesticides and fertilizers; unsustainable use of aquatic resources; gaps in policy and legislation; conflicting institutional mandates; and unregulated or poorly planned development. However, there are also positive and redeeming trends, including co-management of natural resources and the relative effectiveness of civil society organizations and NGOs working on issues related to sustainable development.

Overall, people living within the Cox's Bazaar site are heavily dependent on fisheries, marine products and, to a lesser extent, agriculture for their livelihoods. Over 90% of fisheries production in the area is artisanal in nature, and the sector acts as an important source of employment. The section of the Bangladeshi coastal zone encompassed by the site contains biodiversity of global significance. Over 800 species of wildlife have been identified from the site component areas, more than 20 of which are globally (near) threatened.

Table 5: Overview of Natural Resources and Biodiversity in the Area²

Name	Location	Year created	Area (ha)	Special Features	Present Condition
Fashiakali Wildlife Sanctuary	Cox's Bazaar Division	Legally gazette in 2007	3,217	<ul style="list-style-type: none"> • Mixed evergreen forest 	<ul style="list-style-type: none"> • Co-management support provided by IPAC
Himchari National Park	Cox's Bazaar Division	Legally gazette in 1980	1,729	<ul style="list-style-type: none"> • steep coastal cliffs, low hills along the sea front (but not including the beach itself) • established with a view to increasing the opportunities for tourism and recreation 	<ul style="list-style-type: none"> • draft management plan prepared • high level of illegal timber harvest • numerous "illegal" settlements and housing within the area • heavy livestock grazing • periodic fires • both subsistence and commercial fuel wood and bamboo harvest
Inani National Park (Proposed)	Cox's Bazaar Division	Proposed in 2009	7,700	<ul style="list-style-type: none"> • wet evergreen and semi evergreen forests; contiguous extension of Teknaf Game Reserve 	<ul style="list-style-type: none"> • management support provided by IPAC. Arannayk Foundation is providing funding through a local NGO
Teknaf Game Reserve	Cox's Bazaar Division	Legally established in 1983	11,610	<ul style="list-style-type: none"> • wet evergreen and semi evergreen forest • modest number of endangered Asian elephants widely distributed in the area • very diverse habitat conditions • high biodiversity • potential for significant 	<ul style="list-style-type: none"> • management plan prepared • incursions of <i>Rohingya</i> refugees (from Burma) and local population pressure have severely degraded the forest • subject to impact of cyclones • some conversion to plantations • livestock grazing problem • management support provided

expansion incorporating reserved forest areas	by <i>Nishorgo</i> and IPAC
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Table 6: Snapshot of the Available Bio-Diversity Conservation²

Bio-Diversity	Upazila	Type	Area (ha)	District	
Wildlife Sanctuaries	Fashiakhali	Hill-Forest	3,217	Cox's Bazaar	Gazette, 2007
	Teknaf	Peninsula	11,615	Cox's Bazaar	Gazette, 2010
National Park	Himchari	Peninsula	1,729	Cox's Bazaar	Gazette, 1980
	Medha Kachhapia	Forest	395.92	Cox's Bazaar	Gazette, 2008
Ecologically Critical Area (ECA)	Teknaf Beach	Peninsula	10,465	Cox's Bazaar	Gazette, April 1999
Safari Park	Dulahazara	Hill-Forest	600	Cox's Bazaar	1999

USAID (2001) has summarized the issues related to biodiversity conservation in terrestrial ecosystems, particularly the hilly areas. Among the root causes of ecological degradation are:

- Population density among the highest in the world, which exerts tremendous pressure on all natural resources;
- Poverty and social inequality, which gives few choices to those at the bottom of the social and economic ladder;
- Colonial era laws on the management of public lands and their use to generate revenue;
- Government departments, which are inadequately equipped for modern concepts of resource management;
- Lack of financial planning at all levels; and
- Systemic corruption

In the Chittagong-Cox's Bazaar region, salt producers use the salt pans in the monsoon season for subsistence fishing and the harvesting of shrimp and finfish.

The mangroves are exploited for a wide range of forest products, in particular timber, pulpwood and firewood, and wood for making matches, hardboard and pallets.

5.1.2 Environmental and Climate Change Issues in the target area

Relatively recent (and positive) development related to the concern for biodiversity and the sustainability of the natural resources base has been the declaration of Ecologically Critical Areas (ECAs). The Bangladesh Environmental Conservation Act of 1995 includes a provision whereby if the Government is concerned that the degradation of an ecosystem has reached "a critical state" or is so threatened, it may declare the area to be an ECA by notification in the official gazette.

Current situation of environmental degradation in Bangladesh is alarming. The annual deforestation rate is estimated to be around 3.3 per cent. Along with this, current rate of species extinction as a result of anthropogenic activities has been estimated to be up to thousand times higher than the natural rate. Tidal wetlands constitute about 25 per cent of the land area of the country which are home ground for mangroves, lagoons, sand dunes and beaches and coral habitats. Degradation of wetlands has caused several problems including extinction and reduction of wildlife, extinction of many indigenous rice varieties, loss of soil nutrients and loss of water reservoirs. It, as well, increases in the occurrence of flooding and decline of occupations hence socio-economic development.

Cox's Bazaar is one of the most catastrophe prone sites which has been declared as Ecologically Critical Area (ECA) since 1999. However, due to absence of proper guidelines, pollution is taking place at an increasing rate. Destroying coastal green, collecting oyster and coral, increased and uncontrolled access of tourists to the areas of rich biodiversity are causing severe jeopardy to natural environment. Adjacent Teknaf peninsula provides breeding area for globally threatened species of marine turtles and serves as a key sanctuary for over 80 migratory species of birds. All forms of diversity are diminishing fast due to the destruction of their habitats. Deforestation is frequent on the peninsula where forest extraction is an important occupation for many of the settlers.

5.2 Community Profile of the Target Area

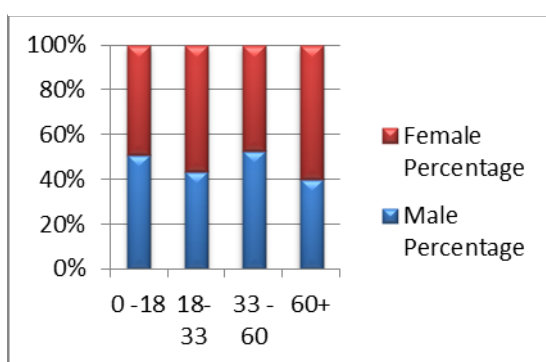
5.2.1 Beneficiary Profile

In Cox's Bazaar region we have conducted a household survey on 106 beneficiaries. Apart from these beneficiaries 96 of them were included in the Focus Group Discussions (FGD). Here we have focused to develop a preliminary profile of these targeted beneficiaries based on our findings from the survey and focus group discussion. In this region, most of the populations belong to poor households, forest and sea dependent people, married, unmarried or widowed women, youth and few disable people are enlisted in the beneficiaries list which is one of the mandate criteria of the CREL project. Our target was to cater all sort of information from different income generating and dependent people of this particular region.

Demographic Information: In terms of demographic information, the ratio of male household members is higher than the female household members. There is insignificant gender distribution of the beneficiaries, with 52% of the household members being male and 48% being female. We can observe from the below graph that, maximum number of beneficiaries belongs to 18 to 33 age group. More than half of these household members are below 18 years old, with 23% being in age group of 18 to 33, 19% of them are from 34 to 60 groups and only 1% belongs to above 60.

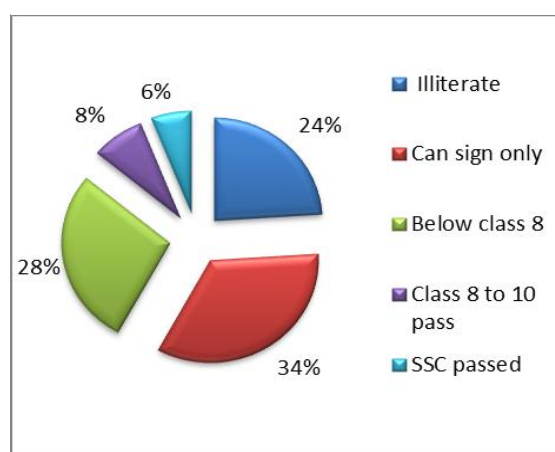
Literacy Status: Literacy status of the Cox's Bazaar region is not that satisfactory. 34% of the beneficiaries claim that they can only sign their own name. 24% of them are illiterate, 28% of them belong to below class 8, 8% of them belong to class 8 to 10 pass and only 6% of them passed their SSC examination or above educational attainment. So we can observe that, a large portion of them are illiterate and very few of them can sign their names. It resembles these beneficiaries are not able to go for other occupations where higher education is required. Chances are quite lower to turn them from their current occupations to other conventional service sectors is very limited but not impossible.

Figure 11: Age Group



Source: Primary data-Beneficiary profiling

Figure 12: Literacy Status



Economic Status: According to beneficiary profile data base, it was found that average family income per year is 66,404 BDT and Per Capita/Day Income 30.57 BDT. Majority of the income comes from using the forest land for different types of cultivation and by resource extractions. Monthly average of major expenses of the household is 8,683 BDT. It is found that average household size is 6 where earning member is only 2 and rests of them are dependents. Looking at their average expenditures it is clear that their expense rate is higher than the income rate. Therefore, most of them are taking loan from different NGOs or Mohajons for continuing their economic activities.

Table 7: Economic status³

General Household Information	
Average Household Size (number)	6
Average No. of Earning member (number)	2
Average No. of Dependent Members (number)	4
Average of Total Yearly Income (BDT)	66404
Per Capita Per Day Income (BDT)	30.57
Average of Major expenses of the household (BDT)	8683.9
Average of Own Land (dcm)	23.133
People having pond %	11.321
Average Pond Size (dcm)	8.45

5.2.2 Infrastructure & Operating Environment

The operating environment and infrastructure (road access, electricity access) in all the sites were satisfactory. The areas are well connected with roads. The villages are almost 100% covered under Rural Electrification. The presence of major market actors is present within a reasonable distance in the working area. Site wise description is given below:

Himchari NP

Himchari site is under Cox's Bazaar Upazila and the major unions are Ramo, Jhlongja, Mithachari and Khunia palang. Nearest large markets for inputs are Ring Road Bazaar, Bangla Bazaar, Cox's Bazaar Sadar Market and Chainda Bazaar. Other than Cox's Bazaar Sadar Saturday is the regular Haatbar. All of these markets are good for commercial activities. Cox's Bazaar Sadar market is the main hub for major commercial activities in this region. The union level roads connecting the villages with Upazila sadar are good quality bitumen covered roads. However, it is quite difficult to travel in rainy season. During the field time, it was observed that roads were flooded by the rain water due to lack of proper drainage system. In Himchari site there is no significant rivers or canals therefore no need for water transportation apart from the few fishermen whose livelihood depends on fishing. The overall situation for infrastructure is satisfactory for business activities. In fact electricity is also available in that particular site. Main economic activities are Tailoring, Stitching and Dressmaking, Agro based products, few Betel Leaf production, various kinds of Oyster, Snail, Pearl ornaments, Net making and Bamboo and Cane Handicraft Products. Villagers sell their products to nearest markets which are Ring Road Bazaar, Bangla Bazaar, Cox's Bazaar Sadar Market and Chainda Bazaar. Hence for Tailoring, Stitching and Dressmaking and Embroidery usually they get order from the neighbors but not from the distant traders. Most of these beneficiaries have learnt these commercial activities from their family members. Very few of them have taken formal trainings. However, formal

³ Source: Primary Data - Beneficiary profiling

training for Tailoring, Stitching and Dressmaking is available in Cox's Bazaar Municipal. There are few local NGOs who are also providing micro credit loans and other benefits to the localities- CODEC, ASA, Grameen Bank, BASTAB, RIC, SDI, TMSS, ANANDA and MUKTI. There are two local youth clubs available in this site.

A major infrastructure for this site is CMC office where weekly meeting or training can be held. Apart from these, Himchari national park is also a superb attraction for the outside visitors. This park has promoted Bangladesh tourism the most popularity due to which ratio of visiting this place is increasing day by day. This park is a tropical rainforest which is nearby the famous Cox's Bazaar.

Fashiakhali WS

Fashiakhali site is under Chakaria Upazila. Over here the major economic activities are Betel leaf cultivation, Agricultural products, Salt cultivation and Hand Crocheted Prayer Caps. Nearest large markets are Malum Ghat Bazaar and large scale market is Chakoria Bazaar. Malum Ghat Bazaar is a local market and Haatbar is on Sunday, Monday, Wednesday and Thursday. However, the major large scale market is the Chakaria Market where all kind of local inputs for production can be found. In fact here we have observed major input sellers and wholesalers for the Salt and Betel Leaf. They have very good network from Chakaria to Chittagong, Cox's Bazaar as well as in Dhaka. It basically acts as a major hub for business for these products. However, for Bamboo and Cane Handicraft Products we have observed during the field time that raw materials are collected from the nearest forest. Beneficiaries over here do not have any formal training. They have learnt these activities from their family members. The union level roads connecting the villages with upazila sadar are good quality bitumen covered roads. There are six local youth clubs available in this site.

Some of the major local NGOs working in this site are CODEC, ASA, Grameen Bank, BRAC, BASTOB and Caritas. Villagers usually take micro credit loans from these NGOs. The overall road connectivity is satisfactory as well as better for business activities. Hence, electricity is also available in Fashiakhali site. A major infrastructure for that site is CMC office where weekly meeting or training can be held.

Medhakachapia NP

Medhakachapia site is under Chakaria Upazila and the union is Khutakhali. Nearest market for Medhakachapia is Khutakhali Bazaar and usual Haatbar is on Sunday and Wednesday. Large markets for inputs are Dulahazra, Malumghat and Chakaria (Chiringa) Bazaar. All of these markets are good for commercial activities. Chakaria market is the main hub for major commercial activities in this site. About 70% roads are good quality bitumen covered and rest 30% is not. In rainy season it's quite difficult for movement. Local electricity is available without three villages and they are Puba Gorjantoli, Pachim Gorjantoli & Maddham Gorjantoli. Major economic activities are Hand Crocheted Prayer Caps, Bamboo and Cane Handicraft Products, Salt Cultivation; Agro based products, Nursery and Nature-Tourism at around the Medhakachapia National Park. Villagers sell their products to nearest markets which Khutakhali Bazaar, Dulahazra, Malumghat and Chakaria (Chiringa) bazaar and they collect their raw materials from here as well. Hence for Hand Crocheted Prayer Caps, Bamboo and Cane Handicraft Products usually they get order from the local traders. Most of these beneficiaries have learnt these commercial activities from their family members. Very few of them have taken formal trainings from a cooperative named 'Sarvik Shomobay Samiti'. There are few local NGOs who are also providing micro credit loans and other benefits to the localities- CODEC, ASA, Grameen Bank, BRAC, UDDIPON, BLAST and TMSS. A major infrastructure for that site is CMC office and Khutakhali Union Parishad Conference Room where weekly meeting or training can be held.

Teknaf WS

The nearest market for Teknaf Sadar Union is Teknaf Sadar Bazaar, Hnila Bazaar, Sabrang Bazaar and Baggona Bazaar. The usual Haatbar is on Sunday, Wednesday and Thursday. Large markets for inputs are Teknaf Sadar Bazaar. All of these markets are good for commercial activities. Teknaf Sadar Bazaar is the main hub for major commercial activities in this site. About 80% roads are good quality bitumen covered and rest 20% is raw (Kacha or Semi Pacca Road). In rainy season it's quite difficult for movement. Local electricity is available in 70% of the villages but rest 30% villages do not have electricity because some of the villages are in a very remote area. Major economic activities are Betel Leaf, Tailoring, Net making, Shrimp Cultivation, Hand Embroidery, Bamboo and Cane Handicraft Products, Salt Cultivation; Agro based products and Day laborer.

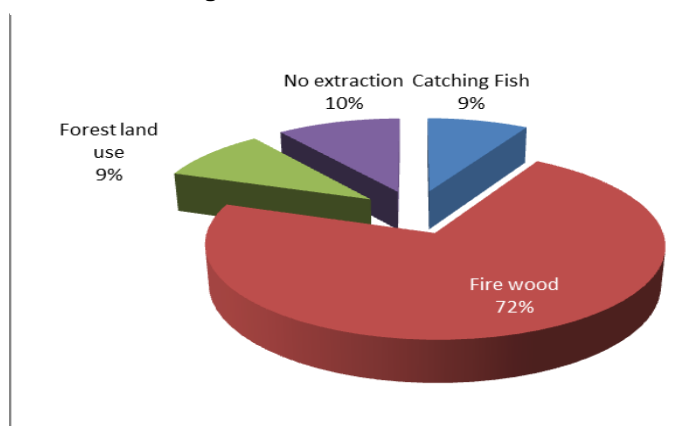
During our field visit to Pallan para and Naitang para, we have found that villagers sell their products to nearest markets which Teknaf Sadar Bazaar, Hnila Bazaar, Sabrang Bazaar and Baggona Bazaar and they collect their raw materials from here as well. However, for Betel Leaf local traders collect it from them and export it to Myanmar. For Hand Crocheted Prayer Caps, Bamboo and Cane Handicraft Products and Hand Embroidery usually they get order from the local traders or village neighborhoods. Most of these beneficiaries have learnt these commercial activities from their family members. There are few local NGOs who are also providing micro credit loans and other benefits to the localities- CODEC, SHED, ASA, Grameen Bank, BRAC, Muslim Aid, ACF, NACOM, UDDIPON, Solidarity and SDI. A major infrastructure for that site is SHED training centre, Upazila Conference hall, CMC Office and Union Parishad Conference Room where weekly meeting or training can be held.

Shilkhali site is under Teknaf Upazila. Nearest market Shaplapur Bazaar and usual Haatbar is on Saturday and Tuesday. Large markets for inputs are Teknaf Sadar Bazaar. On the other hand, Whykkyong is also under Teknaf Upazila. The near markets are Whykkyong Bazaar, Hnila Bazaar, Falongkhali Bazaar, Shaplapur Bazaar, Ukiya Bazaar, Coat Bazaar and Morischa Bazaar. All of these markets are good for commercial activities. Commercial activities are conducted from these markets but raw materials are not always available in the local markets for which they have to depend on the Teknaf Sadar Bazaar. About 70% roads are good quality bitumen covered and rest 30% is raw (Kacha or Semi Pacca Road).

5.2.3 Status of Natural Resource Dependency

It is examined that most of the beneficiaries are resource extractors and dependent on reserved forests for resource extraction. If we look at the below chart, it was found that majority are cutting trees for fire wood, 9% of the beneficiaries are using forest land and other 9% are catching fish. Average fish extraction is 158 kg per month, per month fire wood extraction is 51 mond and average no. of using forest land is 120 dcm.

Figure 13: Resource Extraction



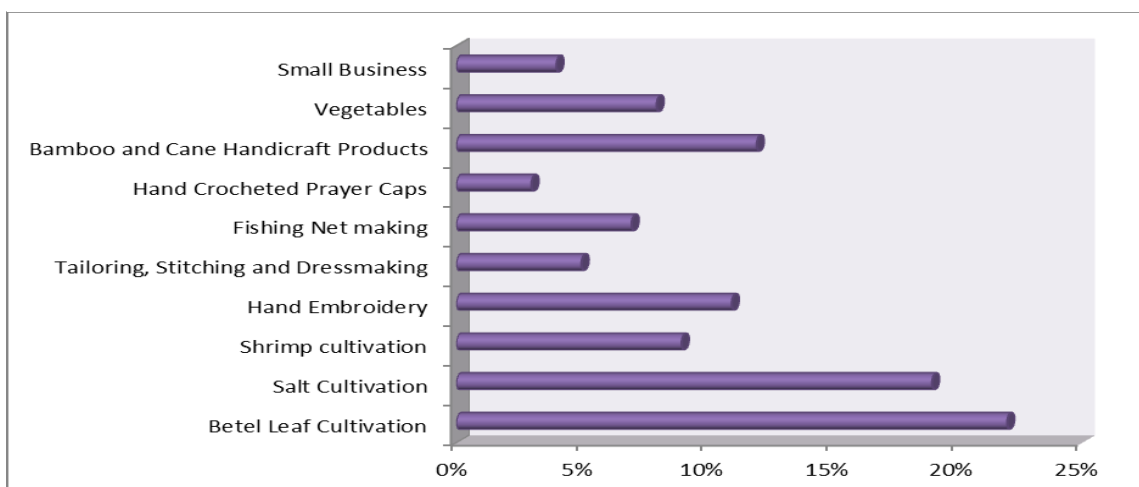
Source: Primary data-Beneficiary profiling

5.2.4 Engagement in Commercial Activities

As we can observe from the below chart that most of the beneficiaries are active in Betel Leaf cultivation and Salt Cultivation in Cox's Bazaar region as it is very profitable. A beneficiary can earn 10,000 BDT per week after an investment of 50,000 BDT to 60,000 BDT. On the other hand, Salt and Shrimp cultivation is also very popular among the population. However, in long run these economic activities can be harmful for the ecological system. Other commercial activities are- Hand Embroidery, tailoring, Stitching and Dressmaking, Fishing Net making etc.

In a broad way in the existing sites, most of the beneficiaries are participating in below commercial activities:

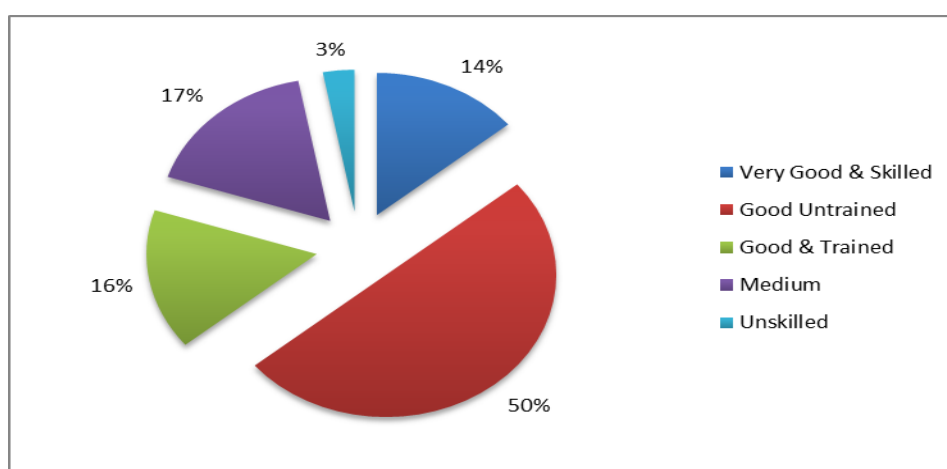
Figure 14: Present Activities Engaged in



Source: Primary data-Beneficiary profiling

After our examination we have observed that, 50% of the population are good but untrained about their commercial activities as their doing it for generations and learnt it from their family members. 16% of them are good and trained, 17% of the population claimed to be medium at their occupation. Only 14% of them are very good at their commercial activities and totally skilled and 3% claimed to be unskilled and most of these populations were youth. Below is the chart showing knowledge of commercial activities:

Figure 15: Knowledge on Commercial Activities



Source: Primary data-Beneficiary profiling

5.3 Value Chain Selection

5.3.1 Long list of value chain activities

The present study observed a number of value chain activities in the investigated area. Some major value chain activities are mentioned below.

1. **Hand Embroidery:** Embroidery has been a widely common handicraft engaged by majority of the women target women. They mostly use decorating fabric (dress, saree, bed sheet, blankets, pillow cover) with needle and thread or yarn. In addition to simple hand embroidery, they also use other materials such as metal strips, pearls, beads, quills, and sequins. An interesting characteristic of all the women engaged in embroidery are they practice this in addition to their other household chores and they do their own designs. The basic techniques of stitches - chain stitch, buttonhole or blanket stitch, running stitch, satin stitch, cross stitch – are generally learned from family members or neighbors. Machine embroidery is not common among the target groups.
2. **Tailoring, Stitching and Dressmaking:** A large number of women were found engaged in stitching and dressmaking. Although, a number of women reported that they cannot read or write the measurement, but they can manage through estimation and judgment. These women have purchased sewing machine through micro-credit from different credit providers. Unlike embroidery, stitching and dressmaking are also done in addition to other household chores.
3. **Nakshikantha:** Few women in the region are also involved in making nakshikantha. However, these women are also not literate and they have poor judgment in making these products with appropriate designs and size. These products are still not appropriate for the end market although with proper training on design and measurement it can be possible to distribute in the end market.
4. **Fishing Net making:** Fishing nets are usually meshes formed by knotting a relatively thin thread. Nets are usually made of nylon threads. Each net is about 40 yards and requires about 3 to 6 months. However, smaller nets and net repairing are very profitable.
5. **Hand Crocheted Prayer Caps:** The women are engaged in netting hand crocheted prayer caps, however, there are opportunities for other designer caps and bonnets for men, women and babies. This provides the households an extra supplementary income.
6. **Bamboo and Cane Handicraft Products:** Bamboo (rarely cane) products have occupied an important occupation in the target area. However, majority of the Cane and bamboo are collected from the forest and also from the market. Not much cultivation of cane and bamboo were observed. Cane and bamboo are wild products and used to widely and abundantly available in the forest but they are declining at an alarming rate. The baskets are used for carrying salt, fish and vegetables. Mats are often used in shrimp cultivation areas as fencing.
7. **Shrimp cultivation:** According to ICLARM “shrimp farming is a capital intensive business with total production costs of US\$ 735 per ha/crop for extensive system, US\$ 1,837 per ha/crop for improved traditional systems and US\$ 9,184 per ha/crop for semi intensive systems, the corresponding net income however is US\$ 1,275, US\$ 2,204 and US\$ 153,061 per ha/crop respectively”. All the steps of value-added activities are strictly controlled under GMP (Good Manufacturing Practices) and SSOP (Standard Sanitation Operating Procedure). Competent authority like FIQC (Fish Inspection and Quality Control department under the Ministry of Fisheries, Government of Bangladesh) and some independent international quality assurance organizations specifically 16 France based SGS (Societe Generale de Surveillance), United Kingdom based Lloyd's and Denmark based Baltic Control perform inspection, testing, certification and verification

services following the Codex guidelines, code of practice, standards and directives of European Union Food Law, HACCP regulations and requirements of other import countries. Shrimp culture has set in motion socio-economic changes that have exposed the coastal rural poor to a greater degree of vulnerability. The question obviously arises: who gains and who pays? Mostly the elites and politically powerful section of the society who have the access to land and huge capital gain benefits. A kind of 'enclave economy' has developed in the coastal belt, marginalizing poorer households in the process. In the Chakaria Sundarbans, large areas of mangrove forest are being cleared for the construction of shrimp ponds (ESCAP, 1988; Mahmood, 1986; Bashirullah et al., 1989) and 8,500 ha are no longer productive. 'Giant-deep' ponds, created by blocking-off tidal channels and distributaries of the Matamohuri River by cross dams, have had a particularly serious impact. Rapid deforestation in the Matahohuri catchment area has increased siltation which is compounded by the building of embankments for shrimp ponds. Much of the mangrove in the Naaf Estuary has also been converted to shrimp ponds (Scott, 1989).

8. **Cultivation of Betel leaf:** The betel plant is an evergreen and perennial creeper, with glossy heart-shaped leaves and white catkin. Since it is a creeper, it needs a compatible tree or a long pole for support. Betel requires high land and especially fertile soil. Waterlogged, saline and alkali soils are unsuitable for its cultivation. The local farmers called baruj prepare a garden called a barouj in which to grow betel. The barouj is fenced with bamboo sticks and coconut leaves. Dried leaves and wood ash are applied to the furrows at fortnightly intervals.
9. **Vegetables:** Vegetable cultivation is extremely common among the target groups. Majority of them produce in small lands and the produce are mostly consumed for family use. The small amount of surplus is sold in the market. As a result both productivity and profitability of vegetable farming is extremely low. In some instances, a few farmers, because of the market demand and supply gap, made some profit. Lack of knowledge and technology, high value crops are not produced. Enormous opportunity lies in providing knowledge and technology for high value crops such as capsicum, strawberry, medicinal plants, etc., to cater the local and national markets.
10. **Salt:** Salt farmer is overwhelmingly concentrated in Cox's Bazaar district where 15 percent of total rural households of the district are salt farmers. They meet bulk of the demand for raw salt in the country. As of June 2003, 38,328 salt farmers operated on 23,735 ha of land in Cox's Bazaar. Moheshkhali upazila has the highest concentration of salt farmers. Their number is approximately 10,118 and they operate on one-third of the total land area under salt farming in Cox's Bazaar. Salt farmers are mostly poor and operate on a small scale. Their average size of farm is 0.62 ha. They work under adverse conditions. This is a hardworking job that interests only the poor and the landless. Many of them lease in land from others. They are in close proximity to the open sea and often face all the hazards coming from the sea. Sometimes the whole output is washed away by heavy rain and storm surge because of lack of storage facility.

Additional Value chains

After reviewing all the existing value chains in Cox's Bazaar, we have found that there are scopes for developing new value chains in this region. These value chains are capable of generating more revenue and income for the beneficiaries and also it can reduce the amount of natural recourse extraction from the forest. Thus the below value chains were came into consideration to expand in this region instead of cultivating other agricultural crops and vegetables-

1. **Strawberry:** Strawberry is one of the economically important edible fruits throughout the world. It is ranked high among small fruits, esteemed as dessert and consumed for its flavor. Plant Breeding and Gene Engineering Laboratory, Dept of Botany, Rajshahi University, has been researching programme since 1998, to develop strawberry (*Fragaria xananssa*) varieties suitable

for cultivation in Bangladesh weather condition. Considerable progress has been achieved and three genotypes have selected through the induction of somaclonal variation. The target beneficiaries in Cox's Bazaar can be linked with both fresh and processed strawberry markets. Considering the new RU3 and Festival variety which has high flavor and color, the local strawberries has been high market acceptance and demand. The recent market behavior also suggests that there is high demand for organic food and fruits using no chemical pesticides, preservatives and ripening agents. If CREL can introduce its brand, it can easily enter this extremely high premium market. It may be noted that strawberry produce higher yield in organic environment.

2. **Capsicum:** Capsicum is a perennial shrub that grows within three months and is harvested over a three- to six-week period. Given capsicum's relatively quick growing and harvesting period, it is a low-risk crop that does not require substantial working capital investment. This goes well for CERL target group members. A short growing and harvesting period makes capsicum more competitive as it is easy for other farmers to enter into the market.
3. **Floriculture:** Every year to cater the market demand, different flowers such as chrysanthemum, tuberose, and gladiolus have been imported from India and orchids, gerbera, anthurium and Thai rose are imported from Thailand. Bangladesh had to spend roughly Tk. 2-3 million in importing flowers and ornamental plants from abroad. The demand for flower specially rose and merry gold is growing all over the country. In Cox's Bazaar District Chakaria Upazila is producing roses, gerbera and marigold. Therefore, it's viable for the beneficiaries of CREL to produce flowers.
4. **Apiculture:** In addition to floriculture, beneficiaries of CREL project can also go for apiculture. According to our literature review, despite of its potential for cultivation, high income opportunity and enormous benefits, apiculture is almost non-existence in Cox's Bazaar. They (almost armature, as a hobby) are farming bees and collecting honey.
5. **Medicinal plants:** Medicinal plants are consumed by a large number of Ayurvedic, Unani, Homeopathic industries and practitioners in Bangladesh. At present, there are 204 Ayurvedic, 266 Unani drug manufacturing companies and 25 Herbal companies operating in Bangladesh. There are 79 Homeopathic and Biochemic drug manufacturing companies in Bangladesh. Beneficiaries of Cox's Bazaar can produce these medicinal plants and make higher profits if they can be linked with the end market.

5.3.2 Current Value chains passing cut-off criteria

Using the cut-off criteria, some value chain activities in which the project has least scope to contribute were eliminated. On the other hand, more than one value chains were merged into a single value chain, as those isolated VCs seemed to have similarity or relevance in terms of existing or potential market systems, practices, actors and further opportunities.

So, the eligible value chains passing cut-off criteria are –

1. Tailoring
2. Stitching
3. Sewing
4. Dressmaking
5. Nakshikantha
6. Hand Crotched Prayer Caps
7. Fish Net Making
8. Hand Embroidery
9. Strawberry

10. Capsicum
11. Medicinal Plants
12. Apiculture
13. Floriculture

Justifications for the elimination of other value chains are tabulated here.

Table 8: Justifications for the elimination of other value chains

Eliminated Value Chains	Justification for Elimination
Betel-leaf cultivation	<ul style="list-style-type: none"> – Requires bamboo and logs for cultivation which encourages destruction of forests – Highly capital intensive, requires Tk 50,000 to Tk 60,000 per acre of land – Limited access to land by majority of target groups
Salt processing	<ul style="list-style-type: none"> – Highly capital intensive, requires Tk1 50,000 to Tk200,000 per acre of land – Limited access to land by majority of target groups – Encourages destruction of coastal forestry for more salt beds – Affects crop growth (including yield, quality, and economic return) – Affects soil physical properties (such as aggregation and water infiltration) – Increases toxicity of nutrients
Shrimp cultivation	<ul style="list-style-type: none"> – This is a highly capital intensive chain – It increases the salinity of the soil and harmful for the nature – Clearing the forests for having more lands to cultivate shrimps
Bamboo and cane products	<ul style="list-style-type: none"> – Extraction of bamboo and cane from the local forests – Destruction of natural resources as they need it inputs
Vegetables	<ul style="list-style-type: none"> – The small amount of surplus is sold in the market. – Productivity and profitability of vegetable farming is extremely low – Lack of knowledge and technology, high value crops are not produced

5.3.3 Attractiveness Measure of Eligible Value Chains

In order to measure the attractiveness of the VCs eligible for ranking exercise, we first looked at their prevalence across the different project sites within the region. Thus, the beneficiary outreach was maximized with the selected value chains. Given below is the site-wise presence of the value chains:

Table 9: Site-wise Prevalence of VCs selected for ranking exercise⁴

Livelihood	Chocoria		Himchari		Teknaf			
	Fashiakhali	Medha kachhapia	Adarsha gram	Chainda Khandakar Para	Shilkhali	Whykong	Naibhong Para	Pallan Para
Tailoring	✓	✓	✓		✓	✓	✓	
Embroidery				✓			✓	
Strawberry	✓	✓		✓	✓	✓		✓
Capsicum	✓	✓		✓	✓	✓		✓
Floriculture	✓	✓		✓	✓	✓		✓
Apiculture	✓	✓		✓	✓	✓		✓
Medicinal plants	✓	✓		✓	✓	✓		✓

⁴ Primary data: In-depth interviews, FGDs & validation workshop

The scores of each eligible value chain rated in the validation workshop against the criteria and their associated weights are tabulated below:

Table 10: Attractiveness Measure of Eligible Value Chains⁵

Criteria	Weight	Tailoring	Embroidery	Strawberry	Capsicum	Floriculture	Apiculture	Medicinal plants
<i>Climate Tolerance</i>	3	5	5	3	3	3	3	5
<i>Climate Resiliency</i>	3	1	1	2	2	2	2	3
<i>Resource Extraction Minimization</i>	5	5	5	2	2	2	4	4
<i>Women and Youth Inclusion</i>	5	3	3	4	4	4	3	5
<i>Outreach</i>	2	3	2	3	3	3	1	5
<i>Growth potential</i>	5	3	3	3	3	3	3	3
<i>Income</i>	5	3	4	2	2	2	2	3
<i>Private sectors participation</i>	3	2	4	3	2	3	2	4
<i>Development priorities and favorable policy of government</i>	3	4	4	3	3	3	3	4
<i>Synergy and potential collaboration</i>	3	4	4	2	2	2	2	4
<i>Risk</i>	4	5	5	2	2	2	2	4
<i>Scope for value addition</i>	3	5	5	2	2	3	3	4
Total Weightage Score		157	141	101	98	101	96	135

5.3.4 Ranking and Short listing of Value chains (site wise & regional)

According to the scores earned by the value chains, the selected value chains are ranked below –

- Rank 1: Tailoring
- Rank 2: Embroidery
- Rank 3: Medicinal Plants
- Rank 4: Strawberry
- Rank 5: Floriculture
- Rank 6: Capsicum
- Rank 7: Apiculture

⁵ Primary data: in-depth interviews, FGDs & validation workshop

Among these the study team finally shortlisted the following value chains. Further analysis revealed the current list of value chains will have insufficient beneficiary outreach to reach the projected target of 11,500 beneficiaries. Thus additional value chains were added on to the preliminary list. The value chains were grouped under three categories depending on common characteristics. The table below illustrates the value chain groups finally chosen for analysis.

Table 11: Final Value Chains

Value Chain 1	Value Chain 2	Value Chain 3
Sewing, Dress Making, Hand Embroidery, <i>Nakshikantha</i> , Hand Crocheted Prayer Caps, Fishing Net Making	Strawberry, Capsicum and Medicinal plants	Floriculture and Apiculture
Grouping Rationale		
These are off farm activities requiring artisanal skills	These are the new value chains added for the new increase beneficiary outreach	Existing floriculture with potential for apiculture in case of scale up

5.3.5 Tentative Outreach with the Shortlisted Value Chains and Trades

Potential Outreach for Sewing, Dress Making, Hand Embroidery, *Nakshikantha*, Hand Crocheted Prayer Caps, Fishing Net Making:

Table 12: Potential outreach of VC 1⁶

Chakaria	Himchari NP	Teknaf WS
No. of target beneficiaries: 1,902	No. of target beneficiaries: 1,548	No. of target beneficiaries: 5,263
Potential Outreach: 35%	Potential Outreach: 40%	Potential Outreach: 40%
Overall Potential Outreach: 38%		
Considerations for Outreach Estimation		
<ul style="list-style-type: none"> Currently most of the women are involved in this VC There is a strong chain already exists for Hand Crocheted Prayer Caps in Chakaria High interest and inherited traditional skill of women Scope for the value addition like design, skill & technology Scopes for potential upgrade of crafting practices, processing, finishing, product diversification and trading efficiency 	<ul style="list-style-type: none"> More women can be involved in this value chain Sewing & Dress making chain can be improved if they are linked with Cox's Bazaar Sadar Fish Net Making sub-sector is quite strong in this area Himchari is nearest to the Cox's Bazaar Sadar Scopes for potential upgrade of crafting practices, processing, finishing, product diversification and trading efficiency High interest and inherited traditional skill of women 	<ul style="list-style-type: none"> Hand Crocheted Prayer Caps are highly existing in this area and strong chain is visible Women are involved in most of the sub-sectors Scope for value addition especially for <i>Nakshikantha</i>, Hand Embroidery and Sewing & Dress Making Scopes for potential upgrade of crafting practices, processing, finishing, product diversification and trading efficiency High interest and inherited traditional skill of women

Potential Outreach for Strawberry, Capsicum and Medicinal plants:

⁶ Primary and secondary data: in-depth interviews, FGDs, beneficiary profiling, project documents

Table 13: Potential outreach of VC 2⁷

Chakaria	Himchari NP	Teknaf WS
No. of target beneficiaries: 1,902	No. of target beneficiaries: 1,548	No. of target beneficiaries: 5,263
Potential Outreach: 30%	Potential Outreach: 10%	Potential Outreach: 75%
Overall Potential Outreach: 30%		
Considerations for Outreach Estimation		
<ul style="list-style-type: none"> • Chakaria has the most fertile land • Beneficiaries are more into agriculture • Possible to convert the vegetable and betel leaf producer to cultivate strawberry and capsicum as it is very profitable • Technology of strawberry and capsicum already exists in Chakaria • Short term medicinal plants can be cultivable • Cultivable lands are high in amount 	<ul style="list-style-type: none"> • Technology of strawberry already exists in Himchari • Demand for strawberry and capsicum is high in the local hotels • Medicinal plants producer already exists in Himchari • Cultivable lands are less in amount 	<ul style="list-style-type: none"> • More cultivable lands in Teknaf • Suitable land for medicinal plants and capsicum • Beneficiaries are more into agriculture • Possible to convert the vegetable and betel leaf producer to cultivate strawberry and capsicum as it is very profitable in Teknaf as well

Potential Outreach for Floriculture and Apiculture:

Table 14: Potential outreach of VC 3⁸

Chakaria	Himchari NP	Teknaf WS
No. of target beneficiaries: 1,902	No. of target beneficiaries: 1,548	No. of target beneficiaries: 5,263
Potential Outreach: 25%	Potential Outreach: 10%	Potential Outreach: 10%
Overall Potential Outreach: 15%		
Considerations for Outreach Estimation		
<ul style="list-style-type: none"> • Flower cultivation is available in Chakaria • Land is more fertile and suitable • Accurate PH level • Inputs are available • Demand is high in the local and the national level • Beneficiaries are interested into apiculture 	<ul style="list-style-type: none"> • Land is not very suitable for cultivation • Beneficiaries are less into agriculture 	<ul style="list-style-type: none"> • Land is not suitable • Flat land is needed • Beneficiaries are less interested

⁷ Primary and secondary data: in-depth interviews, FGDs, beneficiary profiling, project documents

⁸ Primary and secondary data: in-depth interviews, FGDs, beneficiary profiling, project documents

5.3.6 Potential Trades

After the outreach calculation, we have observed that few beneficiaries need to cope with other trades. Especially who are not currently involved with any IGA. This project is aiming towards less natural forest destruction and climate resiliency; these trades will definitely help them not to depend on forest as well as in their economic condition. Going through several visits in South East Zone 2, potential trades found in the region for the beneficiaries are given below:

- Boat building
- Boat repairing
- Boat engine repairing
- Cyber café operator
- Hotel support staff

Rational for selecting these trades:

- High opportunity for employment
- Skills can eventually make them entrepreneurs (engine repairing)

Target beneficiaries for the trades: The target beneficiaries of these trades are the youth age from 18 years to 30 years especially who are depending on the natural resources. The project can intervene in the following areas:

- Develop linkage with employers
- Provide basic literacy training
- Develop professional credibility

Part III: Value Chains Analysis for Southeast Region 2 (Cox's Bazaar)

6. Value Chain Analysis for VC1: Sewing & Stitching, Dress Making, Hand Embroidery, Nakshikantha, Hand Crocheted Prayer Caps, Fishing Net Making

6.1 Brief Overview

Sewing and Stitching

- The idea is to develop the entrepreneurs into an “haute couture” (French for "high sewing" or "high dressmaking" or "high fashion") in creating exclusive custom-fitted clothing.
- Haute couture is made to order for specific customer(s)
- Usually made from high-quality, expensive fabric and sewn with extreme attention to detail and finished by quality seamstress.

Currently a large number of women are engaged in part-time sewing and stitching to cater their neighborhood markets. The client generally provides the fabric and the entrepreneurs simply sew and stitch them. The rate varies from location to location – in the very interior the rate is about Tk. 70, while near the market, the rate is about Tk. 150. With almost no formal training, a woman entrepreneur, on an average, can earn about Tk. 1,000 a month. However, the current capacity of the local entrepreneurs does not consist of the financial or technical ability to be able to reach such levels of expertise.



Dress Making

- Dress making is primarily a “ready-to-wear” or “prêt-à-porter” is clothing sold in finished condition, in standardized sizes.
- Ready-to-wear clothing intended to be worn without significant alteration, because clothing made to standard sizes fits most people using standard patterns.
- Fashion houses in Cox’s Bazaar, Chittagong and Dhaka that produces women's haute couture line also produce a ready-to-wear line, which returns a greater profit due to the higher volume of garments made and the greater availability of the clothing.
- The construction of ready-to-wear clothing is also held to a different standard than that of haute couture due to its industrial nature.
- High-end ready-to-wear lines are sometimes based upon a famous certain unique patterns that is then duplicated and advertised to raise the visibility of the designer. In high-end fashion, ready-to-wear collections are usually presented by fashion houses in certain seasons such as religious festivals.



Smaller collections which add to the retail value are presented separately at the entrepreneurs' discretion for example in Cox's Bazaar during the tourist seasons October through March.

Hand Embroidery

- Embroidery is the handicraft of decorating fabric or other materials with needle and thread or yarn.
- It often incorporate other materials such as metal strips, pearls, beads, quills, and sequins and are often called (*karcupi* - ornamental needlework on clothes and *hajarbuti* - thousand dots on the body, in local terms.

- The bihari refugee living in Ambagan, Pahartoli in Chittagong and Mohammadpur and Mirpur in Dhaka are famous for their *karchupi* work. Many boutique houses obtain their *karchupi* works from here.)
- Embroidery is most often used on caps, hats, coats, blankets, dress shirts, denim, stockings, and golf shirts and available with a wide variety of thread or yarn color.
- Embroidery hoop or frame can be used to stretch the material and ensure even stitching tension that prevents pattern distortion.
- *Chikan* is also a traditional embroidery style from Lucknow, India. *Chikankari* is delicate and artfully done hand embroidery on a variety of textile fabric like muslin, silk, chiffon, organza, net etc. *Chikan* embroidery is also done with colored and silk threads.
- The patterns and effects created depend on the types of stitches and the thicknesses of the threads used in the embroidery.
- Caucasus embroidery is an interesting characteristic of embroidery is that the basic techniques or stitches on surviving examples of the earliest embroidery – chain stitch, buttonhole or blanket stitch, running stitch, satin stitch, cross stitch – remain the fundamental techniques of hand embroidery today.

Nakshikantha

- Nakshikantha, a type of embroidered quilt, is a type of folk art of Bangladesh and West Bengal, India. The art has been practiced in rural Bengal for centuries.
- The basic material used is thread and cloth. Kanthas are made throughout Bangladesh, but the greater Mymensingh, Rajshahi, Faridpur and Jessore areas are most famous for this craft.
- The colorful patterns and designs that are embroidered resulted in the name "Nakshikantha" which was derived from the Bengali word "naksha", which refers to artistic patterns.
- The running stitch called "kantha stitch" is the main stitch used for the purpose. Traditionally, kantha was produced for the use of the family. Today, after the revival of the nakshi kantha, they are produced commercially.

The Nakshi kantha or designer quilt and bed sheets are available in different fabrics like cotton, mixed cotton, satin and velvet can cater the local hotels and houses. They are accessible in rich colors, shades, designs and pattern as per the requirements of the customers. The bed sheets are high on demand in various reputed hotels as well.

The following is how kanthas are categorized, according to the stitch type: Running stitch, Lohori kantha, Lik or anarasi, Cross stitch or carpet, Sujni kantha. The stitches used in modern day kantha are the Kasmiri stitch and the arrow head stitch. Stitches like the herring bone stitch, satin stitch, back stitch and cross stitch are occasionally used.

Kanthas generally denote quilts used as wrappers; however, all articles made by quilting old cloth may also be referred to by the same generic name. However, depending on the size and purpose, kanthas may be divided into various articles, each with its specific names.

Hand Crocheted Prayer Caps

- Crochet is a process of creating fabric from yarn, thread, or other material strands using a crochet hook.
- Hooks can be made of materials such as metals, woods or plastic and are commercially manufactured as well as produced by artisans.



- Crocheting, like knitting, consists of pulling loops through other loops, but additionally incorporates wrapping the working material around the hook one or more times.
- Crochet differs from knitting in that only one stitch is active at one time (exceptions being Tunisian crochet and broomstick lace), stitches made with the same diameter of yarn are comparably taller, and a single crochet hook is used instead of two knitting needles.
- Additionally, crochet has its own system of symbols to represent stitch types. There are many variation of crochet such as filet crochet, Tunisian crochet, tapestry crochet, broomstick lace, hairpin lace, cro-hooking, and Irish crochet are all variants of the basic crochet method.



Fishing Net Making

Nets are devices made from fibers woven in a grid-like structure. Fishing nets are usually meshes formed by knotting a relatively thin thread usually made of artificial polyamides like nylon, although nets of organic polyamides such as wool or silk thread were common until recently and are still used.

- **Cast or throw nets** are small round nets with weights on the edges which is thrown by the fisher. Sizes vary up to about four meters in diameter. The net is thrown by hand in such a manner that it spreads out on the water and sinks.
- **Dragnet** is a general term applied to any net which is dragged or hauled across a river or along the bottom of a lake or sea. An example is the seine net shown in the image. The fishing depth of this net can be adjusted by adding weights to the bottom.
- **Drift nets** are nets that are not anchored, but are drifting with the current. It is usually a gill or tangle net, and is commonly used in the coastal waters.



6.2 End Market Analysis

6.2.1 Market Size and Penetration

There is no reliable estimate of total number of enterprises and related market actors and value chain members in Chakaria, Himchari (Cox's Bazaar) and Teknaf. However, the team during the study has gathered some discrete information about the number of enterprises in Chakaria, Himchari (Cox's Bazaar) and Teknaf. There are about 19,000 different enterprises having trade-licenses from Municipal Corporation in Cox's Bazaar, Chakaria and Teknaf. The local business enterprises during the survey provides an estimation about number of enterprises in Chakaria, Himchari (Cox's Bazaar) and Teknaf which is about 95,000 excluding agro business like vegetable growing, fishery, poultry rearing etc. During the interview with market actors in Chakaria, Himchari (Cox's Bazaar) and Teknaf the participants reported that in each growth center of the Upazila/Thana there are about 5,000 enterprises. Combining all the above information, the team projected and estimated that about 250,000 different enterprises exist in Cox's Bazaar District excluding agricultural farms.

The following sector dominant features were also taken into account:

- Number of firms in the supply chain and their functions and features
- Market size, segments, scopes and features

- Market growth rate of individual sub sectors and position in the business lifecycle
- Backward and/or forward integration industry units
- The types of distribution channels used to reach consumers
- Status in achieving economies of scale in purchasing, manufacturing, transportation, and marketing
- Capacity utilization of the firms
- Cost of production and margin on sales
- Return on investment
- Capital requirements and the ease of entry and exist.
- The pace of technological change in both production process innovation and new product introductions
- Learning and experience effects.
- Capacity outsourcing or sharing

At the same time the following Sector Variables/Driving Forces were also assessed:

- What is the growth and profitability index and how strong is the index for motivating the actors to produce and sell the product/service under consideration?
- What is causing the industry's profitability structure and business environment to change?
- Which companies/supply chains are in the strongest/weakest positions?
- What strategic moves are the companies of the industry likely to make next?
- What are the key factors for success?
- What are the prospects for above-average profitability?

Sewing and Stitching and Dress Making

Sewing, stitching and dressmaking started as a family need and become a semi-commercial trade to cater the local neighborhoods. Almost all the women have proficiency in sewing and stitching, however dressmaking requires a little skill in measurement, cutting and stitching. The target groups are engaged in the process as a hobby without commercial and market orientation. Large volumes are a challenge that cannot be met by a single small group of producers.

However, due to the simplistic nature of the work, and the ever increasing demand, the dressmaking sector is expanding remarkably. Currently the mainstream market is completely catered by the regional and national market actors. However, the scope for entering in basic and simple products such as women's inner skirt (petticoat), blouse, pajama, long housecoats (maxi), children's casual wears (nima, chemise) has a huge potential that can be catered by the local target groups.



Hand Embroidery and Nakshikantha

Hand Embroidery and Nakshikantha as well as related similar products are widely categorized as "handicrafts". Handicraft represents less than 1 percent of all exports from Bangladesh. In contrast, the global market for handicrafts is estimated to be close to \$100 billion. Surely this represents a huge opportunity for this country in terms of rural employment creation. The women in the target area are eager to show their fine handicraft skills, being naturally proficient with stitches passed down from mother to daughter and all having a genuine interest in crafts. However, four important issues make

handicraft in general and hand embroidery and nakshikantha in particular a non-expanding sector - price, quality, design and quantity. The sector is suffering from classic case of conventional marketing 4Ps. Products not meeting the needs of the customers; products lacking appropriate pricing strategy, products lacking effective promotion/communication and distribution (place).

The target groups are still producing hand embroidery and Nakshikantha as a hobby without commercial and market orientation. Large volumes are a challenge that cannot be met by a single small group of producers. Consistency in quality cannot be maintained over different groups of producers where there is no or limited connection between them. Timely delivery is a challenge since the products are being produced by the group members in leisure time after completing different family chores. Empowering small groups of producers is therefore not likely to bring significant value addition and growth. Though access to quality raw materials is not a fundamental problem in the local markets, however to cater the specialized up-market at the national level certain high quality raw materials (stones, glass beads, pearls, vegetable dye, etc.) are required, these are not available in local market.

The expansion of the production specifically for national market a combination of craft skills with business skills would be required. Bulk purchasing of raw materials, skills of preparing samples, marketing and communication in print and electronic (internet) is required. The required service providers for developing skills of designs, cataloging, photography, promotion is not available in Cox's Bazaar. It would be highly unrealistic to assume that with a little training, a new design or two and some capacity building, market linkage, a small group of producers will be able to secure sales to stores at the national markets. Similarly, it is unrealistic to assume that large stores and boutique houses in the national level would be interested to source tiny volumes of one particular product from a single supplier in a far-away remote area. Generally stores and boutique houses place a limit on the number of suppliers that they choose to buy from to make it administratively and economically manageable. As a result it is not only must the supplier be able to make volume, but will also need to be able to make a whole range in volume in order to have a chance of competing to supply. Currently Cox's Bazaar hand embroidery and Nakshikantha do not represent in the national market as a source. Certain handloom products are sourced from the neighborhoods particularly from Banderban and Moheshkhali.

Hand Crocheted Prayer Caps

A large number of rural women at different villages especially in Teknaf are engaged in making hand crocheted prayer caps (*tupi*). More than 4,000 vulnerable women in the upazila are directly engaged in making these caps and they are supporting their families by earning about Tk. 2,500 to Tk. 3,000 every month. The women are working after they receive export orders from traders of Pakistan, Oman and other Arab countries since 2009. According to SU Haider, President of the Bangladesh Handicrafts Manufacturers and Exporters Association, one of the country's largest associations of exporters, noted that Muscat Festival is an ideal platform to display Bangladesh's finest handicrafts which are well known all over the world.

Fishing Net Making

Blessed with an extensive coastal stretch, Cox's Bazaar is a critically important region of the country for fisheries both sea and fresh water. Fishing net is one of the major gears used by fishermen next to fishing boats. The type of fishing net used generally differs greatly and mainly depends on the season, type of fish, type of landings, convenience, etc. Fishing net making is a flexible as well as a consumer oriented industry. The type of nets to be manufactured, in terms of mesh size, largely depends on the demand of the fishermen. Despite the enormous demand for fishing nets, the development of the fishing net making in Cox's Bazaar has been very slow and has not kept pace with the development of fisheries. The supply of fishing net is largely conditional and is based on the

tradition, quality, and price. The demand for handmade fishing nets is extremely limited and seasonal, moreover the economic viability for handmade fishing nets are extremely low.

6.2.2 Main Market, Buyers & competition

Sewing & Stitching and Dress Making

- The required inputs (threads, strings, *chumki*, *jori*, pearls, crochets, buttons, design books, embroidery books, etc.) are generally purchased from Dhaka (ChakBazaar, Gausia market, Sadarghat, etc.) as well as certain loom clothing from Narshingdi
- Average sales of the these inputs in a day is about Tk 400,000 – Tk700,000
- However, during religious festivals especially “Eid” the sales figure is more than Tk. 2,000,000 – Tk. 3,000,000 a day.
- The presence of specialized boutique shop exclusively dealing with designer clothes in Cox’s Bazaar is very limited.
- Demand for women clothing specially women’s inner skirt (petticoat), blouse, pajama, long housecoats (maxi), children’s casual wears (mina, chemise) are very high
- There are about 100 shops selling inputs in the Cox’s Bazaar catering the local market
- The dress sellers purchase dresses from Chittagong and Dhaka, local sourcing is limited due to poor quality

Hand Embroidery and Nakshikantha

The primary hand embroidery and *nakshikantha* products are produced in Jessore, Tangail, Mymensingh, and Rangpur regions. The local hand embroidery and nakshikantha is a very new and limited effort undertaken by a few producers especially in Teknaf region. However, lack of volume, quality and non-conformity with standard unique stitching styles the products are generally used in the local and neighborhoods. Only a negligible amount of the produce is actually traded in the local market. Majority of the hand embroidery and nakshikantha products found in the local market are fed by the national market. However, the local Chittagong Hill Tracts are and especially the Rakhain community in Cox’s Bazaar has very special styles and designs of hand embroidery and nakshikantha products which are very unique from the mainstream products. Demand for this unique hand embroidery and nakshikantha products have limited demand due to poor marketing.

Hand Crocheted Prayer Caps

The primary competition is machine knitted crocheted prayer caps available at a much lower price. The local demand favors the machine knitted prayer caps. The hand crocheted prayer caps are extremely high export market. Volume and contract production from a few buyers is one of the primary impediments in enhancing profitability. Organizing the groups, engaging other buyers, improving negotiating skills, providing market information regarding price, quality, and consumer preference can substantially improve the present impediments; currently each women producer can produce 5-6 caps in a week.

Fishing Net Making

A part of the local fishing nets market is catered by the locally produced handmade fishing nets by the women. However, the market is not very large, a women (depending on the size, the average size is 10.5 feet) can produce 6 nets a year. Average price of fishing net is about Tk. 2,000 to Tk. 3,000. The peak season for net sales are May through September. During this time net is sold at a much higher rate usually from Tk. 3,000 to even Tk. 4,500. In the lean seasons a net is usually sold at Tk. 2,000 to Tk. 2,500. The local input sellers procure the necessary inputs from Chittagong and Comilla. Finished nets are also procured from Chittagong, Noakhali, and Comilla.

6.2.3 Demand-Supply Situation

Sewing & Stitching and Dress Making

The demand for women's inner skirt (petticoat), blouse, pajama, long housecoats (maxi), children's casual wears (*nima*, chemise) is very high in the local market. Currently the market is almost completely catered by the national and regional market players. A few local NGOs have started to link their beneficiaries with the local dress market. With the increasing training on sewing and stitching skills, local producers have started to enter the market. The suppliers are interested to outsource the basic products from the local women to reduce cost as well as inventory.

Hand Embroidery and Nakshikantha

The demand for hand embroidery and nakshikantha products is not very high. The market is currently catered by the national and regional market actors. The shops in the "Burmese Market" are the primary seller of these products. The locally produced products rarely enter into the mainstream market because of its low volume and lower quality.

Hand Crocheted Prayer Caps

The demand for hand crocheted prayer caps is mostly for the overseas market, the local consumption is very low. Every year about 20 million caps are being exported to different countries all over the world. The primary cap manufacturing hub in Bangladesh is Bogra and Chittagong. More than 500,000 women are engaged in producing these caps.

China and India are the two major competitors of Bangladesh hand crocheted prayer caps. However, Bangladesh is one of the most favored countries to the importing countries because of quality and price competitiveness.

Fishing Net Making

The handmade fishing nets are generally used by small fishers. The users believe the handmade fishing nets are more durable than the machine made nets. However, some of the fishers in Teknaf believe that hand-made nets produced by the local women are cheaper because they are made from cheaper yarn. Majority of the fishers in the area are quickly shifting to machine-made nets.

6.2.4 Market opportunities

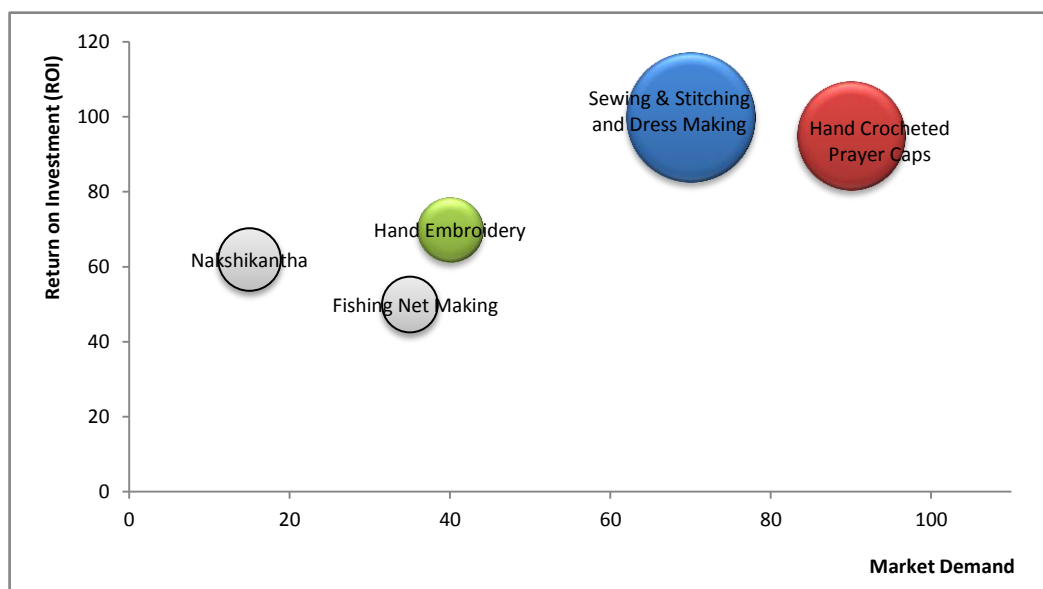
Opportunity identification should be in line with the broad objective of the project. Since all the projects within CREL working areas are focused on poverty eradication and climate conservation, CREL should look forward to opportunities to two types of opportunities:

1. To look for opportunities that the target beneficiaries can utilize and enter into the value chain as a mainstream actor. If the target beneficiaries are already actors within the value chain, CREL should look for opportunities to increase the scope of value addition by the beneficiaries.
2. In doing the mainstreaming, the environment and climactic conditions are unharmed, through minimum utilization of natural resource extraction and minimum adverse impact on environment due to value chain activities.

Opportunities should be feasible for the target beneficiaries to adopt. Target beneficiaries have to have some previous skills, experience, knowledge or resource to utilize the opportunities identified.

Hence all the opportunities identified might not actually opportunity for the target beneficiary. For example – if the beneficiaries do not have the experience or resources in dairy cattle rearing, they cannot utilize whatever opportunities are identified in the dairy value chain.

Figure 16: Comparative matrix on the ROI of the different sub-sectors⁹



Sewing & Stitching and Dress Making

The target beneficiaries generally have the required skills, experience, as well as knowledge to capitalize the present opportunity in the primary local dressmaking sector. The existing demand for women's inner skirt (petticoat), blouse, pajama, long housecoats (maxi), children's casual wears (*nima*, chemise) is very high in the local market. The availability of all the raw materials required for the primary dressmaking in the local area is also a great opportunity for the target group.

Hand Embroidery and Nakshikantha

Market Opportunity for Hand Embroidery and Nakshikantha is minimal in the local market. Generally women are involved in this process and they prefer to do it as their side activity after completing all their regular family chores. For preparing one Nakshikantha it takes 2 months and need to invest almost 2000 Tk. and profit is around 1000-1500 Tk. which is mostly sold to the local villagers. Thus in a year they can only make 6 Nakshikantha and year around profit 6000-9000 Tk. which is not that satisfactory (ROI is very low). Similarly in Hand Embroidery mostly women are involved and they consider it as their side income. Very few of them are doing it commercially and selling it to the nearby villagers who providing them orders.

Though the local demand is quite low but in national level the demand is quite high. These products can be sold in different boutique shops like Aarong, Kumudini, Karupponno, TMSS, MIDAS, etc. if proper promotional activities are done. The primary opportunity lies if these women can receive proper training on quality design then it can be possible to link them into the mainstream value chain.

Hand Crocheted Prayer Caps

Saudi-Bangladesh Textile Mills Ltd. is 100% export oriented joint venture project with Saudi Arabia are producer and exporter of prayer caps, embroidery caps, Arabian Yashmagh, Ghutra, Tufi, hand

⁹ Primary data: in-depth interviews

crocheted caps, head covers, head scarf. The primary opportunity lies in Improving negotiating skills and competitive advantage of the local women through organizing them and linking them with mainstream value chains.

Aarong, Kumudini, Karuponno, TMSS, MIDAS, etc., are also engaged in exporting their products including local hand crocheted prayer caps. BSCIC and Ministry of Commerce has special cell for promotion of women entrepreneurs through different export facilities and incentives. Moreover Bangladesh Handicrafts Manufacturers and Exporters Association are also working for the promotion of caps in Middle Eastern countries through participation in Handicraft fairs. These opportunities can also be tapped for improving price and skills and the local women.

Fishing Net Making

Opportunities for handmade fishing net are gradually decreasing primarily because of quality issues and low volume. Improved knitting skills, improved raw materials can help makes these women producers competitive in the market.

6.3 Value chain map and analysis of value creation activities

6.3.1 Value Chain Overview

Sewing & Stitching and Dress Making

The analysis demonstrates that dressmaking has remarkable opportunity to engage the target community, although the question of skills development, assurance of quality, meeting supply deadlines, meeting profitable economic order quantity as well as market linkage is critically important. Investing about Taka 12,800 the return can be as high as Taka 43,200 in 30 working days. Alternatively, if the necessary raw materials are supplied by the producers, the target community can add value through stitching and earn Tk. 20 to Tk. 30 per piece. It was estimated that with average skill a person can produce 10-15 pieces per day and can improve this production rate to as high as 20-30 with superior skills and dexterity. Looking at the value chain map of tailoring showing the relationship between the actors in reaching the final product to the customer through active and profitable engagement of the community people, it is possible for CREL and its partners to invest in the sector for enhancing the livelihood of their target group. The dressmaking value chain map demonstrates the interrelationship of value chain members and how a “high value” value chain can be engaged through developing quality, productivity and cost leadership.

Business Environment

There are underlying factors of the Sewing & Stitching and Dress Making value chain which impacts the way it functions as a whole. These factors given below also create the underlying constraints of the value chain functions.

Women led activity: The obvious motivation that drives project to work in this sector is the possibility to make an additional source of income through needlework for the women beneficiaries.

Low capital costs: It is feasible to engage as many women as possible provided to have willingness to do the work. Low capital costs are involved in needle work; one needle, some fiber and fabric which are again provided by the service provider makes the sector feasible to intervene getting direct women beneficiaries.

Market demand: Sewing & Stitching and Dress Making has a great demand for its versatility which can be done simply and cheaply by adding value to any item and thus making it appealing to the customer.

Projects and Public Organization: Projects which are skillful and organizations for example Baastob and other organizations are working in the area to develop the sector can be partnered for more synergy and learning from other projects. Apart from this different public organizations like Jubo Unnayan Shongstha is working and providing training on this sub sector.

Hand Embroidery and Nakshikantha

Both hand embroidery and Nakshikantha has a very limited market in Cox's Bazaar. Unlike other developed embroidery markets in Bangladesh, the Cox's Bazaar market is still in its infancy with a very small number of producers and relatively low interest from customers in value-added products.

Business Environment: Underlying Factors

There are underlying factors of the Hand Embroidery and Nakshikantha value chain which impacts the way it functions as a whole. These factors given below also create the underlying constraints of the value chain functions.

Small number of manufacturers and distributors: The few people are engaged in producing small quantities of products which are sold mostly in the neighborhood markets and people with high income levels. And even this is limited to fashion accessories and home decoration items.

Extremely limited customer base: The number of customers who are willing to pay a premium price for personal style and taste is very small. And there are extremely limited handmade embroidery goods even in some general industries such as fashion, kitchenware etc.

Lack of developed channels: Retail and wholesale channels that distribute hand embroidery have not come up due to little or no demand from local or national consumers.

Unclear industry definition: Hand embroidery industry is not clearly defined yet. Hand embroidery goods are mixed with karchupi, hajarbuti and are these days intermixed.

Hand Crocheted Prayer Caps

This sub sector is also women dominant. The involvement of women in this sector is not limited to production rather widespread from input to trading function in some case. The products or services found generating from needlework are- Tupi (cloth hat), jori chumkir kaj (design work), and hater kaj (hand stitching).

Business Environment: Underlying Factor

There are underlying factors of Hand Crocheted Prayer Caps value chain which impacts the way it functions as a whole. These factors also create the underlying constraints of the value chain functions. The primary market of "Hand Crocheted Prayer Caps" is developed based on the demand of the international buyers. The local trading and consumption is limited. The international buyers provide all the necessary inputs; the local producers add value to it through knitting the caps. Since the caps are produced as per the order of the international buyers, the marketing and sales functions are not required by the local producers. Does not require capital investment and therefore almost risk-free business activity. However, this also reduces the opportunity for higher income and profit opportunity.

Fishing Net Making

This sub sector is dominant by both male and female beneficiaries however very limited in amount. The involvement of beneficiaries in this sub sector is not limited to production rather widespread upto trading function in some case. The products or services found generating from needlework are different categories and sizes of Fish Nets which are mainly targeted towards the local fisher men.

Business Environment: Underlying Factor

There are **underlying factors** of Fishing Net Making value chain which **impacts the way it functions** as a whole. These factors also create the **underlying constraints** of the value chain functions. Handmade fishing net production is gradually decreasing in the face of machine made nets in the local area. The usage of these handmade nets is primarily in the local area.

6.3.2 Value Chains Actors, Functions and Map

Sewing & Stitching and Dress Making

Input Supplier

The national input suppliers are the key actors for supply of all necessary inputs such as treads, ornamental beads, cloths, etc. The access and availability of inputs from the national actors seems no major issue with the local input traders. The presence of local input suppliers in all the major upazillas headquarter is satisfactory, although Cox's Bazar is the primary market. The price difference is negligible in upazilla markets compared to Cox's Bazar central market. A few large traders in the upazillas have their own linkage with the national market players.

Production

Home based producers with capital as the sewing machine, mostly purchased through micro credit from different micro finance institutions. The neighborhood customers provide cloths and the providers add value through cutting, stitching and sewing.

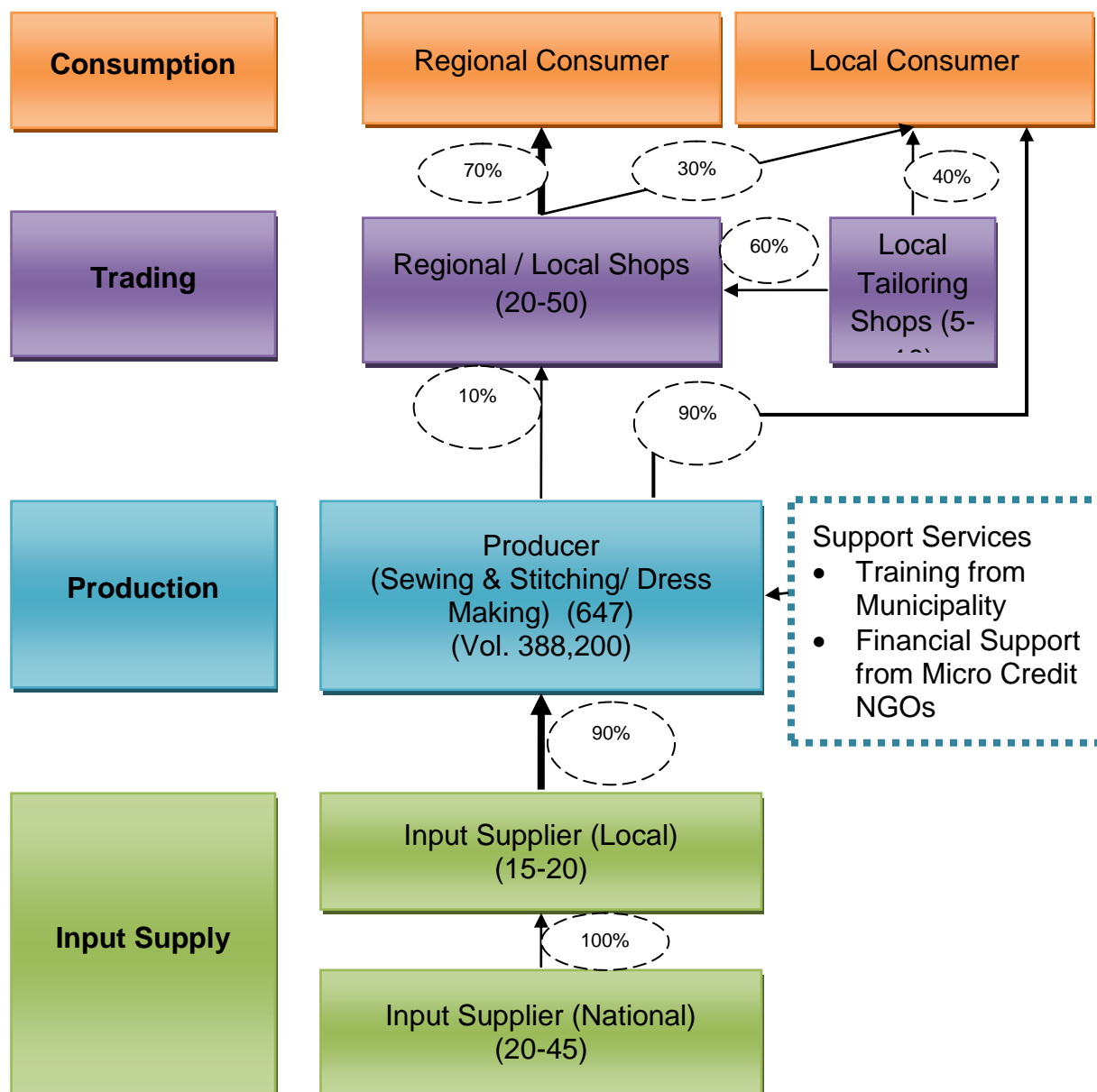
Trading

Local shops and regional shops (shops in the working area as well as in adjacent districts – Ctg) are one of sources of ready to wear clothes for the consumers. The shops procure the different clothing articles from local, regional and national markets and traders. In addition to this the local tailoring shops are also a source for both the traders and the consumers. These tailoring shops are run by males and women do not feel comfortable to approach them particularly for their inner wears.

Consumption

The consumers of different inner wears and other clothing articles are mostly used by the local and regional (people in the working area as well as in adjacent districts – Ctg) consumers. A few articles are sold in the adjacent districts because of price competitiveness. The local products cannot reach the national markets because of volume and price competitiveness from other districts particularly Northern regions of Bangladesh.

Figure 17: Value Chain Map for Sewing & Stitching and Dress Making¹⁰



Hand Embroidery and Nakshikantha

Input Supplier

The national input suppliers are the key actors for supply of all necessary inputs such as threads, hand embroidery sets, ornamental beads, etc. The access and availability of inputs from the national actors seems no major issue with the local input traders. The presence of local input suppliers in all the major upazillas headquarter is satisfactory, although Cox's Bazar is the primary market for all inputs. The price difference is negligible in upazilla markets compared to Cox's Bazar central market. A few large traders in the upazillas have their own linkage with the national market players.

Production

Home based producers with no capital do the work mostly on pre-order. The neighborhood customers provide cloths and the producers add value through designing, stitching and embroidery needle works. The primary products are dresses, pillow cover, cushions covers, bed spreads, etc.

¹⁰ Primary data: in-depth interviews, questionnaire survey

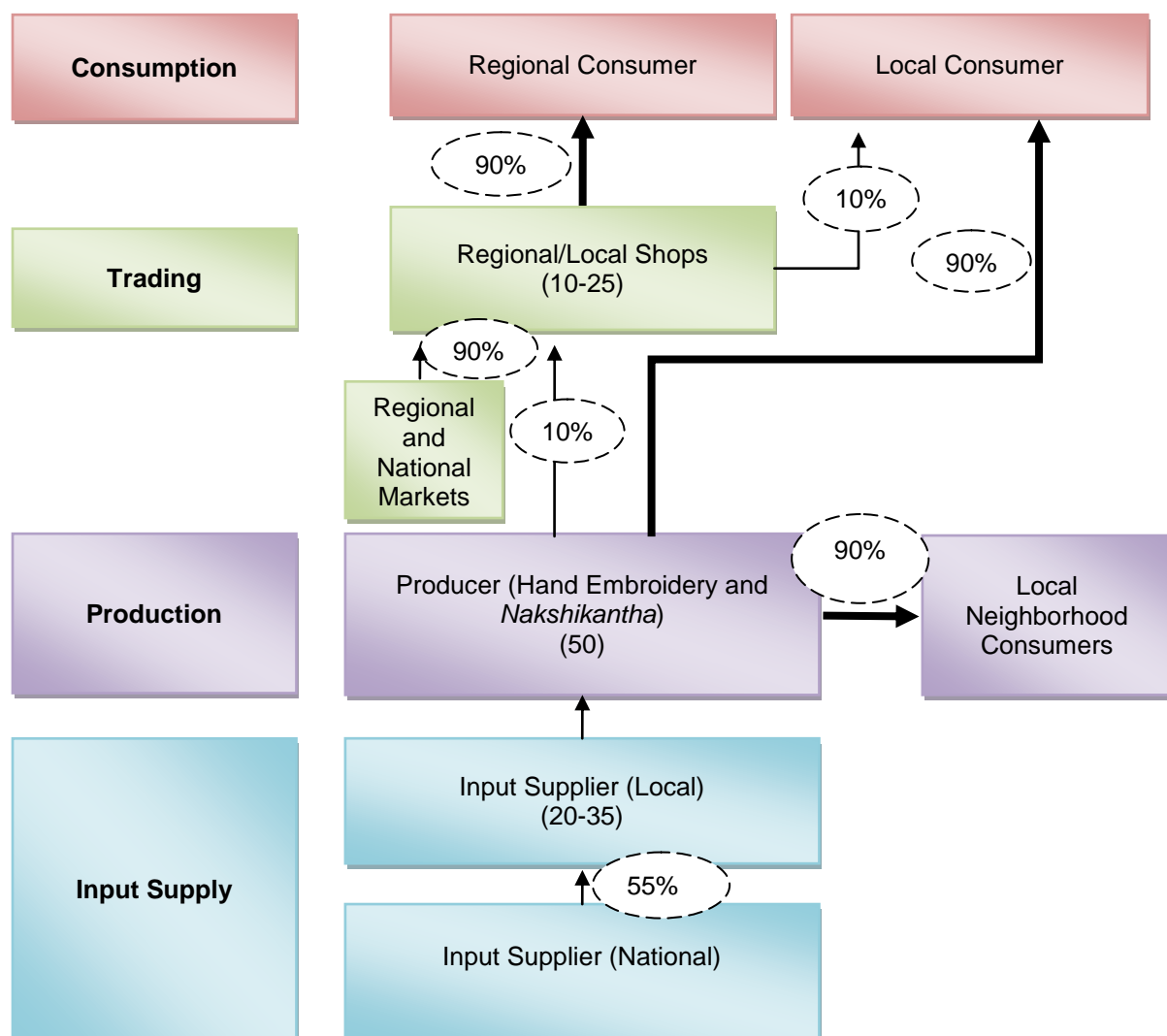
Trading

Local shops and regional shops (shops in the working area as well as in adjacent districts – Ctg) are one of sources of hand embroidery articles. The shops procure the different embroidery articles from local, regional and national markets and traders. In addition to this the local tailoring shops are also a source for both the traders and the consumers. However, majority of the embroidery are machine works. The machine embroidery shops are generally run by males.

Consumption

The consumers of different embroidery articles are mostly used by the local and regional (people in the working area as well as in adjacent districts – Ctg) consumers. A few articles are sold in the adjacent districts because of price competitiveness. The local products cannot reach the national markets because of volume, price competitiveness as well as quality from other districts particularly South Western and Northern regions of Bangladesh.

Figure 18: Value Chain Map for Hand Embroidery and Nakshikantha¹¹



¹¹ Primary data: in-depth interviews, questionnaire survey

Hand Crocheted Prayer Caps

Input Supplier

The commissioning agents are the key actors for supply of all necessary inputs such as threads, embroidery pins, etc. The access and availability of inputs from the local market actors is quite easy for the producers, however due to strict specifications, quality, choice of color, etc, the producers rely on the inputs from the commissioning agents. The presence of local input suppliers in all the major upazillas headquarter is satisfactory, although Cox's Bazar is the primary market for all inputs. The price difference is negligible in upazilla markets compared to Cox's Bazar central market. A few large traders in the upazillas have their own linkage with the national market players.

Production

Home based producers with no capital do the work mostly on pre-order. The commissioning agents provide necessary inputs and the producers add value through embroidery needle works. The primary products are prayer caps. Local Commission agents also play a vital role in production process as the main inputs are directly supplied by them.

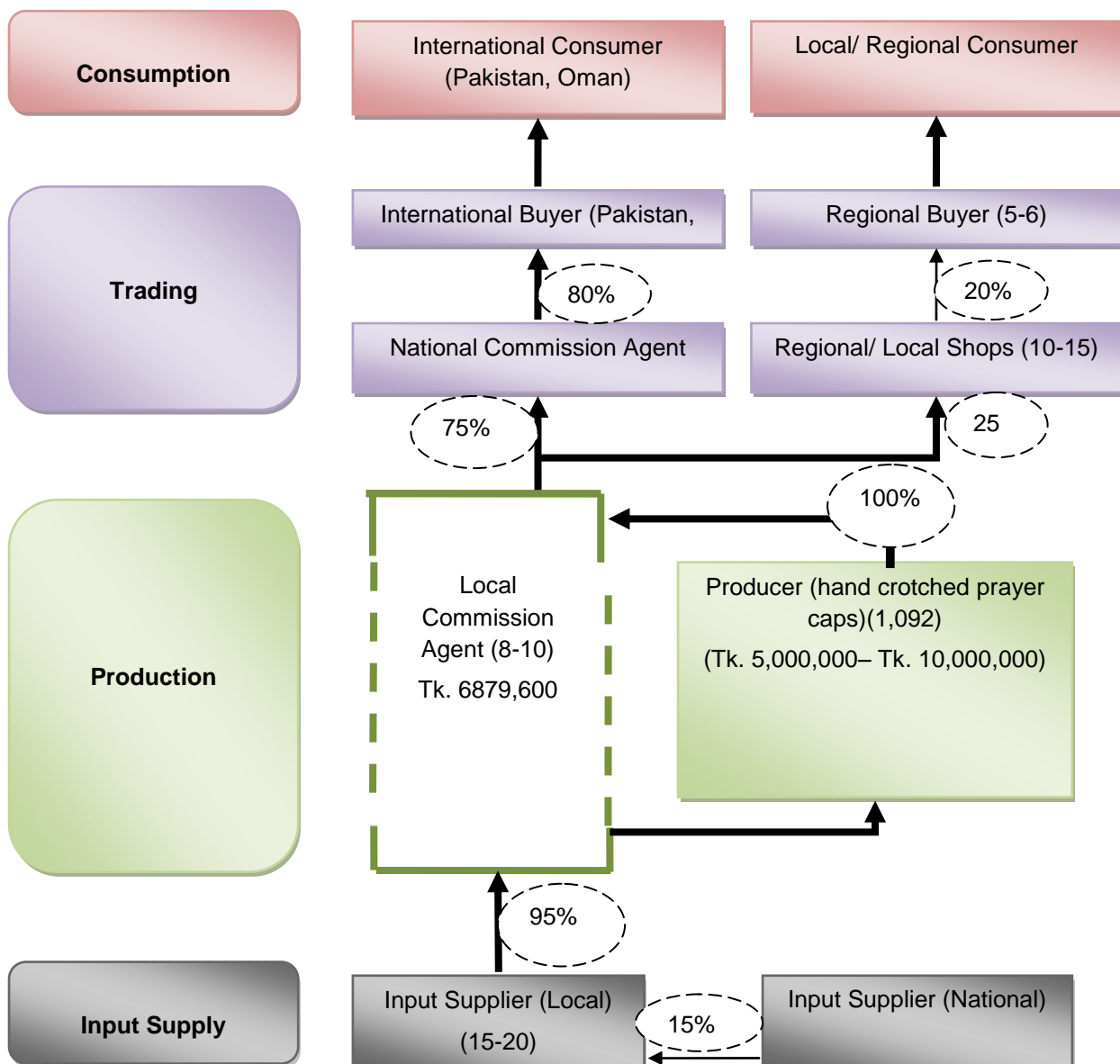
Trading

Local shops and regional shops (shops in the working area as well as in adjacent districts – Ctg) are one of sources of crocheted prayer caps. The shops, however, sells both hand and machine crocheted caps. The hand crocheted caps are mostly favored because of its quality, although the hand crocheted caps are expensive. The local shops procure the different caps from local, regional and national markets and traders. In addition to this the local small street shops are also a source for both the consumers.

Consumption

The different caps are mostly used by the local and regional (people in the working area as well as in adjacent districts – Ctg) male consumers. A few caps are sold in the adjacent districts because of price competitiveness. The local products often reach the national markets because of better price competitiveness as well as quality. The other competing districts are Shitakunda, Mirshari, Comilla, Feni, Kishorejong, Jessore, Bogra, and Rangpur of Bangladesh.

Figure 19: Value Chain Map for Hand Crocheted Prayer Caps¹²



Fishing Net Making

Input Supplier

The national input suppliers are the key actors for supply of all necessary inputs such as nylon treads and filaments, floats, lead beads, etc. The access and availability of inputs from the national actors seems no major issue with the local input traders. The presence of local input suppliers in all the major upazillas headquarter is satisfactory, although Cox's Bazar is the primary market for all inputs. The price difference is negligible in upazilla markets compared to Cox's Bazar central market. A few large traders in the upazillas have their own linkage with the national market players.

Production

¹² Primary data: in-depth interviews, questionnaire survey

Home based producers with no capital do the work mostly on pre-order. The neighborhood customers often provide threads and the producers add value through knitting works. The primary products are small to medium nets of different mesh sizes.

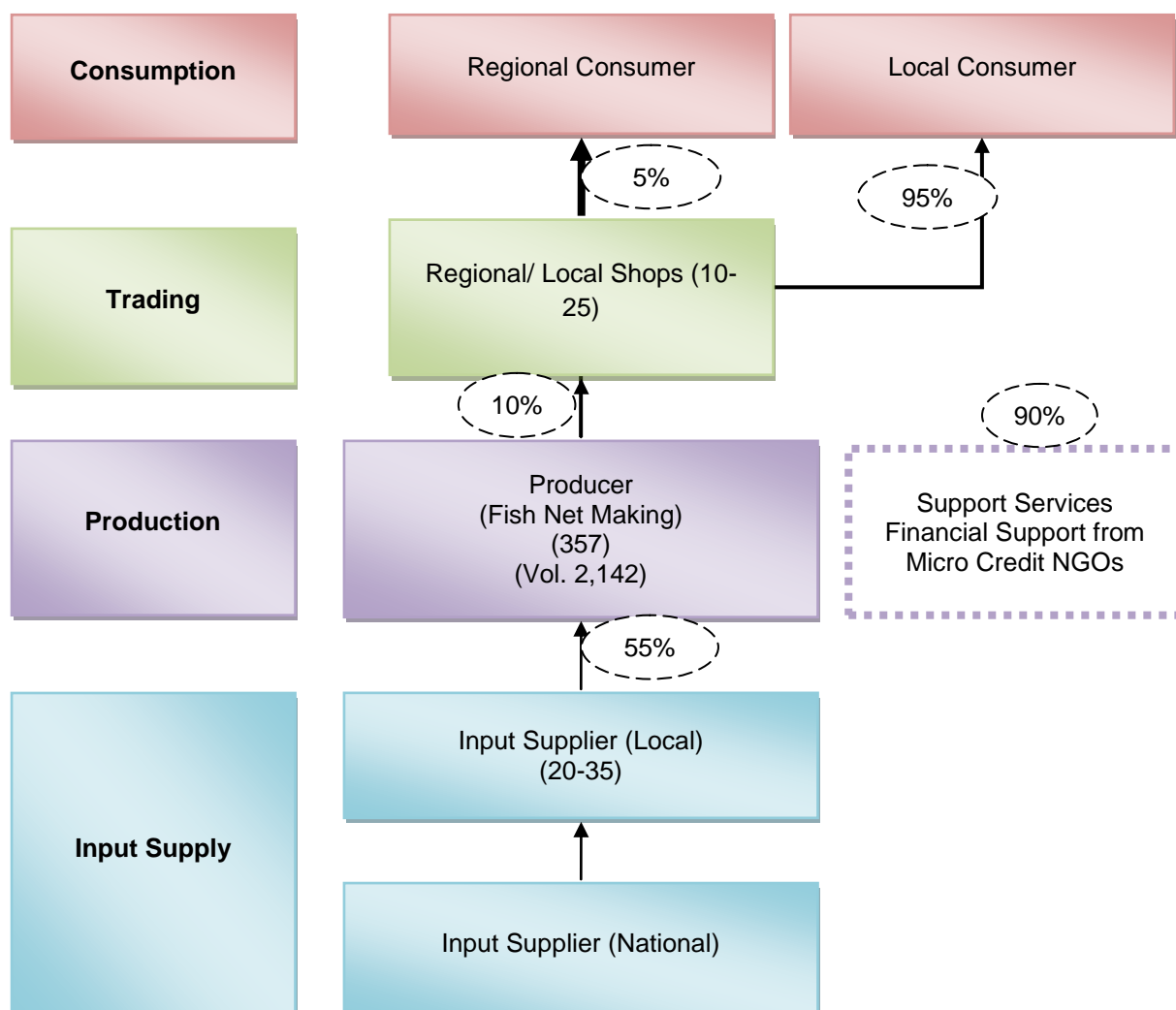
Trading

Local shops are one of sources of fishing nets. The shops procure the different nets from local, regional and national markets and traders. In addition to this the local home-based producers are also a source for both the traders and the consumers. Majority of the fishing nets machine knitted, however, the price of knitted fishing nets are slightly higher. The ocean going fishers prefer machine knitted large nets. The local fishers use hand-made nets for ponds, canals and shallow water fishing.

Consumption

The hand knitted fishing nets are mostly used by the local small scale fishers. The local products cannot reach the national markets because of volume, price competitiveness as well as quality from other districts particularly Southern Coastal regions of Bangladesh.

Figure 20: Value Chain Map for Fishing Net Making¹³



¹³ Primary data: in-depth interviews, questionnaire survey

6.4 Value Chain Performance

Value Chain performance investigated above on their actors and their functions revealed some strengths and weaknesses of the vegetable a value chain to impact the beneficiaries. Further analyses of factors affecting the chain as a whole are given below:

6.4.1 Business Enabling Environment

In general, we uncovered the business environment inside the region to be favorable for business development. There is great accessibility of both input suppliers and market actors for this clubbed value chain. The impediments remains within the production level as many producers and especially the targeted beneficiaries are satisfied old system, unwilling to hazard their venture behind commercial upscaling.

Gender and cultural norms: In Cox's Bazaar region the cultural norm is that, mainly men in every household are responsible for major earnings and expenditure of the family. However, we have also found that women are also willing to participate in the economic activities for the betterment of their family. Hence both male and female beneficiaries are lack of latest technical know how, shortage of capital and unwilling to change their existing profession. For example, a beneficiary who is making hand crocheted prayer caps for years she is not willing to switch to fish net making or dress making. Moreover they are satisfied to serve on their local market, relatives or neighbours. Therefore, in this study we had to club several sub sectors into one singular value chain to reach out all the beneficiaries.

Youth in this region have substantial interest in economic activities although they lack of vision to choose exact profession. Some of them who are continuing their education do not want to take their traditional or family profession in future. These values lead to a system where despite of the demand in the regional market, the producers have not expanded their practices.

6.4.2 Vertical Linkages

Vertical linkage among Sewing & Stitching and Dress Making, Hand Embroidery and Nakshikantha, Hand Crocheted Prayer Caps and Fishing Net Making sub sectors for the beneficiaries in Cox's Bazaar Region is low to medium depending on the location of the beneficiaries. As mentioned above they have certain problems to take the risk of expanding their operations both in volume and also level of business.

Access to markets: Beneficiaries of Sewing & Stitching and Dress Making have access to markets only in the local basis however not in the regional or national markets, For Hand Embroidery and Nakshikantha they are also accessing in the local markets. However for Hand Crocheted Prayer Caps beneficiaries usually do not have access to the market as the local agents are responsible for collecting inputs and giving the finished products to the regional agents/ shops. For Fishing Net Making, makers usually visit markets by themselves and sell it to the local markets on seasonal demand basis.

Input Access & Quality: Beneficiaries are mostly dependent on the local input suppliers and local input suppliers are collecting these inputs from the national market mostly from Dhaka and Chittagong. Access and quality inputs are present; however separation and restricted demand methods means beneficiaries are unable to show impact on the input sellers.

Access to Market Information: For all the sub sectors Sewing & Stitching and Dress Making, Hand Embroidery and Nakshikantha, Hand Crocheted Prayer Caps and Fishing Net Making the vertical linkage with the trading arena is not that strong. Beneficiaries located within the nearby location of the Cox's Bazaar Sadar, Teknaf Sadar and Chakaria Sadar have better access to market information however for others in the distant location the scenario is worse. Due to the lack of the basic market information beneficiaries have low advantage for price negotiation or hoarding tactics. Information doesnot flow quickly therefore beneficiaries have little idea about the regional and national level markets.

6.4.3 Horizontal Linkages

Horizontal linkages among beneficiaries were accessible in some delicate structures. In large, the beneficiaries have been under previous projects and there is a level of cooperation among them, yet casual in nature.

Types & forms of collaboration & competition: At the production level the forms of collaboration is available by the beneficiaries. However, in the trading level collaboration is low & competitions are both high. Pricing strategy is fixed by the market agents and especially by the regional traders. Retailers have limited negotiation capacity however they are not collaborated highly in all levels.

Roles for the targeted beneficiaries: The traders are interested to work with mainly the skilled beneficiaries as they are consistent and professional. However, targeted beneficiaries who have less skills cannot access these actors and stick to local markets. In most cases, we have seen dominance of Forias or collectors/travelling wholesaler who work with 10-15 makers as one group.

The performance of the Value Chains and Scope for Upgrading are described below:

Sewing & Stitching and Dress Making

Sewing & stitching and dress making has remarkable opportunity to engage the target community, although the question of skills development, assurance of quality, meeting supply deadlines, meeting profitable economic order quantity as well as market linkage is critically important. Investing about Taka 12,800 the return can be as high as Taka 43,200 in 30 working days. Alternatively, if the necessary raw materials are supplied by the producers, the target community can add value through stitching and earn Tk20 to Tk30 per piece. It was estimated that with average skill a person can produce 10-15 pieces per day and can improve this production rate to as high as 20-30 with superior skills and dexterity. Looking at the value chain map of tailoring showing the relationship between the actors in reaching the final product to the customer through active and profitable engagement of the community people, it is possible for CREL and its partners to invest in the sector for enhancing the livelihood of their target group. The dressmaking value chain map demonstrates the interrelationship of value chain members and how a “high value” value chain can be engaged through developing quality, productivity and cost leadership.

Potential Value Chain for Dressmaking (Shopping Bag Making)

This initiative is already introduced by a few private sector enterprises to meet the large local demand for designer shopping bags. Color polystyrene fabrics with catchy logos and slogans the bags are getting remarkable market to the consumers specially the tourist. The product is sold in the local and neighboring markets. The shopping bag is developed from the mainstream polystyrene fabric in three different sizes small, medium and large. These bags are generally water proof and have high demand for various purpose purposes. The demand for shopping bags is very high and the existing supplies find it difficult to cater the market. The primary constraint is low production and absence of skill work force. The raw materials are purchased from both locally as well as from Chittagong and Dhaka and the finished products (bags) are sold in the local market. The primary market hub for this product is Cox's Bazaar.

Hand Embroidery and Nakshikantha

This initiative is engaged by a few target group members to meet the large local demand for decorative hand embroidery and *carchupi* products. The products are generally made according to the order and are often sold in the local neighboring markets with very few going into the mainstream market. The “hand embroidery and *carchup*” is an augmented product of the mainstream embroidery market. The raw materials different varies and types of cloths ranging from cotton, silk, georgette used for saree, shalwar, kurta/kamiz, cushion covers with decorative stones, glass beads, pearls, colored

strings, etc., and are generally procured from local and Cox's Bazaar market. The demand for hand embroidery and *carchupi* is very challenging to estimate, however, judging the sales of similar products in the local market (procured from Chittagong and Dhaka) it can be estimated that the demand is very high. The sellers are interested in products that meet quality standard and delivery during the peak seasons. The primary constraint is low production, absence of skill work force and products not meeting quality standard. The primary market hub for this product is Cox's Bazaar.

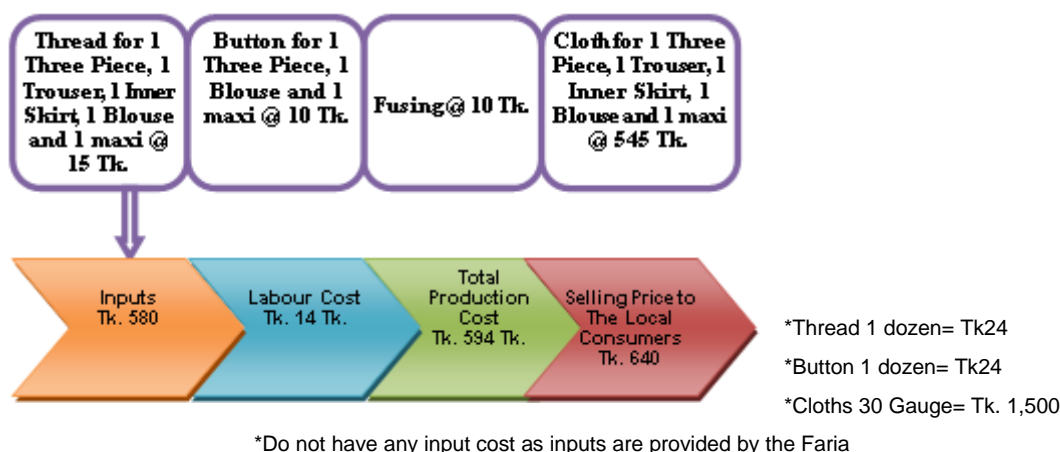
The above analysis demonstrates how the hand embroidery *carchupi* can remarkably engage the target community with little skills, although the question of skills development, assurance of quality, meeting supply deadlines, meeting profitable economic order quantity as well as market linkage remains extremely important in this sub sector as well.

The analysis shows that investing about Taka 670 the return can be as high as Taka 2,200 in roughly 5-10 working days. Alternatively, if the necessary raw materials are supplied by the producers, the target community can add value through stitching and earn Tk700 to Tk. 1,000 per piece. It was estimated that with average skill a person can produce one saree in 5 to 10 days per day and can improve this production rate to as high as 100-150kgs with superior skills and dexterity.

Following is the subsector map of hand embroidery *carchupi* making in a graphical representation generalized in the CREL and its partner working areas showing the relationship between the actors in reaching the final product to the customer through active and profitable engagement of the community people. Although the targeted community feels that this is an extremely tedious job and they cannot devote such attention and time.

Looking at the value chain map of tailoring showing the relationship between the actors in reaching the final product to the customer through active and profitable engagement of the community people, it is possible for CREL and its partners to invest in the sector for enhancing the livelihood of their target group. The dressmaking value chain map demonstrates the interrelationship of value chain members and how a "high value" value chain can be engaged through developing quality, productivity and cost leadership.

Figure 21: Sewing & Stitching/ Dress making/ Hand Embroidery/ Nakshikantha - Cost of Production and Sales Revenue / Profit per piece¹⁴



Hand Crocheted Prayer Caps

With rising demand abroad for the hand knitted caps have gradually spread in almost all the villages of Teknaf, Ukhia, Chakaria and Cox's Bazaar. The collector and the trader provide the women the yarns and other inputs. After completion of work the supervisors collect the products from their houses. A worker can knit three caps in a week and gets Tk40 a piece. The collector earns about Tk10 per piece to collect the caps from the different workers. The caps are generally sold in the

¹⁴ Primary data: in-depth interviews, questionnaire survey

imported country at Tk550 to Tk600 each. Various types of prayer caps are available in the Middle Eastern countries however; the most popular are the Bangladeshi caps as they are stretchable and handmade in crochet style.

Figure 22: Cost for Producing Hand Crocheted Prayer Caps



Fishing Net Making

The fishnet twine or yarn are mostly synthetic - Nylon Multifilament net, Nylon Monofilament, and HDPE nets. Cotton nets are rare for large commercial sea fishing. The yarns are sold in Kilograms.

Figure 23: Cost for Producing Fishing Net¹⁵



Do not have any input cost as inputs are provided by the Faria. Price depends on the size (length) of the net

Fishing net making is not very capital intensive each 10.5 feet long net (average size of the net produced by the group members) generally costs about Tk. 1,500. In a year, a producer can make about 6 nets (approximately about 1 net per 2 months). Yarn, Lead (to increase the weight of the net), and reel for knitting is required. The inputs are supplied from Chittagong market and are available in the local markets. The general peak season is May through September when a net is sold at Tk. 3,000 and in dull season the price is around Tk. 2,000 – Tk. 2,500. Total market value for fishing net in a year is about Tk. 102,16,000. Both demand and supply is limited. Mostly women are involved in this profession and they consider net making as a side profession after completing different family chores. Because of other family preoccupation, the women are not much interested in increasing the volume of production.

6.5 Assessment of the regulatory environment and support services

Nakshikantha

India has opened a register of what is known as Geographical Indicator (GI) of its products. Every member of the World Trade Organization (WTO) which abides by the Trade Related Intellectual Property Rights (TRIPS) Agreement is required to do this. Under Sections 22, 23 and 24 of this Agreement, individual countries have now the right to protect and patent famous, exceptional and extraordinary products originating within the geographical territory of the country, under the GI Act 1999. India has thus registered (uppada) jamdani sari as originating from Andhra Pradesh, the nakshi

¹⁵ Primary data: in-depth interviews, questionnaire survey

kantha from West Bengal. The GI helps producers differentiate their unique products from similar competing products. It enables their producers to build a reputation around such products so that they can fetch a premium price.

Fishing Net Making

The Government has banned the production, import and export of specific mesh size of fishing nets. Popularly known as current nets (Gillnet) with meshes of 4.5 centimeters or less in radius or length are production and export-import-banned. However, with the prior permission of the Director General of Fishing Department, only deep-sea fishing vessels can be allowed to import nets with meshes of 4.5 centimeters or above under the Sea Fish Ordinance 1983. The Director General of Fishing Department shall give permission for an importer per trawler to import 4.5 centimeters radius/mesh-net up to maximum 8 (eight) bag/sack per year.

Market Realities and the Community

Based on the market and community information, profitability and rate of return, bag making can augment the income opportunities of the existing dressmakers using the stitching skills.

The opportunity to link with value chain members and market demand and size of sewing & stitching and dressmaking is one of productive intervention CREL and the partners can try. This particular intervention can be tagged with the shopping bag manufacturing since the production process is almost similar although the value chain differs significantly. The key challenge here will be the facilitation of value chain integration linking the two products.

Based on the had market and community information, the analysis demonstrates that based on “Economy of Scale” and “Willingness to Work” bag making and sewing & stitching and dressmaking is one of the productive intervention CREL and the partners can try. Although willingness to work on “net making” very high the economy scale is extremely low because of a number of constraints. The key challenge here also will be the facilitation of value chain integration linking the two products.

6.6 Value Chain Governance

Influence & control along the chain

The sub sectors are largely influenced by traders, especially the local agents for hand crotched prayer caps. As local agents are collecting and influence for production. However, all other sub sectors, the wholesalers have more influence on the value chain. As producers are directly giving them or supplying them the products. Sometimes wholesalers send their own agents for collecting the finished products.

Power dynamics

Accordingly, for both product movements into and inside the district, the wholesaler is the main controller. Because of the little production volume, beneficiaries are unable to even captivate with the wholesalers, in addition little impact on them.

Inter-Firm Relationships

Agents play the important role in these sub sectors. They invest money to train the producers, collect inputs from market and engage the trained producers to make the products. For getting order from big buyers, first it is needed to place the sample to buyers. There for in this value chain different collaboration can be seen between the producers as well as among the traders as they need the high quality products.

6.7 SWOT Analysis

Table 15: SWOT Analysis of VC 1

Value Chain	Strengths	Weaknesses	Opportunities	Threats
Sewing & Stitching and Dress Making	<ul style="list-style-type: none"> Existing skills and capacity Locally available raw materials 	<ul style="list-style-type: none"> Poor forward market linkage Lack of capital Poorly organized groups 	<ul style="list-style-type: none"> Linkage with local sellers 	<ul style="list-style-type: none"> Deadlines specially during pick seasons
Hand Embroidery and Nakshikantha	<ul style="list-style-type: none"> Existing skills and capacity 	<ul style="list-style-type: none"> Poor forward market linkage Extremely poor demand in the local market Lack of capital Very small group of producers 	<ul style="list-style-type: none"> Linking with dressmakers to add higher value 	<ul style="list-style-type: none"> Not meeting quality and volume in time Higher quality products from regional and national markets
Hand Crocheted Prayer Caps	<ul style="list-style-type: none"> Existing skills and capacity High demand in overseas market Producer gets high moderate price than making charge 	<ul style="list-style-type: none"> Poor negotiating skills Price are generally pre-negotiated Poor price for value addition Poorly organized groups 	<ul style="list-style-type: none"> Marketing and promotion in international trade fairs Better price through improved negotiating skills 	<ul style="list-style-type: none"> The market is controlled by few buyers Poor local market
Fishing Net Making	<ul style="list-style-type: none"> Existing skills and capacity High demand for small scale fishers in the local market 	<ul style="list-style-type: none"> Poor demand Poor price value addition Very small groups of producer 	<ul style="list-style-type: none"> Higher quality products to cater a small local market 	<ul style="list-style-type: none"> Machine made quality products

6.8 Constraints Analysis

Table 16: Constraints Analysis of VC 1

Value Chain	Inputs	Processing	Marketing	Support Services
Sewing & Stitching and Dress Making	<ul style="list-style-type: none"> All the necessary inputs are available at the local market (collected from Dhaka and Chittagong) Lack of bulk purchase and negotiation skills 	<ul style="list-style-type: none"> Poorly organized groups Amateurish production Lack of commercialization 	<ul style="list-style-type: none"> Poor market interface with forward market actors Lack of knowledge about market demand and preference 	<ul style="list-style-type: none"> Skills training service providers
Hand Embroidery and <i>Nakshikantha</i>	<ul style="list-style-type: none"> All the necessary inputs are available at the local market (collected from Dhaka and Chittagong) Lack of bulk purchase and negotiation skills 	<ul style="list-style-type: none"> Poorly organized groups Amateurish production Lack of commercialization 	<ul style="list-style-type: none"> Poor market interface with forward market actors Lack of knowledge about market demand and preference 	<ul style="list-style-type: none"> Skills training service providers
Hand Crocheted Prayer Caps	<ul style="list-style-type: none"> Necessary inputs are available in the local market and also provided 	<ul style="list-style-type: none"> Poorly organized groups 	<ul style="list-style-type: none"> Poor market interface with forward market actors 	<ul style="list-style-type: none"> Skills training service providers

	<ul style="list-style-type: none">by the local <i>Faria</i>▪ Lack of buck purchase and negotiation skills		<ul style="list-style-type: none">▪ Lack of knowledge about market demand and preference	
Fishing Net Making	<ul style="list-style-type: none">▪ Inputs are available in the local market which are collected from Dhaka and Comilla▪ Lack of buck purchase and negotiation skills	<ul style="list-style-type: none">▪ Poorly organized groups▪ Amateurish production▪ Lack of commercialization	<ul style="list-style-type: none">▪ Poor market interface with forward market actors▪ Lack of knowledge about market demand and preference	<ul style="list-style-type: none">▪ Currently no constraints

6.9 Potential Interventions

Table 17: Potential Interventions of VC 1

Constraint	Intervention	Output	Outcome	Leverage point
Dressmakers sell their products in traditional neighborhoods as they do not have access to mainstream market that leads to low profit	Link with forward dressmaking market actors to access mainstream market	Market actors are providing information on demand and preference of dresses that has higher profitability and market demand	The traditional dressmakers are linked with the mainstream market actors and dressmakers can enjoy higher profit (50-60% increase in profit)	Linking the dress making clusters with the forward market for instance- main clothing markets at Cox's Bazaar Sadar (Boro Bazaar), Chakaria Bazaar, Teknaf Sadar Bazaar; especially large retailers
The traditional dressmakers are not organized resulting in higher transaction and transportation cost	Organize the dressmakers based on their production clusters, improve cooperation and leadership	The dressmakers are organized and through cooperative purchase reduce input and transportation cost	Improved negotiating skills and cooperative transaction has reduced the input and transportation cost and it will be lower by 10-15%	For organizing the dressmakers and to motivate local NGOs who are working for the dressmakers like Bastob (in Chakaria) can be potential partners
The producers of hand crocheted prayer caps are not organized resulting in poor negotiating and bargaining power over the buyers and traders	Organize the producers of hand crocheted prayer caps based on their production clusters, improve cooperation and leadership	Dressmakers are well organized and are cooperating with each other to	Improved negotiating and bargaining power are resulting in a) produce in bulk quantities through cooperation, b) bargaining power to improve value addition price by 10-15%	No local NGO is currently working for the cap makers however they can be potential partners as well

6.10 Recommendations

After having reviewed the market conditions, a number of potential value chain interventions were identified to address the constraints faced by the target community in making their livelihood truly meaningful. The Value Chain – Market Assessment team proposes that CREL and all its partners have the potential to work on the value chain activities. It is felt that the community people are currently working without a unified approach and methodology for market improvement. Because of the unique strengths and shortcomings of the beneficiaries as well as the implementing organization

in certain operational areas, the team feels that relatively easy products be chosen as an entry point to maximize the impact through market synergy, leveraging the strengths of each other to create a high impact strategy.

Beneficiaries that are particularly closer to the large market can develop improved market interface with the value chain members for enhancing business value addition for improved cost leadership. However, it may be noted that all the beneficiaries' livelihood activities are primarily geared towards a very traditional NGO service delivery and provider's approach. The new paradigm of market development and value chain integration is critical to the project outcome and would necessary required to dramatically shift in their approach. In this regard, capacity building and hands-on facilitation skills should be developed to understand and appreciate the value chain and market development principles. An extensive capacity building and orientation as well as support would be required in implementation of the program.

In general, although the organizations work with the traditional development paradigm of NGOs being direct service providers, the partner organizations are emphasizing the importance of learning from the current piloting phase to understand which interventions and approaches could be market driven and self-sustaining; and have the potential for scaling-up. All the partner organizations seem keen on learning and pursuing the market development and value chain approach. The assessment team feels that the partner organizations can contribute positively in the Value Chain program interventions mentioned in this report once CREL and its partners shows its willingness and agrees to work on the new approach and methodology.

From the assessment it was found that knowledge and information about market and its role is one of the critical issues for the community as well as the partner organizations. The community and the partner organizations have satisfactory preparedness in terms of personnel and willingness to embrace the new approach – the market development and value chain integration. Poor conceptual clarity of this approach is probably one of the major impediments in making the community and the partner organizations to participate with the process. Majority of the staff and the community people actually believes that although market is a difficult mechanism to enter and interface, however, appropriate hands-on practice and facilitation can greatly benefit them. At the same time the community and the partner organizations are also extremely excited to know that CREL has understood and acknowledged the need for a change in the existing value chain issues and plans to improve this. The community believes that many of the value chains that did not prove fruitful because of poor facilitation and services from the organization. It would be extremely useful to the local community if the new approach is designed in participation with them and as per the needs and expectations of the community.

Although there is been fairly a good consensus by the community that IGAs do have the potential to improve the life and livelihood as well as local social and economic performance they feel that a vertical accountability and transparency is also utmost important, since they have no idea what the organizations are trying to do and how long are they going to stay with them. The participation of the target community, scope and opportunities for constructive criticism and improvement, level of commitment, from the all the community people are extremely important in designing a market based value chain approach.

Effective community participation to improved livelihood and quality of life is not limited merely to the program design and delivery, but has critical dynamics of true participation and commitment from all levels of people in the community. The most successful results involve in women and men as well as youth with experience in market interface that show more sensitivity to market dynamics and their needs, and are aware of other sources of market information to market actors to collaborate. CREL program activities focus on developing appropriate IGAs of not only the women but also the key members of community and the facilitating organizations to improve quality of life and livelihood of the target community. Gaining the involvement, participation, cooperation of target community people as participants can be challenging. Often, because of their lack of experience with the alternative livelihood and IGAs, skepticism of the market driven initiatives and sensitivity of market interface, the

target community people may fear that interacting with the local market actors and value chain members and service providers may often not take positively and can jeopardize the entire program activity. The partner organizations must have the capacity to preempt these challenges and risks and develop adequate plans to address these challenges.

The target community people especially women find it hard to identify themselves as market participants due to persistent neglect and lack of knowledge of market. The partner organizations require developing separate program interventions to deal with these challenges and seek cooperation economic incentives among many stakeholders. The partner organizations must consider their negotiating strategy to elicit appropriate and effective interface with the market actors. The partner organizations may consider working closely with community people and the market actors to secure testimony from rights violation, and consult with local concern authorities, NGOs/CBOs that provide services and advocacy to the targeted community. Other agencies, such as those dealing with market development, can assist the partner organizations in the process of fact findings, information collection, interaction and providing space for market interface, etc.

These dynamics of the market development and value chain approach demand a well-capacitated and well-informed facilitation with equally well organized appropriate knowledge and market interface. The assessment shows that the conceptual clarity of the partner organizations is extremely important not only for only facilitating but also to effectively impart knowledge to the members of the community institutions as well as to develop necessary confidence to the target community people. Identification of right product and for the right market and at the right time is extremely critical is the critical success factors in market development approach. The overwhelming demand for different products by the market is critically challenging in developing the community to appropriately react to the changing market demand and conditions. This would demand superior skills, community integration, feedback mechanism, monitoring tools, etc.

7. Value Chain Analysis for VC2: Strawberry, Capsicum and Medicinal Plants

7.1 Brief Overview

Conventional farming is no longer profitable for the small farmers due to increasing input costs and relatively lower product values. Since stable supply of agricultural produce for the millions of people living in urban centres remains a challenge, supplying quality food to the urban people can be an opportunity for the small farmers provided an effective market chain is developed and sustained.

Absence of organized market chain, low price at the farm gate and lower profit earning, absence of association of small farmers or producers is the major phenomenon in Bangladesh agriculture. CREL's organized groups and producers' can enable the target small farmers to mobilize their resources in a secure environment, increase their efficiency, enhance bargaining capacity and earn greater profit. The local farmers in the target area, grows traditional staples and vegetables at a lower profit results in lower income opportunity. Most farmers are unaware of the new production technology of many of the high value crops that has potentially high market opportunities both at local and national markets. To be able to operate successfully, these small holders are required to be equipped with training and orientation on production and marketing of high value crops. Farmers are not organized entrepreneurs and lack bargaining capacity for marketing their produce. In order to develop sustainable peri-urban agriculture it is essential that farmers are better organized into producers' groups and linked with high-end markets. In view of organizing farmers into producers' group empowering them to produce and supply high value crops, this assessment was undertaken.

Traditional work on value chains describes the internal capability of an enterprise to manage its value chains in an advantageous way. The aim of this process is to design the complete environment of companies to which the above is an enabler. It is worth reinforcing the importance of all aspects of this - up-stream, down-stream, and sideways. A product itself does not create a sustainable edge, so the need is to create a new value chain from the functions associated with new products.

Following products were short listed during the preliminary assessment phase and were validated through the participation of all the stakeholders of CREL projects. In the current phase, detail market assessments were conducted for the following products:

1. Strawberry
2. Capsicum
3. Medicinal Plants

Enhancing Smallholder farmers' income of CREL through cultivation of potentially high-value crops:

Strawberry

- Strawberry is one of the economically important edible fruits throughout the world. Ranked high among small fruits esteemed as dessert and consumed for its flavor.
- Plant Breeding and Gene Engineering Laboratory, Dept of Botany, Rajshahi University, has been researching programme since 1998, to develop strawberry (*Fragaria xananssa*) varieties suitable for cultivation in Bangladesh weather condition.
- Considerable progress has been achieved and three genotypes have selected through the induction of somaclonal variation. The selected genotypes are proved to be adaptive to Bangladesh and have high yield potential with very good quality fruits.
- In view of the potential commercial value, it is highly desirable to develop methods for rapid, efficient and large-scale multiplication of these strawberry genotypes using plant tissue culture technique.
- In Bangladesh, a number of NGOs and private sectors are establishing strawberry cultivation. Professor Dr. Monzur Hossain of Rajshahi University (RU) is the pioneer to research and extension of strawberry cultivation in Bangladesh.
- Most of the private sectors and NGOs have initiated strawberry cultivation from technical assistance from RU. The initial strawberry runners (seedlings) were also collected from RU.
- These private sectors are now in a position to provide training and inputs (runners) to the farmers. Most of the demonstration farmers harvested strawberry around 20kg to 50kg per decimal of land.
- It was proved that strawberry can grow well in local weather and strawberry cultivation can make a good profit for the farmers.



The Cox's Bazaar region is vested with the right agro-ecological conditions – sunshine, sandy loam soil structure, balanced pH condition (6-7), a well-drained soil type and higher organic matters in the soil are found in the target area. It is possible to do intercropping of other crops with strawberry cultivation, however, it is generally advised to avoid peppers, tomatoes, egg plants and potatoes field, as these plants could harbor verticillium wilt, a disease which can affect strawberry plant easily. Land which was recently covered by grass area also not advised for strawberry cultivation as there may be available a large number of wire worms. It is generally ideal to practice crop rotation for improved productivity as a result the same land should be avoided for cultivation in a succession for a number of years. It is preferable to plant it in green manure field. Strawberry may not survive in alkaline soil or high acidic soil. Soil PH ranging from 5.6 to 6.5 is preferable for strawberry cultivation. In light soil along with organic matter, runner formation will be better. In northern region



of Bangladesh, November is the ideal time for strawberry cultivation. Land should be well-ploughed to get maximum benefit. Strawberry can be planted on raised-bed. Bed can be prepared with 15cm height and 30cm width, where two rows can be planted in one bed. The spacing for planting should be considered at 25cm x 20cm in each bed. Around one lakh (100,000) fresh and healthy runners (seedlings) are required for planting in one hectare of land. Late afternoon is the best time to plant the runners (seedlings) on the raised bed. Regarding plantation of the runners on the bed, shallow plantation should be considered, so that the soil is just covering the tops of the roots and a little water would be better to use just immediately after planting the runners. After top-dress, irrigation may be useful to utilize fertilizers into the root zone. Since strawberry is relatively shallow-rooted, frequent irrigation is necessary at different stages of strawberry plants. Otherwise, the mortality of the plants becomes high. Weeds should be controlled as weeds are the major problems in strawberry production. Strawberry plants start flowering within one month of plantation and fruits can be collected in February-March. Strawberry will turn bright red, when they are ripe and ready to be harvested. The strawberry can be

Man Who Turned Cox's Bazar Colorful with Strawberry and Capsicum



A small village Kakara of Chakaria and its inhabitant Rezaul Karim is now almost synonymous when it comes to strawberry farming. How Rezaul has earned such reputation is a story encouraging to others. His tireless endeavor and dedication made him a successful grower of strawberry. "Agricultural innovation has been my hobby since early life. A television program in 2008 has encouraged me to go for strawberry farming and I started gathering knowledge from whatever the source I found accessible" says Rezaul. Before cultivation of strawberry on his small piece of land in August 2009, he came across an expert at a conference in Dhaka in June in that year, which was organized by Bangladesh Strawberry Association. The paper presented by Dr Monjur Hussain, the strawberry expert and a professor at Rajshahi University, showed Rezaul the way, he went on. In a span of hardly five months, Rezaul succeeded as a successful strawberry grower. More than 200 kilograms of strawberry he has already sold out at Tk750 a kg in the local market, and also in Dhaka. Rezaul now eyes a large-scale farming. He said, "The DC of Cox's Bazar was extremely helpful and promoted strawberry in this locality. The DC used to ask every person he would meet to purchase strawberry. He would entertain all his guests coming to his office. Later the DC even issued a circular to all the upazilas to serve strawberries in the meetings. His active encouragement and promotion did work to establish strawberry in Cox's Bazar." Chakaria soil suited his cultivation. So was the climate, as strawberry was tolerant to tropical weather. Rezaul, who invested around Tk5 lakh in his strawberry farm, collected 5 thousand saplings from Dr Monjur Hussain of Rajshahi University, innovator of the RB-3 variety. Rezaul Karim is an extremely enterprising farmer cultivating newer crops. He managed his initial investing by selling his favorite motorcycle.

Rezaul also experimented with capsicum, however, the success this time was limited due to poor seed quality that he purchased from Chittagong. But a neighbor of Rezaul, who collected capsicum seed from England demonstrated remarkable success in harvesting superior quality colored capsicum. Rezaul is planning to expand not only strawberry cultivation this year but also capsicum as well. A total of six persons are working in his farm. Rezaul said if the agriculture department extends support to growers, it is possible for the country to fetch foreign exchange from strawberry exports. He has a plan to expand strawberry farming to other areas through his direct assistance and motivation.

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harvested within two and half months of its plantation and a farmer can earn around Tk700,000 by farming strawberry in 40 decimal of land with an expenditure of Tk50,000 in the first year and Tk25,000 in the subsequent years.

A farmers of Belabo Upazila in Narsingdi district started farming Strawberry, following its economic prospect. He collected the initial saplings (runners) of Strawberry from Cyprus and from it, grew more saplings and cultivated 4,000 Strawberry plants on one bigha of land in his homestead garden in October 2012. The plants started bearing fruits within three months and began harvesting those from January 2013. He has been harvesting 10 kilograms of strawberry everyday from his garden and selling it at Bhairab fruit market at the rate of Tk700 per kilogram. He earned a total of Tk14.50 lakh. Nazrul Islam also grew strawberry saplings (runners) in his field and sold them and earn over Tk3.50 lakh from sales of saplings. According to a farmer, Milon Mia of Dagoria village in Narsingdi Sadar upazila the production cost of the fruit on one *bigha* of lands stands at about Tk80,000 to Tk100,00. He planted saplings of strawberry in early winter that is in the first week of October and started harvesting those after three months from December last. He collected the fruit since then and it continued till the middle of April. Strawberry has high demand in the market but in the absence of effective market linkage farmers' cannot expand its cultivation. A kilogram of Strawberry is selling at Tk650 to Tk800 and even Tk1,100 in the national market. According to Deputy Director of AED cultivation of Strawberry is more profitable than other fruits as it has great demand in the local markets. The Quantum Foundation authorities in Rajshahi bought over 1,000 strawberry plants for Tk20,000 a month ago. They spent a further Tk13,000 cultivating a fallow eight decimal pieces of land in Shitlai Kazipur area. They are now waiting to cash more than Tk2 lakh, six times the amount they invested, by selling 250kg of strawberry in just 10 days.

Strawberry has been registered with the National Seed Board recently, following its successful experimental cultivation at Rajshahi and the Bangladesh Agriculture Research Institute in Joydevpur¹⁶.

Strawberry cultivation was successful in the hilly Matiranga Army Zone in Khagrachari last year. This year, many fresh initiatives were taken to develop the trade in Panchagarh, Dinajpur, Tangail, Rangpur, Kurigram, Mymensingh, Noakhali, Laxmipur, Jessore, Magura, Faridpur, Madaripur, Cox's Bazaar and many areas around Dhaka.

At present, the methods are now more developed, following successful cultivation over the last five years. According to the pioneering farmers, strawberry cultivation is no difficult from growing tomatoes or brinjals. Saplings are sown into prepared beds of matted rows in November and December.

Each plant bears around 250 to 300 grams of fruits and some 6,000 plants can be grown on a *bigha* of land. A farmer can spend Tk20,000 to yield 2,000 kg fruit on a *bigha* of land. Local fruit importers and foreigners, who visited Manzur's strawberry field, comment that the produce was better in size, color and taste than those found in many other countries.

Quamruzzaman hopes some 8,000 strawberry plants in his nursery will yield more than two tonnes of produce. He even sold good quality strawberries at Tk2,000 per kg in Dhaka last year. "I recently planted two new varieties from America Camarosa and Festival. Each fruit of the export quality varieties would weigh about 50 grams. Other strawberry varieties usually weigh around 25 grams.

RU-3 and Modern-3 varieties were found very impressive in size, taste and flavor. Saplings can be planted in rows in the period between November and December. The plants start flowering within one month of plantation and fruits can be collected till March. Each plant bears around 250 to 300 grams of fruit and some 6,000 plants can be grown on one *bigha* of land. Import strawberry from Thailand and Australia at Tk900 to Tk1, 200 per kg. Strawberry essence is also imported.

As different technical service provisions, the following organizations are working on strawberry propagation in Bangladesh:

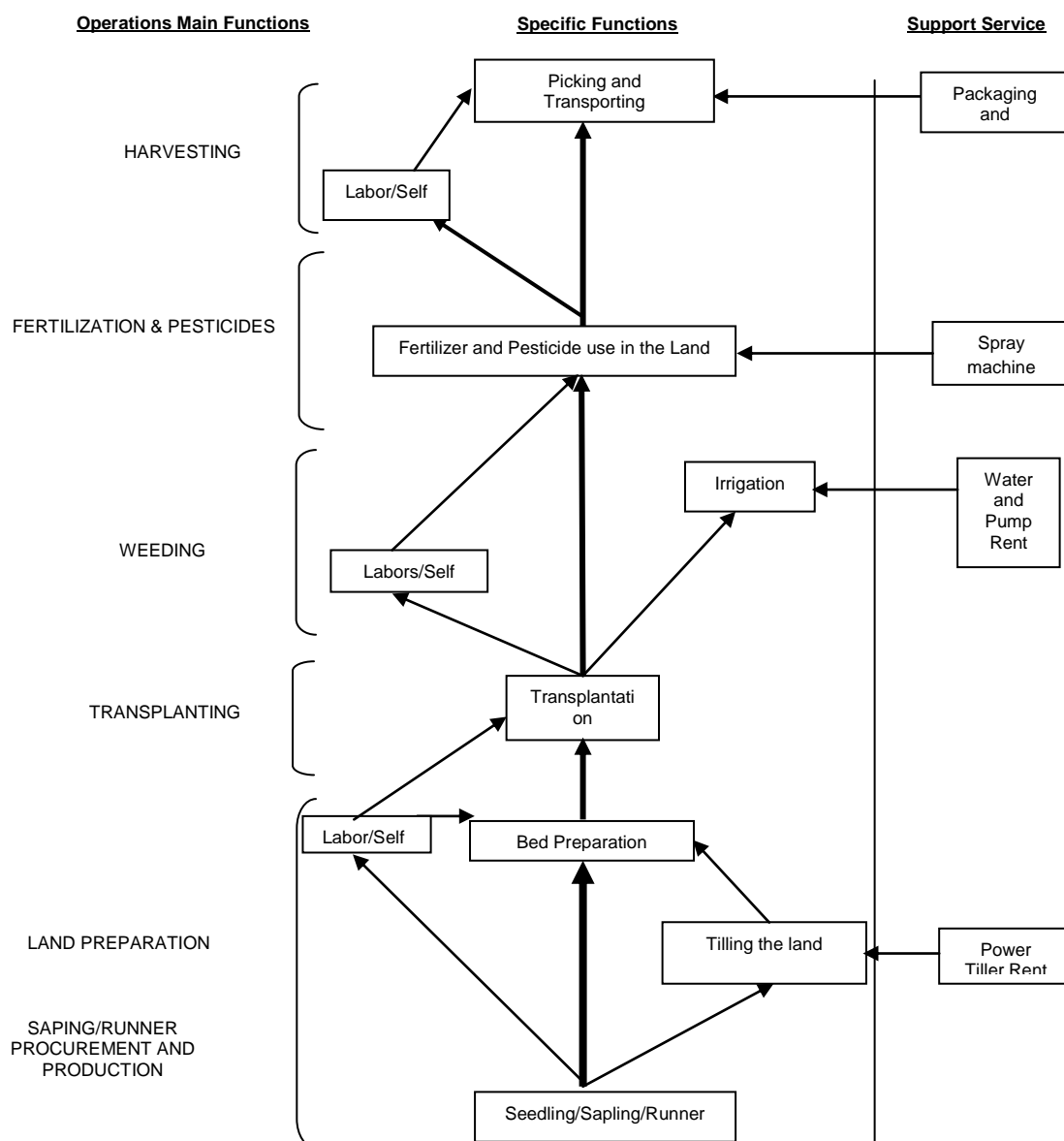
1. National Institute of Biotechnology (NIB) is providing services for Micro propagation of strawberry in Bangladesh. Disease-free orchid production. Conservation of endangered medicinal plants.

¹⁶Dr Shafikul Islam, Senior Scientific Officer of Rajshahi Fruit Research Centre

Objectives of Biotechnology are to identify disease and pest resistance genes for cloning, sequencing and expression.

2. BARI achievements in Biotechnology as follows: Tissue culture of banana, jackfruit, pineapple, water melon, papaya, coconut, grape, gladiolus, orchids, chrysanthemum, rose, tuberose, strawberry, gourd, ginger, brinjal, and potato.
3. Atomic Energy Research Establishment: Plant Biotechnology and Genetic Engineering Division: tissue culture of forest, fruit, medicinal and ornamental plants.
4. Department of Botany, RU Strawberry: Development and release of somaclonal variant suitable for Bangladesh
5. Department of Botany, Chittagong University: Agro bacterium mediated transformations in potato, rare and endangered orchids and medicinal plants.
6. BRAC Plant Biotechnology Laboratory Commercialization of virus-free potato plantlets and seed potatoes. Production through tissue culture of four popular imported flower species (anthurium, gerbera, carnation and orchids), Production en masse of fancy cacti, Disease free fruit plantlets (banana, jackfruit, strawberry, sweet karamcha and lemon, Commercialization of Stevia plants
7. Square Agro Development and Processing Ltd: Potato plantlets and seeds; orchids; strawberry saplings.

Figure 24: Process of Strawberry Cultivation



Recon Group Bangladesh was established in 2011 by few Biotechnologists from Shahjalal University of Science and Technology, Sylhet, Bangladesh. While establishing the company, all the entrepreneurs were student of Biotechnology, Undergraduate level. Now, This group is professionally leading the industries which solely concerns Recon Group Bangladesh.

Recon Group organizes seminars to popularize Agro-Biotechnology among the common people. The main aim is to introduce biotech facilities among the root level farmers and entrepreneurs in a generalized way. Recon also arranges scientific seminars for the enlightenment of Young Researchers of Bangladesh.

Capsicum

- Capsicum is a perennial shrub that grows within three months and is harvested over a three- to six-week period.
- Given capsicum's relatively quick growing and harvesting period, it is a low-risk crop that does not require substantial working capital investment.
- In Bangladesh, capsicum is grown during October to March which is winter season. High night temperature (17-20°C) during flower development is a prerequisite for well shaped elongated capsicum.
- Capsicum uptakes high nutrient hence correct supply of organic and inorganic nutrients was found to increase the yield and quality. The soil type in the cultivated area is sandy loam and the capsicum variety California Wonder is most appropriate for the target areas in Cox's Bazaar.
- The optimum night temperature can be maintained by providing polythene cover along the sides of the poly house. This can result in significant increase in yield and quality (size, shape and individual fruit wt.) due to fertigation. Highest number of fruits/plant and yield (13.64 t/ha) can be obtained. The highest benefit cost ratio 1:5 was obtained from fertigation treatment while 1:3 can be obtained from furrow irrigation treatment.



This goes well for CERL target group members. A short growing and harvesting period makes capsicum more competitive as it is easy for other farmers to enter into the market. As capsicum is a very high value crop and gaining popularity in the super markets of Bangladesh and has got export potentiality, the commercial farmers can adopt this technology for quality production.

During 2009 Olericulture Division, HRC, BARI has released an OP capsicum variety named BARI *Misti Morich* 1. Recently HRC, BARI has released an OP capsicum variety named BARI *Misti Morich* 1. Fruits are shiny green bell shaped converted into red after ripening. Average fruits per plant is 7-9, fruit weight 75-85 g. Fruits can be harvested in 100-105 days and yield 13-15 t/ha. In addition to this, some commercial popular hybrid varieties such as California Wonder, Yolo Wonder, Yellow Wonder etc., are also grown in the country.

Medicinal Plants

According to the WHO:

- “A medicinal plant is any plant which, in one or more of its organs, contains substances that can be used for therapeutic purposes, or which are precursors for chemo-pharmaceutical semi-synthesis.”
- When a plant is designated as ‘medicinal’, it is implied that the said plant is useful as a drug or therapeutic agent or an active ingredient of a medicinal preparation.



- “Medicinal plants may therefore be defined as a group of plants that possess some special properties or virtues that qualify them as articles of drugs and therapeutic agents, and are used for medicinal purposes”.

Chemicals that make a plant valuable as medicinal plant are:

- **Alkaloids** (compounds has addictive or pain killing or poisonous effect and sometimes help in important cures)
- **Glycosides** (use as heart stimulant or drastic purgative or better sexual health)
- **Tannins** (used for gastro- intestinal problems like diarrhea, dysentery, ulcer and for wounds and skin diseases)
- **Volatile/Essential oils** (enhance appetite and facilitate digestion or use as antiseptic/ insecticide and insect repellent properties)
- **Fixed oils** (present in seeds and fruits could diminish gastric/acidity)
- **Gum- resins and mucilage** (possess analgesic property that suppress inflammation and protect affected tissues against further injury and cause mild purgative)
- **Vitamins and minerals** (Fruits and vegetables are the sources of vitamins and minerals and these are used popularly in herbals).

In Bangladesh 5,000 species of angiosperm are reported to occur (IUCN,2003). The number of medicinal plants included in the ‘materia medica’ of traditional medicine in this subcontinent at present stands at about 2,000. More than 500 of such medicinal plants have so far been enlisted as growing in Bangladesh¹⁷. Dhaka, Rajshahi, Shylet and Chittagong division is rich in medicinal plants¹⁸.

Five major plants which can be produce in Cox’s bazaar within 6 months are-

- Holy Basil (Tulshi Pata)
- Aloe vera (Ghrito Kumari)
- Stevia
- Mentha (Pudina Pata)
- Indian Pennywort (Thankuni pata)

Preconditions for improved production of medicinal plants are generally balanced pH 5.5-6.5 and a fertile land for medicinal plants

7.2 End Market Analysis

Strawberry

The country has demand for 50 tonnes of strawberries per season, which local traders import from different countries including the US, Thailand and Australia. The annual growth rate of fresh strawberry is increasing at a geometric progression in Bangladesh. Since the introduction of strawberry about 6 years ago, the demand for the new products has increased several hundred times. With the increased awareness about the products availability in the local market, the end consumers have started to consumer in larger quantities. Although, in the strict sense of marketing, the product is still at a trial stage, the market behavior shown all positive signs of a successful product adaptation, such as repeat purchase, continuous demand, increase in consumption pattern – from experiment to trial to almost a steady consumption. Presence of institutional purchase by hotels, super shops, food processing industry is also another significant indicator of market maturity.

¹⁷ Ghani A.(1998), Medicinal plants of Bangladesh: Chemical constituents and uses. Asiatic Society of Bangladesh, Dhaka

¹⁸ Bio-ecological Zones of Bangladesh, IUCN-The World Conservation Union, Bangladesh Country Office, 2003

Strawberries are usually eaten raw or used in preparing ice creams, jams, jellies, pickles, chocolates, biscuits, cakes and milk shakes. The strawberry fruits have potential to be used as jam, jelly, syrup and as a foundation in beverage and ice creams. One of the sellers has expressed that certain festival shows marked consumption of strawberries such as Eid, Weddings ceremonies, Valentine's Day, Christmas, etc.

Bangladesh showed a remarkable growth in fresh fruit consumption in the last 10 years. Fresh fruit consumption has increased from 26.5 grams in rural area and 35.6 in urban in the year 2000 to near about 60 grams in urban area in 2012. This is partly due to the increased availability of exotic fruits. Consumption of guavas, mangoes, jackfruit, pineapple, lichees, etc., has increased about 50% from a decade ago. The demand for eating processed fruits such as pickle, jam, juice, has increased up 57.7% over the last 20 years.

The import of apples, grapes and pears are primarily from India, Bhutan, South Africa, Australia, and China. \$139.5 million imports of fresh fruits in FY 2011. Despite high tariffs, apple imports and consumption have been growing at about 2-3% a year.

Export of edible fruits and nuts citrus fruits 345.73 December 2011 to 490.96 in January 2013 showing an increase of 42.01

Capsicum

Capsicum or popularly known as Mishti Morich (sweet pepper) / Shimla Morich, is relatively a new product in Bangladesh catering a niche high end market of Bangladesh. The larger consumption is Dhaka and a few urban cities such as Chittagong and Sylhet. The largest consumers are hotels and restaurants in the cities. Due to significant change in food habit and advent of new recipes capsicum has become one of the basic food ingredients in Bangladesh.

However, there is no specific statistics regarding the market size of capsicum in Bangladesh, it is estimated that more than 150 tons of capsicum is consumed in Bangladesh per year. A large majority of the demand (about 90%) is catered through import of capsicum primarily from India, Thailand and China.

Considering its popularity in Bangladesh, a large number of farmers have started to produce capsicum mostly in South West (Jessore) and North Western regions (Rajshahi and Rangpur) of Bangladesh. A little amount is also grown in Sylhet and Chittagong.

The demand for capsicum is steadily increasing due to changes in consumers' food preferences and importantly the demand is not seasonal rather round the year.

The capsicum supply chain is essentially handled by the chili market chain. In Cox's Bazaar only a few traders are currently engaged in catering primarily the demand of local hotel. The products are brought from Dhaka. The current yearly consumption of capsicum in Cox's Bazaar is about 5-10 tons

Medicinal plants

The practice of traditional medicine is deeply rooted in the cultural heritage of Bangladesh and constitutes an integral part of the culture of the people of this country. Different forms of Traditional medicines have been used in this country as an essential means of treatment of diseases and management of various health problems from time immemorial. The practice of traditional medicine in this country has flourished tremendously in the recent years along with that of modern medicine. As a result, even at this age of highly advanced allopathic medicine, a large majority (75-80%) of the population of this country, particularly in the rural and semi-urban areas, still prefer to use traditional medicine in the treatment of most of their diseases even though modern medical facilities may be available in the neighborhood. However, the concept, practice, type and method of application of traditional medicine vary widely among the different ethnic groups living in different parts of the

country according to their culture, living standard, economic status, religious belief and level of education. Thus traditional medicine practice in Bangladesh includes both the most primitive forms of folk medicine (based on cultural habits, superstitions, religious customs and spiritualism) as well as the highly modernized Unani and Ayurvedic systems (based on scientific knowledge and modern pharmaceutical methods and technology). These various aspects of Traditional medicine practice in Bangladesh, their current official status (acceptability, recognition, etc.) in the country as a means of treatment, and their contribution to, and impact on, the overall health management programs of the country are described and discussed in this paper supported by documentary evidences and scientific data.

Total yearly market value of medicinal plants in Bangladesh about Tk500 crore, however, the illegal market is worth about 1,000 crore per year. 80% of the medicinal plants are imported from India, China and Malaysia (primarily from India). There are about 600 renowned herbal medicine companies in Bangladesh that requires medicinal plants as their primary raw material. The Unani practicing doctors are contributing for Tk410 corer by producing Unani medicines and different Unani institutes are contributing about TK340 corer. There are about 120 different types of medicines prepared from medicinal plants. 70% of the medicinal plants are used as medicines and rest 30% are used as food consumption. The medicinal plant industry is growing at rate of 25% per year. To cater the industry, Bangladesh need to produce quality plants urgently.

The following medicinal plants are imported from different sources:

- Indian: Amla/ Indian gooseberry/ Amalaki, Chandan
- Malaysia, Indonesia, and Thailand: Saffron, cinnamon, cardamom, cloves, etc.

It may be noted that cloves and saffron can be produced in Chittagong, Jessore, Gazipur, Shatkhira, Naogaon. Malabar nut, as well as Vasaka, Holy Basil or Sacred Basil, Arjuna, Indian Pennywort/ Centella, Stone Apple, Aloe Vera etc., are cultivated in limited quantities in Bangladesh.

In Cox's Bazaar region, Wild Asparagus, Devil's Cotton (Olat Kambal), Ashwagandha / Indian Ginseng, Turmeric, Aniseed, Aloe Vera, Mentha, Lily, Rose, Nigella Seed, Holy Basil, Sesame Seed, Indian Bedellium Tree, Indian Pennywort, Fenugreek Seed, Fenugreek Leaf, Asafoetida, etc., can be grown very profitably. For a quicker return within 2 to 6 months time the following can be produced in Cox's Bazaar area:

- Aloe vera
- Stevia
- Holy basil
- Malabar nut
- Wild asparagus

7.2.1 Main Market, Buyers & Competition

Strawberry

The value chain is focused on domestic fresh fruit market. Exports of strawberry do occur on a largely opportunistic basis two such consignments were sent to Oman recently.

The overall fresh fruits market although is expanding at a rate of about 5% every year, however, import of certain non-traditional fruits have declines significantly. At the same time, import of apple, orange, grapes, etc., has increased significantly in the last 5 to 10 years.

Import of fresh strawberry is insignificant in Bangladesh, although there are large quantities of processed strawberry products such as pulp, essence, etc., are imported every year.

Capsicum

Capsicum or popularly known as *Mishti Morich* (sweet pepper) / *Shimla Morich*, is relatively a new product in Bangladesh catering a niche high end market of Bangladesh. The larger consumption is Dhaka and a few urban cities such as Chittagong and Sylhet. The largest consumers are hotels and restaurants in the cities. Due to significant change in food habit and advent of new recipes capsicum has become one of the basic food ingredients in Bangladesh.

However, there is no specific statistics regarding the market size of capsicum in Bangladesh, it is estimated that more than 150 tons of capsicum is consumed in Bangladesh per year. A large majority of the demand (about 90%) is catered through import of capsicum primarily from India, Thailand and China.

Considering its popularity in Bangladesh, a large number of farmers have started to produce capsicum mostly in South West (Jessore) and North Western regions (Rajshahi and Rangpur) of Bangladesh. A little amount is also grown in Sylhet and Chittagong.

The demand for capsicum is steadily increasing due to changes in consumers' food preferences and importantly the demand is not seasonal rather round the year.

The capsicum supply chain is essentially handled by the chili market chain. In Cox's Bazaar only a few traders are currently engaged in catering primarily the demand of local hotel. The products are brought from Dhaka. The current yearly consumption of capsicum in Cox's Bazaar is about 5-10 tons

Medicinal plants

This sector is deprived of proper institutional laws and therefore it is very difficult to standardize the import and export process

Major users of medicinal plants:

- Hamdard Laboratories producing about 133 products
- Sadhana Ousadhaloy producing about 150 products
- Shakti Ousadhaloy producing about 138 products
- Ayurvedic Pharma Ltd producing about 135 products
- Human Drugs Ltd producing about 28 products
- National Pharma producing about 16 products
- Kundeswari producing about 48 products
- Mujaher producing about 39 products
 - Traditional Medicine Resource
 - Crude drug market
 - Wild habitat
 - Forest floor
 - Homestead & Fellow land
 - Cultivation
 - Import

7.2.2 Demand-Supply Situation

Strawberry

The country has an annual demand for around 250 tonnes of strawberry. Currently strawberries are imported from Thailand and Australia at Tk 900-Tk.1,200 per kg. In addition to this, strawberry pulp and flavor is also imported.

Capsicum

The country has an annual demand for around 150 tonnes of capsicum. Currently capsicums are imported primarily from India, Thailand and China at Tk. 300-Tk500 per kg. In Cox's Bazaar about 5-10 tons of capsicum are required and is currently catered through national suppliers.

Medicinal plants

The demand –supply situation of medicinal plant can be described by the following table:

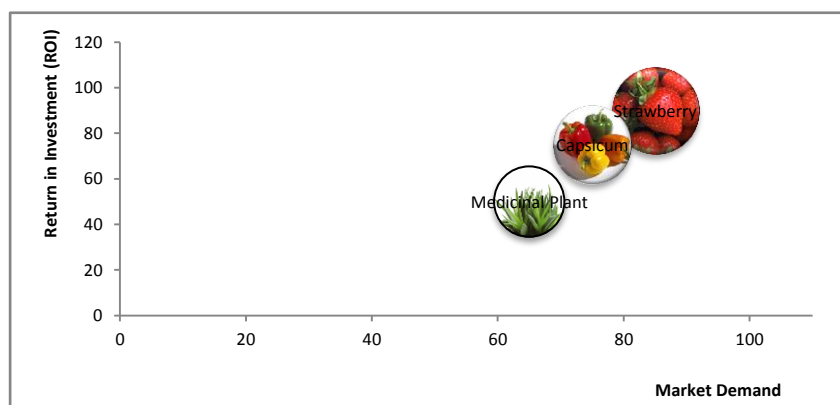
Table 18: Demand-supply situation of medicinal plant¹⁹

Description	Number of Enterprises	Production (Import)	Medicine Production	Medicine Import	Medicine Export
Unani	210	4 corer	320 corer	0	0
Medicine produced by Unani practitioners	51,292	3 corer	410 corer	0	0
Ayurvedic	162	3 corer	280 corer	0	0
Medicine produced by Ayurvedic practitioners	4,3861	3 corer	340 corer	0	0
Unani and Ayurvedic medicine export potential					1,500 corer

7.2.3 Market opportunities

The market opportunities of Strawberry, Capsicum and Medicinal Plants are shown by the figure:

Figure 25: Market Opportunities of Strawberry, Capsicum & Medicinal Plants



Strawberry

Both local and national markets require about 150 tons of strawberry per season. Bangladesh is at the moment producing only 40-50 tons. Apart from the fresh fruit market, strawberry is required in food processing companies such as in production of jelly, jam, juice, bakery, ice-cream, flavor and essence and pulp production. The demand in the food processing market is more than 400 tons per year.

The target beneficiary can be linked with both fresh and processed strawberry markets. Considering the new RU3 and Festival variety which has high flavor and color, the local strawberries has been high market acceptance and demand. The recent market behavior also suggests that there is high demand for organic food and fruits using no chemical pesticides, preservatives and ripening agents. If

¹⁹ Source: Hakim Mohammad Ferdous Wahid, Role of Traditional Medicine in Social Economic Development of Bangladesh, November 14, 2012

CREL can introduce its brand, it can easily enter this extremely high premium market. It may be noted that strawberry produce higher yield in organic environment.

In addition to the fresh market, a small pulp factory in Cox's Bazaar BSCIC area through private sector partnership can cater the market round the year and minimize the risk even further for the producing beneficiaries. However, this is not an urgent issue at the current market conditions where demand for fresh fruits is still higher.

Capsicum

- Capsicum has a higher income elasticity of demand than other stable crops.
- Capsicum tends to require two to four times more labor than cereal crops and provide opportunities for unskilled labor.
- Capsicum provides opportunities for growers to move up the value chain, as a growing market exists for high-quality processed spices,
- The production of capsicum is concentrated in a few countries mostly developing nations. The top 10 producers of capsicum accounted for 80% of production. India is dominant producer (44%) followed by China with a 9% market share. Bangladesh was the world's fastest growing producer of capsicum and by 2004, its third largest producer

Medicinal plants

Medicinal plants are consumed by a large number of Ayurvedic, Unani, Homeopathic industries and practitioners in Bangladesh. The number of such industry and practitioners are provided below:

Table 19: Number of industry and practitioners²⁰

Traditional Practitioners	Ayurvedic and Unani	Recognized	6,000
		Institutionally Trained	1,000
		Unregistered	10,000
	Homeopathic	Registered	25,000
		Unregistered	20,000
Modern practitioners	Prescribe TM		500
Traditional/Folk remedies	Ojha/Fakir		50,000
Traditional Drug Producers	Ayurvedic		161
	Unani		261
	Homeopathic		76
	Others (Street vendors)		100

Apart from the above, the medicinal plants are also used by the food processing, cosmetic, beverage and toiletries industry.

Considering the market opportunities, the following chart shows relative attractiveness of cultivating strawberry, capsicum and medicinal plants in Cox's Bazaar rated on profitability and return on investment

7.3 Value chain map and analysis of value creation activities

Reasons for promoting value added production of these crops are:

- Higher profits.
- More stable market conditions, as prices for consumer product prices.
- Job creation.
- Diversification of products and markets.
- Down-stream economic benefits through industry support sectors becoming more involved.

²⁰ Jasim Uddin Chowdhury, Traditional Systems of Medicine in Bangladesh, Bangladesh Council of Scientific and Industrial Research (BCSIR) Laboratories, Chittagong

- Our strategic position should be one of maximizing overall value.

It is important to note that the sum of the value chain is expected to create a value that is greater than the sum of each individual activity, in other words, it would create a greater profit margin.

7.3.1 Value Chains Overview

Strawberry

Strawberry is a relatively new product to the target group and the locality of Cox's Bazaar. A few enterprising farmers have started to cultivate strawberry in Cox's Bazaar in the last few years. The results so far have been extremely encouraging both in terms of farm productivity and revenue. As a result, the value chain for strawberry is new and still at a formative stage. The value chain of horticulture products – vegetable and fresh fruits have its strong presence in the working area. The value chain of strawberry in Cox's Bazaar is drawn based on the experience of the few practicing farmers and the current fresh fruits market actors.

The local strawberry market has been developed by the local entrepreneurs/farmers with the patronization of local government. The local hotels and the local community showed tremendous interest about strawberry. The large quantity of the locally produced strawberries was consumed in the Cox's Bazaar market mostly by the local hotels. The fruit traders are optimistic about the product and showed positive interest in market development.

The national superstores have developed communication with the local strawberry entrepreneurs/farmers and are procuring the products directly.

Capsicum

Capsicum is comparatively a new product for the local market mainly the local inhabitants. Many hotels and restaurants although regularly use and buy capsicum for their different food recipes. Some three star hotels actually buy it from the local market; on the other hand high ranking hotels import it from Dhaka or Chittagong as they do not want to compromise with the quality and dissatisfied the customers. During the assessment phase few capsicum seller was found and two farmers were struggling to produce capsicum. However they were not able to produce quality product due to lack of high quality seeds. They have confirmed that if quality seeds are provided farmers are willing to produce this high value crop as there is high demand for Capsicum.

Medicinal Plants

It was reported by the value chain members that a few small producers are engaged in medicinal in Cox's Bazaar, although we could identify only 3. A few collectors were also found who collect different medicinal plants from the local forests.

7.3.2 Value Chains Actors, Functions and Map

Strawberry

Input Supplier

The local producers are the key actors for supply of primary input (runner/seedling) and the regular agro input suppliers as the sources for other inputs such as fertilizer, pesticides, tools, etc. The access and availability of both runner and other agro inputs from the national actors seems no major issue with the local input traders and producers. The presence of local agro input suppliers in all the

major upazillas headquarter is satisfactory, although Cox's Bazar is the primary market for all inputs. The price difference is negligible in upazilla markets compared to Cox's Bazar central market. A few large traders in the upazillas have their own linkage with the national market players for agro inputs.

Production

Strawberry cultivation is new, only a few producers in the target area are engaged in production and sales of strawberry in Cox's Bazar. Experience from the local producers and other producers in different regions of the country suggest that strawberry cultivation does not require much sophisticated technology and knowledge, anybody with agriculture experience particularly in producing horticulture products, can easily start producing strawberry for commercial marketing. A small piece of land can yield almost 1000 times more income than traditional vegetable cultivation. The primary product is fresh strawberry.

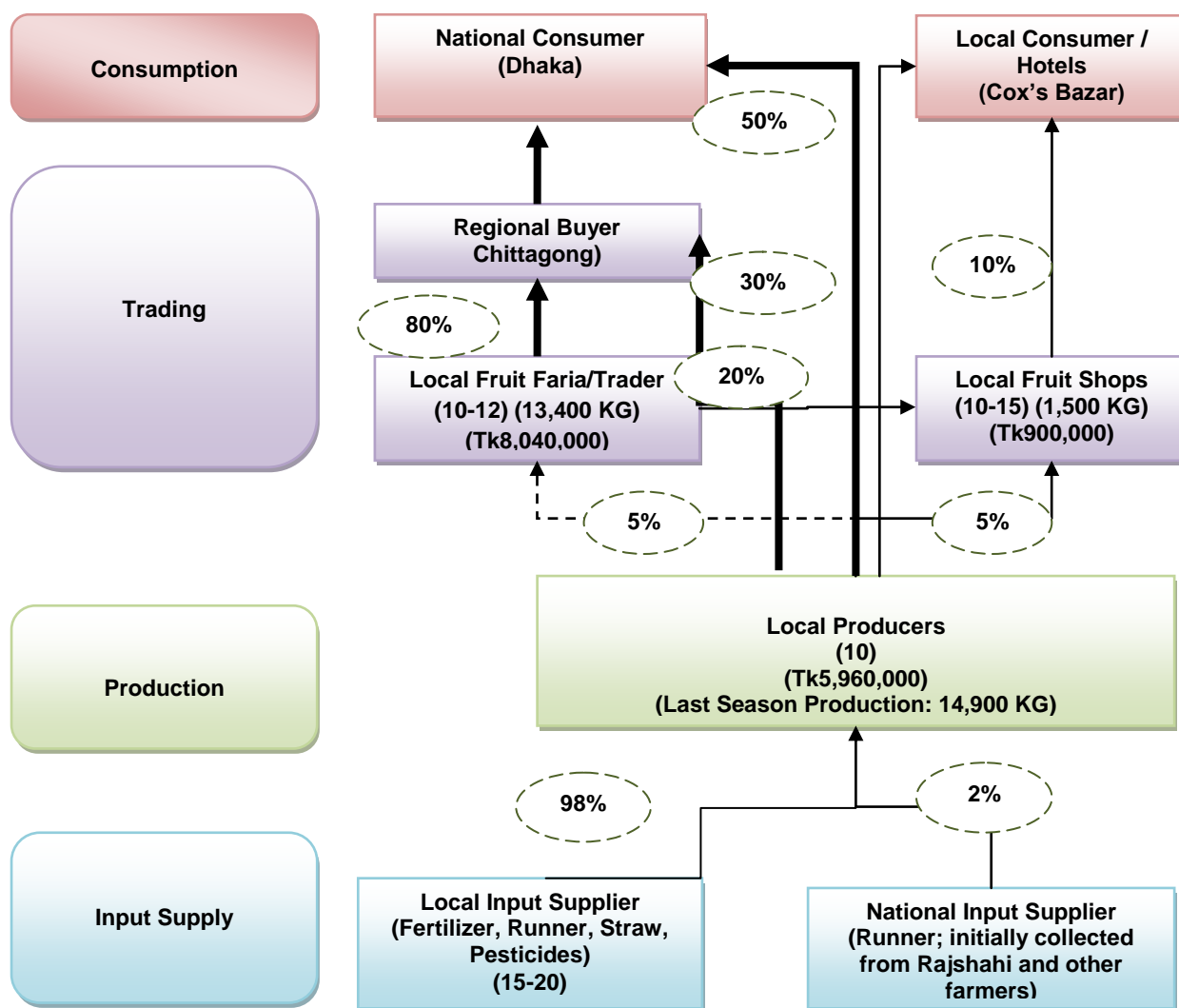
Trading

Local fruit shops rarely trades strawberry because of lack of consumer awareness and demand. These shops mostly cater the local hotels and resorts. The regional and national super shops (shops in the working area as well as in adjacent districts – Ctg) are one of sources of fresh strawberry. The local shops and the regional and national super shops procure fresh strawberry from different regions of the country including Cox's Bazar.

Consumption

The fresh strawberries are mostly used by the local hotels and resorts as well as regional (people in the working area as well as in adjacent districts – Ctg) and national consumers. In the target areas, the primary consumer of fresh strawberry is still limited to large number of hotels and resorts in the tourist district of Cox's Bazar.

Figure 26: Value Chain Map for Strawberry²¹



Capsicum

Input Supplier

The local agro input suppliers are the sources for all inputs such as seeds, fertilizer, pesticides, tools, etc. However, because of its fewer demand, the seeds are often sourced from the national input actors. The access and availability of other agro inputs from the national actors seems no major issue with the local input traders and producers. The presence of local agro input suppliers in all the major upazilla headquarter is satisfactory, although Cox's Bazar is the primary market for all inputs. The price difference is negligible in upazilla markets compared to Cox's Bazar central market. A few large traders in the upazillas have their own linkage with the national market players for agro inputs.

Production

Capsicum cultivation is new, only a few producers in the target area are engaged in production and sales of strawberry in Cox's Bazar. Experience from the local producers and other producers in different regions of the country suggest that capsicum cultivation does not require much sophisticated technology and knowledge, anybody with agriculture experience particularly in producing horticulture

²¹ Primary data: in-depth interviews, questionnaire survey

products, can easily start producing capsicum for commercial marketing. A small piece of land can yield almost 500 times more income than traditional vegetable and chili cultivation. The primary product is green and colored capsicum.

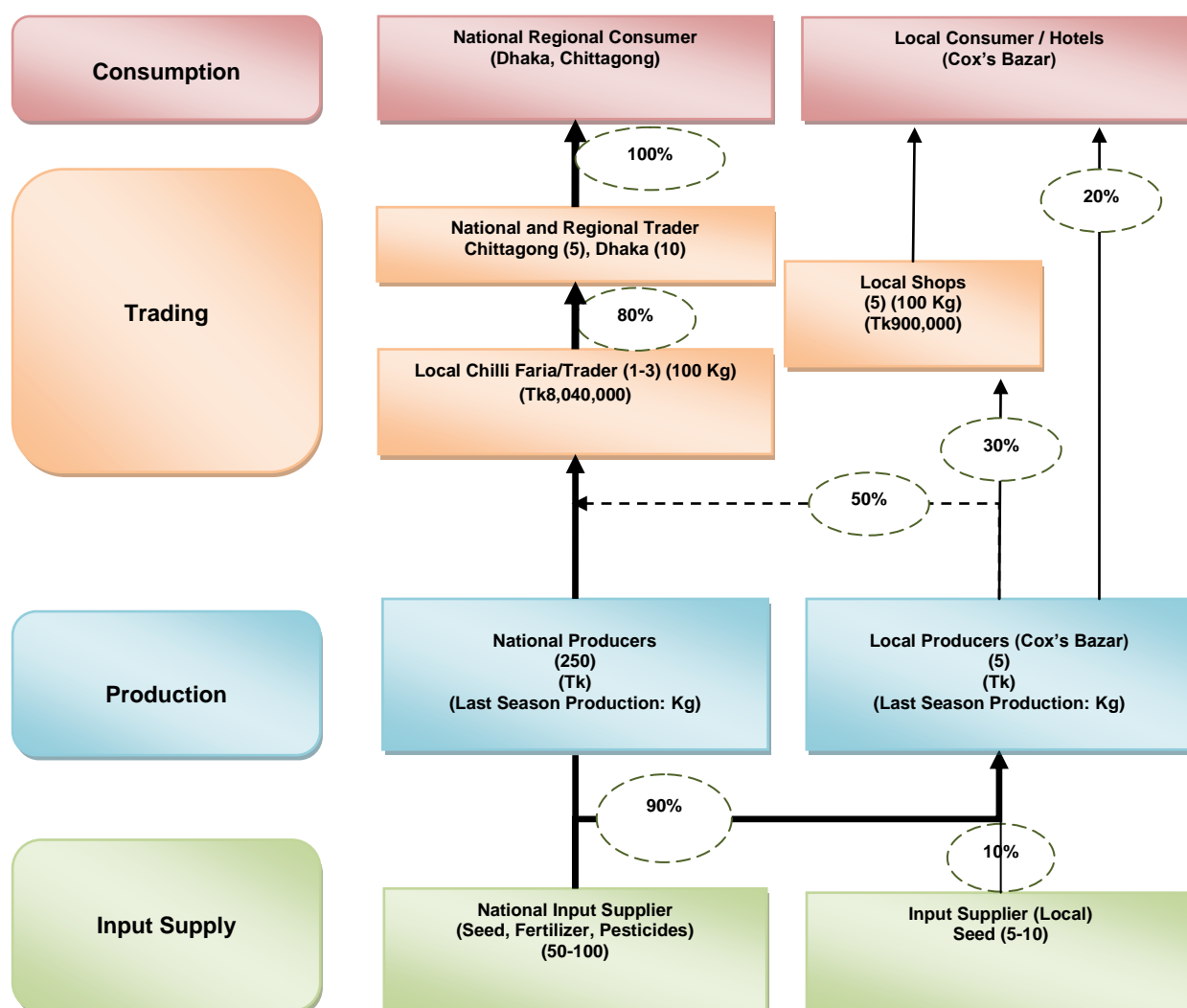
Trading

Local vegetable and chili traders rarely trade capsicum because of lack of consumer awareness and demand. These traders mostly cater the local hotels and resorts. The regional and national super shops (shops in the working area as well as in adjacent districts – Ctg) are one of the sources of capsicum. The local shops and the regional and national super shops procure capsicum from different regions of the country.

Consumption

Capsicums are mostly used by the local hotels and resorts as well as regional (people in the working area as well as in adjacent districts – Ctg) and national consumers. In the target area, the primary consumer of capsicum is still limited to large number of hotels and resorts in the tourist district of Cox's Bazar.

Figure 27: Value Chain Map for Capsicum²²



²² Primary data: in-depth interviews, questionnaire survey

Medicinal Plants

Input Supplier

The local producers are the key actors for supply of primary input (seedling/saplings) and the regular agro input suppliers as the sources for other inputs such as fertilizer, pesticides, etc. The access and availability of quality saplings are limited, however, other agro inputs from the national actors seems no major issue with the local input traders and producers. The major processing companies often provide quality saplings to the local producers on a buy-back contract arrangement. The presence of local agro input suppliers in all the major upazillas headquarter is satisfactory, although Cox's Bazar is the primary market for all inputs. The price difference is negligible in upazilla markets compared to Cox's Bazar central market. A few large traders in the upazillas have their own linkage with the national market players for agro inputs.

Production

Medicinal plant cultivation is rarely practices by the local target group because of lack of quality sapling and market linkage. The medicinal plants are generally extracted from the forests; however, the supply is irregular and erratic. Often the required plants are not found. Experience from the few local producers and other producers in different regions of the country suggest that medicinal plant cultivation does not require much sophisticated technology and knowledge, anybody with agriculture experience particularly in nursery producing horticulture products, can easily start producing strawberry for commercial marketing. A small piece of land can yield almost 1000 times more income than traditional vegetable cultivation. The primary product is fresh strawberry.

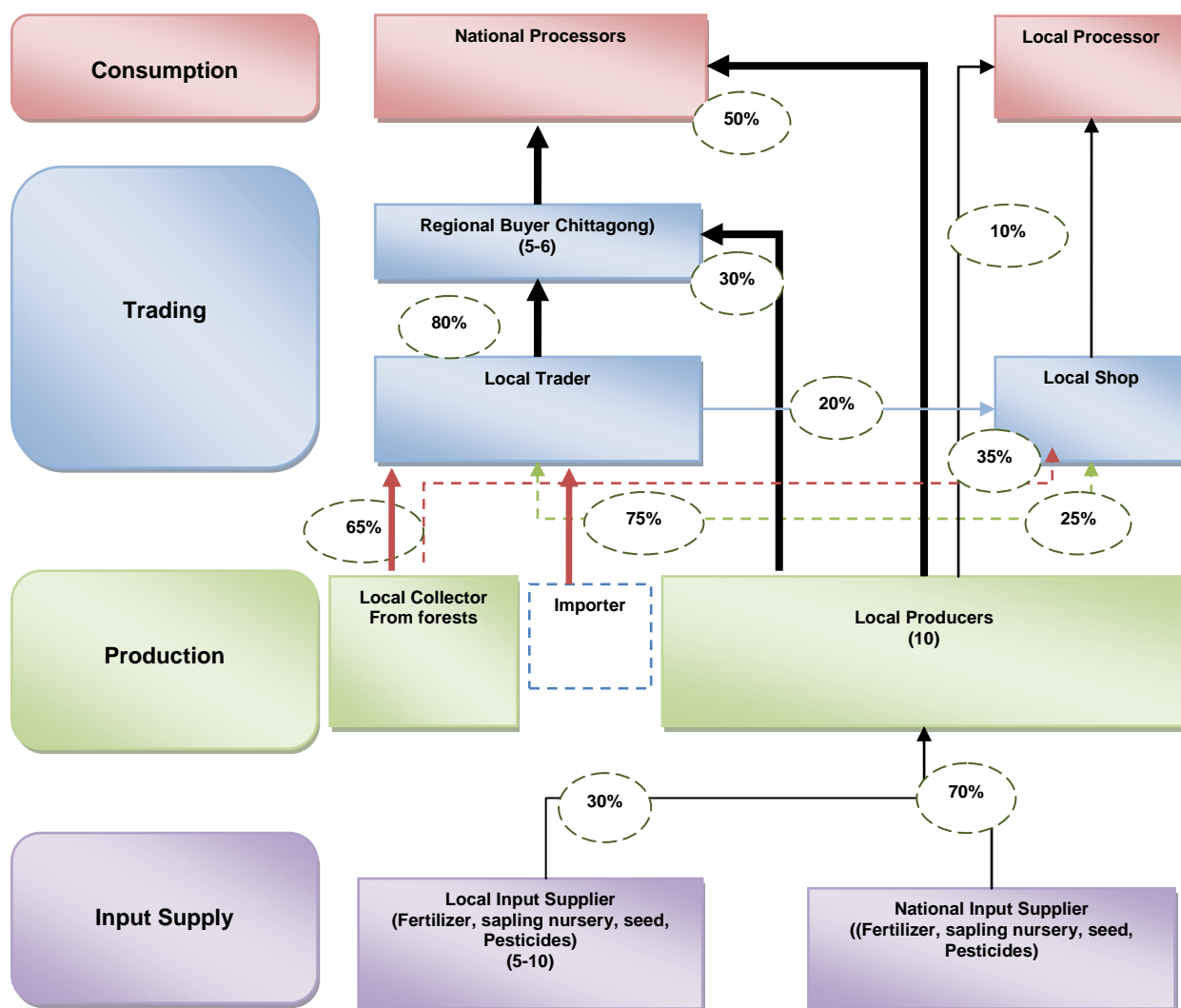
Trading

Local fruit shops rarely trades strawberry because of local of consumer awareness and demand. These shops mostly cater the local hotels and resorts. The regional and national super shops (shops in the working area as well as in adjacent districts – Ctg) are one of sources of fresh strawberry. The local shops and the regional and national super shops procure fresh strawberry from different regions of the country including Cox's Bazar.

Consumption

Medicinal plants are consumed by the national processors as well as the local processors. Sometimes local inhabitats consume medicinal plants for their better health condition but negligible in amount.

Figure 28: Value Chain Map for Medicinal Plants²³



7.4 Value Chain Performance

Value Chain performance investigated above on their actors and their functions revealed some strengths and weaknesses of this value chain club into Strawberry, Capsicum and Medicinal Plants to impact the beneficiaries. An over all analysis on this value chain is given below:

7.4.1 Business Enabling Environment

Overall we have found that, the business environment within the region is positive and it has a tendency to be growing. There is good availability of both input suppliers and market actors for the Strawberry sub sector. However, the major challenge is, it will be a new value chain for the beneficiaries. Beneficiaries who are into agricultural production and homestead gardening basically they will be involved in this value chain. The dispute remains within the production tier as many producers and especially the targeted beneficiaries are satisfied with their existing agricultural products, the main concern will be to convince them for these high value products. Normally they are unwilling to risk the investment into new kind of products as they have limited knowledge, idea, and

²³ Primary data: in-depth interviews, questionnaire survey

cultivation technique about the product itself. However, for the capsicum and medicinal plants the project needs to develop the whole value chains.

Gender and cultural norms: Inhabitants of Cox's Bazaar region are not very conservative. Women are tend to work outside and they are also involved in the agricultural work however men usually holds the major responsibilities for earnings. Youth are also involved in different agricultural productions.

7.4.2 Vertical Linkages

Vertical linkage among strawberry-producing farmers in Cox's Bazaar Region is very low. As mentioned in the above value chain overview, only 15 to 20 farmers are involved in the strawberry production. For capsicum and medicinal plants there are few farmers are producing these products as an experimental state.

Access to markets

In this value chain the farmers have very limited/ no access to market. Strawberry farmers have better possibilities to access the market. Only the lead farmers have access to market however, other farmers are following the footsteps of the lead farmers or sometimes sell it to the lead farmers for reducing the trading difficulties. In this case some lead farmers are playing the role of input seller, producer as well as middlemen in the market. However, for the capsicum and medicinal plants farmers do not have strong access to market.

Input Access & Quality

Strawberry farmers are mostly depended on the lead farmers and traditional input suppliers for the production inputs. For capsicum and medicinal plants inputs like seeds are unavailable in the market and farmers have limited knowledge. Access and quality to other inputs are also present; but distance and limited demand means individual beneficiaries are unable to influence the input sellers to bring the seeds for capsicum and medicinal plants.

Access to Market Information

For this new sub sectors, access to market information is very limited in nature very few farmers have the market information. In our study it was visible that only strawberry and capsicum farmers have market information however the medicinal plants farmers have no national or regional level of access to the market information. Therefore, they have no space for price negotiation.

7.4.3 Horizontal Linkages

Horizontal linkages among beneficiaries were present in some weak forms only for the strawberry subsectors. However for capsicum and medicinal plants it was not visible.

Types & forms of collaboration & competition

For the strawberry farmers collaboration is quite high. It is because of the lead farmers; however, there is no formal association for this sub sector in traders point in district or regional level. Traders in the district level influence the pricing and product perishability and transportation facilities influence the pricing. Retailers in the regional level have a keen awareness of the source and benchmark of quality that can be provided in the market. Although there are few retailers in the region who are selling this products as the local demand is low. And most of the end consumers (hotels) prefers to import it from the National level.

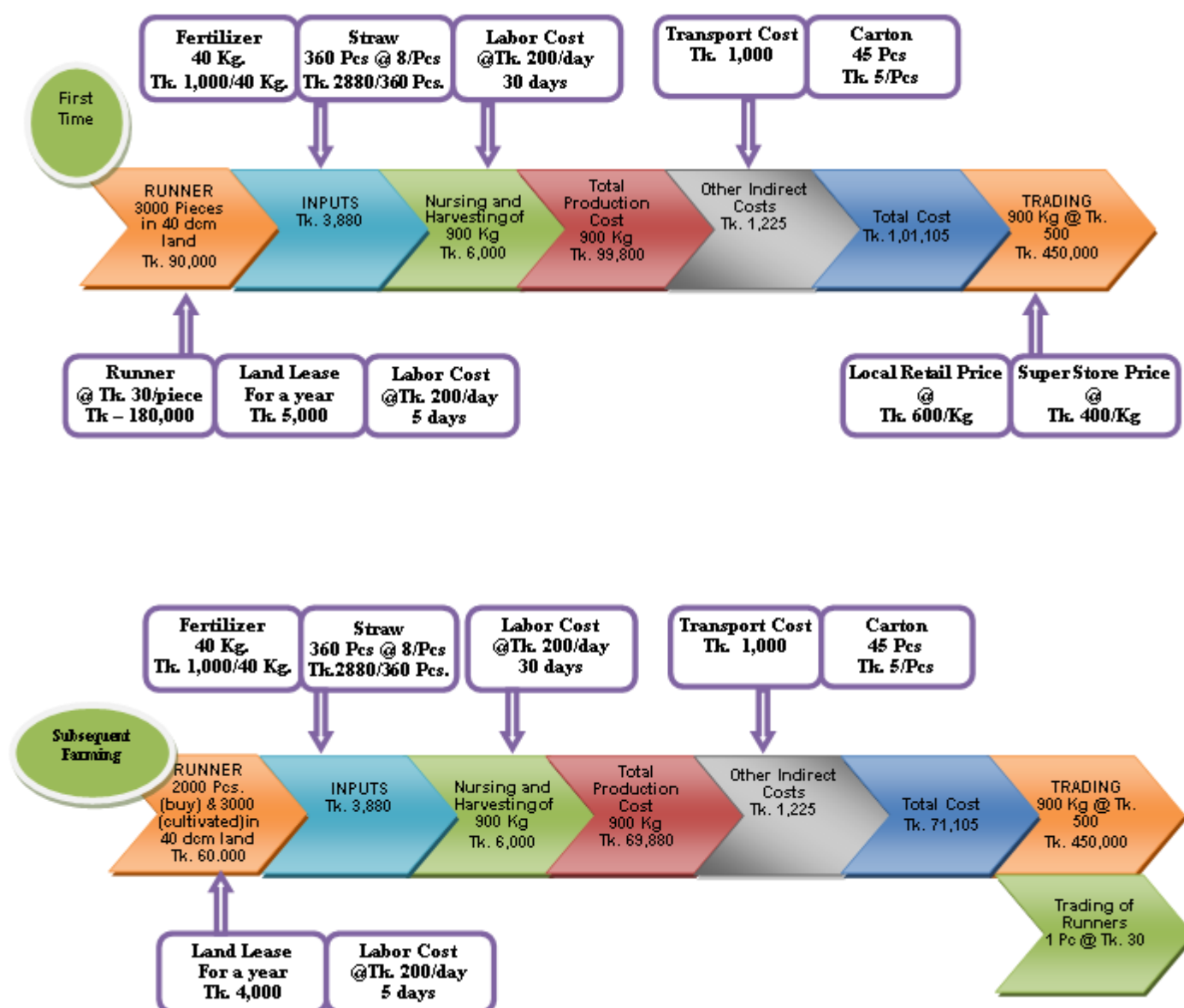
Roles for the targeted beneficiaries

However, these trading actors prefer to work with large farmers as they are consistent and professional. The targeted beneficiaries need to learn the production technique and be consistent and professional.

Performance of the Value Chains and Scope for Upgrading:

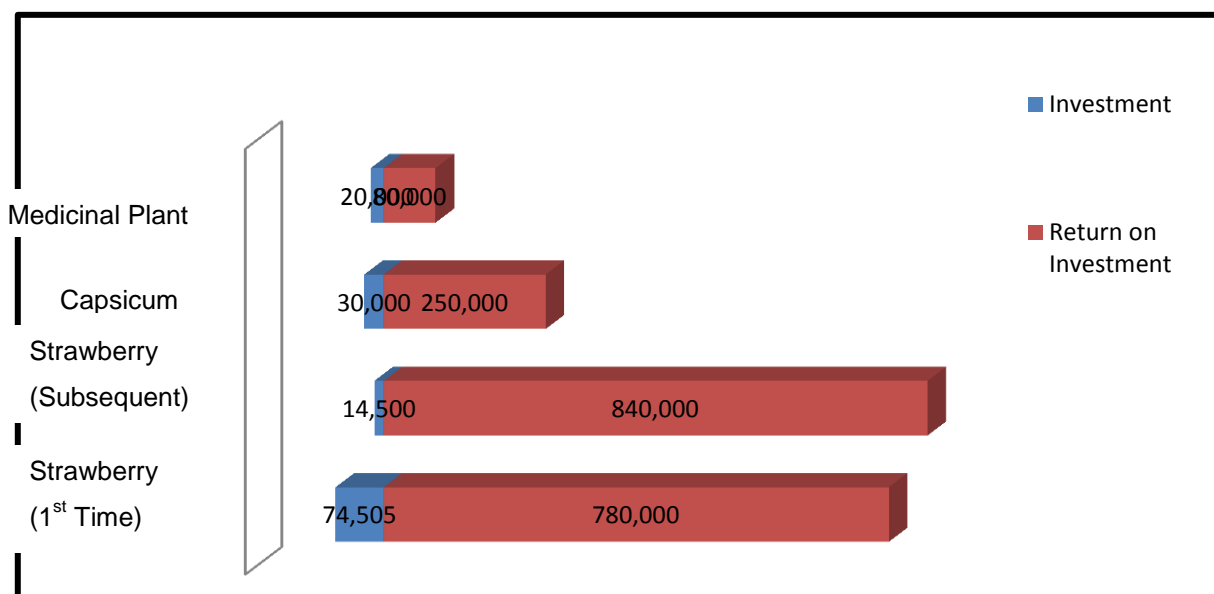
The current production of strawberry in this region is very sporadic and not a strong commercially established market yet. Based on the data collected from these actors and on costs associated with this value chain, the following cost-benefit analysis has been done. Since introducing strawberry for the initial phase will include additional costs, the subsequent farming cost-benefit analysis is shown separately.

Figure 29: Strawberry - Cost of Production and Sales Revenue / Profit per 40 decimal land²⁴



²⁴ Primary data: in-depth interviews, questionnaire survey

Figure 30: Investment Vs Return on Investment²⁵



7.5 Value Chain Governance

The value chain is largely influenced by traders, especially the wholesalers for the strawberry.

Influence & control along the chain

As the region has a large amount of wholesalers coming from Chittagong, the quality and supply of those products influence the markets greatly and the channel via which they come in is the wholesalers. The other point of influence is the influx of natural reasons in certain season. The ultimate control of the value chain lies with the end-market actors – consumers – who dictate demand and pricing of strawberries. In other two sectors, the market is not well established therefore difficult to track the influence and control along the chain.

Role of Beneficiary

Farmers are unable to go beyond district level wholesalers and often choose selling directly to consumers in locality for quicker return on harvest. This occurs because most production is done on loans and there is pressure to pay back as soon as possible.

Inter-Firm Relationships

There is limited inter-firm relationship in this value chain as the market is not established especially for medicinal plants and capsicum. The trading network is not that well developed. It is a challenge for the project to establish the whole value chain inter-firm network. All contracts are verbal and based on mutual trust and sustainable business relations basically for the strawberry traders and producers.

²⁵ Primary data: in-depth interviews, questionnaire survey

7.6 Assessment of the regulatory environment and support services

The key variables or driving forces and their Influences on the value chain:

Table 20: Assessment of the Regulatory Environment and Support Services

CRITERIA	NEGATIVE	POSITIVE
IRRIGATION	<ul style="list-style-type: none"> Irregular power supply for irrigation Poor availability of diesel Price hike of diesel Poor availability of rental facilities 	<ul style="list-style-type: none"> Government subsidy for diesel oil Introduction of farmer's card for access to diesel at subsidised rate
CULTIVATION	<ul style="list-style-type: none"> Poor knowledge of advance agricultural technology Lack of soil testing facilities in Cox's Bazaar 	<ul style="list-style-type: none"> Eagerness to learn and adopt new crops and technologies for improved productivity and profitability
SEED	<ul style="list-style-type: none"> Poor availability of quality seed with good germination rate Inadequate seeds and saplings in the locality Lack of adequate knowledge for seeds/sapling production and preservation 	<ul style="list-style-type: none"> Seed policy and certification Emphasis on quality Relaxation on import/export of seeds Local production of seeds through farmers' group under different government and non-government organizations
INSURANCE	<ul style="list-style-type: none"> Lack of crop insurance 	<ul style="list-style-type: none"> NA
STORAGE	<ul style="list-style-type: none"> Lack of adequate and appropriate cold storage facilities for vegetables, fruits, etc. 	<ul style="list-style-type: none"> NA
PRODUCTION	<ul style="list-style-type: none"> Due to poor yield, high production and processing loss, the per unit production cost of almost all the agriculture product is high Rate of post harvest loss is high 	<ul style="list-style-type: none"> Application of improved production technology Improved variety resisting pest, draught, salinity Increase processing, packaging and branding
SYNDICATE	<ul style="list-style-type: none"> Strong and large product wise market syndicates 	<ul style="list-style-type: none"> Work on improvement on value chain by many organizations Access to Information on critical market information has increased
PESTICIDE	<ul style="list-style-type: none"> Lack of adequate knowledge and skills about IPM (integrated pesticide management) 	<ul style="list-style-type: none"> NA
FERTILIZER	<ul style="list-style-type: none"> Inadequate supply of fertilizer in the peak season Poor availability of organic fertilizer Lack of knowledge of organic compost production 	<ul style="list-style-type: none"> Farmer's card to access subsidised chemical fertilizer Production increased due to soil nutrient through organic fertilizing Knowledge and skills development to produce organic compost fertilizer

Strawberry

Mahabaleshwar-Panchagani belt of Western Maharashtra region, famous for strawberry cultivation, has now received GI status and now will be recognized as "Mahabaleshwar Strawberry", brand name for the strawberry. Earlier, All India Strawberry Growers Association had applied for the GI status to Chennai based Geographical Indication Registry. The association confirmed the acceptance of the same on Wednesday and now the growers can market their fruit as 'Mahabaleshwar Strawberry'. According to Geographical Indication Registry, the GI goods are defined as that aspect of industrial property which refers to the geographical indication referring to a country or to a place situated therein as being the country or place of origin of that product. Typically, such a name conveys an assurance of quality and distinctiveness which is essentially attributable to the fact of its origin in that defined geographical locality, region or country. Under Articles 1 (2) and 10 of the Paris Convention for the Protection of Industrial Property, geographical indications are covered as an element of IPRs. They

are also covered under Articles 22 to 24 of the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement, which was part of the Agreements concluding the Uruguay Round of GATT negotiations. According to All India Strawberry Grower's Association's chairman Balasaheb Khilare "There are over 1,800 strawberry growers in Mahabaleshwar-Panchgani belt on 2,000 acres and produced 20,000 tonnes of strawberry every year. The total cost of the production is more than Rs 100 crore. The climatic condition of Mahabaleshwar is very suitable for strawberry than any other part of the country and is similar to Europe and hence, we are able to grow good quality fruits over here. The taste and sweetness of this fruit is unique and are exported to over 153 countries in the world."

From 2013-14 fiscal year, the Government of Bangladesh has increased custom duty on importing roses, carnations, orchids, chrysanthemums and lilies from 12 % to 25%. From 2013-14 fiscal year the Government of Bangladesh has increased custom duty on various imported fruits such as Strawberries subjected to a supplementary duty of 20%. Currently strawberry (HS Code - 2008.80.00) is subject to 37.5% duty for import. Currently, there are around 108.16 per cent duties on imports of fruits including 30 per cent SD, 25 per cent customs duty, 15 per cent value-added tax, 5 per cent regulatory duty, 4 per cent advance trade VAT, 5 per cent advance income tax. After reduction of the SD, the total duties and taxes on import of fruits will be around 98 per cent. According to Jahirul Islam Tipu, convener of the Bangladesh Fruits and Vegetable Importers Association and Chittagong-based fruit importer, Enayet Kabir, Bangladesh imports fruits mostly from China, South Africa, New Zealand, Brazil, USA, India, Pakistan, Australia and Egypt.

Capsicum

The production, trading as well as export and import of Capsicum do not have any regulations. It is entirely traded based on market and economic factors.

Medicinal plants

The Directorate of Drugs Administration under the Ministry of Health & Family Welfare, Government of Bangladesh, is the Drug Regulatory Authority of the country. This Directorate supervises and implements all prevailing Drug Regulations in the country and regulates all activities related to import and procurement of raw and packing materials, production and import of finished drugs, export, sale, pricing, etc. of all kinds of medicine including those of Ayurvedic, Unani and Homoeopathic systems. At present, there are 204 Ayurvedic, 266 Unani drug manufacturing companies and 25 Herbal companies operating in Bangladesh. There are 79 Homeopathic and Biochemic drug manufacturing companies in Bangladesh.

Official Status of Traditional Medicine in Bangladesh: Unani and Ayurvedic systems of medicine were officially recognized by the Government of Bangladesh immediately after independence and at the same time a Board of Unani and Ayurvedic systems of medicine was constituted. After the introduction of a National Drug Policy in 1982, Unani and Ayurvedic drugs have been brought under the control of the Drugs Administration Department of the Ministry of Health and Family Welfare by legislation to control and regulate the commercial manufacturing and marketing of quality Unani and Ayurvedic drugs. The Board of Unani and Ayurvedic systems of medicine performs the following specific functions:

- registration of the traditional medicine practitioners
- recognition of the relevant teaching institutions
- holding of qualifying examinations
- publication of text books
- standardization of Unani and Ayurvedic drugs
- preparation and publication of Pharmacopoeias/Formularies

- undertaking research and development programs.

The Board has published two National Formularies: one for Unani and the other for Ayurvedic drugs, which have already been approved by the Government. They are now in use as official guides for the manufacture of all recognized Unani and Ayurvedic medicinal preparations.

Policies and Measures by Directorate of Drug Administration, Ministry of Health & Family Welfare, Government of Bangladesh

- Penalty for manufacturing & sale of substandard drugs
- Penalty for unauthorized import
- Penalty for unpermitted production.
- Drug Evaluation
- Adverse reactions
- Supply management
- Quality assurance
- Packing & labeling
- Control of advertisement

7.7 Poor/Resource Dependent, Youth and Gender Analysis

Gender relations in the value chains: Some gender, power and inclusion issues have been found common to local conservative area or the particular commodity context while others are specific to value chain as a whole. For example, production of new products often demands more labor than conventional agro products. It is understood that this 'extra' workload will be usually borne by the family, especially the women. Increases in labor are in addition to 'normal' workloads in the field and in the home. That said an often cited positive impact of participation in new products production and processing is that there are increases in family income and health. Yet constraints to the full participation of women in farm level activities, benefits, and decision making are important to note so that they can be adequately addressed. Women have a critical role in farming, as a workforce in charge of hoeing, sowing, weeding, harvesting, but often also as the family member responsible for food production and preparation. Female involvement in any organic production initiative is thus vital, though often disappointing, overlooked or marginalized.

Transforming the role of women in the value chains: One of the key issues are access to market for both inputs and marketing of the harvested products are at the very minimum not worsening the position of women or being not connected to the market systems.

While it is perhaps unrealistic and overly idealistic to imagine that production, processing and marketing will radically change gender relations for the better, or have a significant impact on the position of women within a given societal context, it is reasonable to work towards gender awareness and a positive impact. There are limits given that production and processing operate within a larger societal context, which may not support shifts in gender relations.

Towards the empowerment of women in the initiative: CREL and other stakeholders in the VC sector often have developmental objectives driving their support. CREL can play an important role in triggering the transformative power of VC of new agricultural products. There are several levels at which gender issues can be addressed:

- **Household and community level:** access to land and employment, division of labor (usually the less valued tasks are reserved for women), social constraints on women's mobility

- **Producer support level:** access to support schemes, participation in trainings (including training on agricultural, business and leadership skills)
- **Institutional level:** access to financial services (possibly hindered by having no land or property in her name), women to have opportunities in leadership positions, participation of women in planning and decision-making
- **Market Level:** accessing the inputs (seed, fertilizer, pesticide, irrigation, etc.) as well as forward market (traders, processors, super shops, transport agencies, etc.), women to have negotiating skills, mobility, opportunities in leadership positions, as well as in planning and decision-making skills.
- **Policy level:** legislation for cooperatives, labor rights (including equal pay, maternity leave, childcare facilities) and creating standards that compel producers and processors to meet basic gender criteria.

Starting Points for Managing Gender Issues Responsibly: The approaches mentioned above aim to empower women in the long term. There are several ways in which you can contribute to empowerment of women in your organic business:

- **Capacity Development:** Women need to be able to attend training for new product production methods, processing techniques and commercial know-how, as well as leadership and organizational development sessions. Experience demonstrates that little transfer of information occurs from a man attending training on to his wife. In some cases, women are even unaware after a number of years of production that their farm is premium! This is particularly impressive when we consider that much of the work related to organic production – planting, weeding, harvesting, and marketing – is done by women. It not only represents inequity between men and women, but creates a weak link in the system. How can the system be robust if the people doing much of the work in an operation are unfamiliar with the essence of that system? From a business perspective, this presents a risk. By building capacities of both men and women, quality, productivity as well as profitability can be better ensured.
- **Appropriate timing:** Organize meetings and trainings in a way that they fit the rhythm of women's responsibilities. For example, a women's training may require child care support or may need to be in the late afternoon, after the afternoon meal is served – or at another convenient time when they have less family chores.
- **Extension staff:** Extension staff needs to cater the small holder women as role models, and should be able to engage with the women in a producer organization and women in the fields. As women are doing a disproportionate amount of the work related to production, their perspectives are absolutely critical to the good functioning of the system. Especially in more traditional contexts, extension staff should be able to not only communicate appropriately with women in the village but should also pay required attention when required, and should have women-friendly attitude which may well be perceived as more approachable by women.
- **Women's groups:** Women in the villages talk to each other, share ideas and compare experiences. Creating and supporting women's groups can strengthen this exchange. Allowing women's groups to define the issues that they want to address, and monitor the group's development on these issues is a positive way of triggering participation and loyalty. Communication can only strengthen the system.
- **Leadership:** Often it is assumed that gender issues are better addressed within organic agriculture than conventional. In many cases, women are indeed initiators or a driving force behind organic initiatives. To strengthen this, women also need to be in leadership positions within a producer organization or agri-business. This requires building leadership and management skills among women.

- **Registration as Women Farmer:** Women should be registered as a farmer and should acquire the Government enlisted farmer's card from the Department of Agriculture. This would not only empower the women to exert influence over their husbands to take farming more seriously, but will also help in acquiring different government services such as subsidized diesel, fertilizer, pesticides, open bank account with only Tk10 and access to bank loan, etc.
- **Women-only activities:** In some cases, it may make sense to have women-only value chains in order to preserve the integrity of women's roles in that chain, avoid exploitation and provide opportunities otherwise unavailable. This may happen for some commodities for some of the links in the chain in an unplanned manner, where certain activities are reserved for women. For example, women produce and sell strawberry. A women-only chain (or link in the chain) can be intentional to enhance participation and productivity.

7.8 SWOT Analysis

Table 21: SWOT Analysis of VC 2

Value Chain	Strengths	Weaknesses	Opportunities	Threats
Strawberry	<ul style="list-style-type: none"> ▪ High demand both at the local and national level ▪ Extremely higher ROI ▪ Quick ROI within 3-4 months 	<ul style="list-style-type: none"> ▪ Production technology is still not widely known 	<ul style="list-style-type: none"> ▪ Small land size can also greatly benefit ▪ Processing of pulp can significantly reduce the risk of distribution ▪ Specialized groups can be developed for provisions for organic fertilizer, packaging, distribution and marketing 	<ul style="list-style-type: none"> ▪ Distribution within 3-4 days after harvesting can put producers in risk if not preserved in cold storage or processed as pulp
Capsicum	<ul style="list-style-type: none"> ▪ High demand both at the local and national level ▪ Extremely higher ROI ▪ Quick ROI within 3-4 months 	<ul style="list-style-type: none"> ▪ Production technology is still not widely known 	<ul style="list-style-type: none"> ▪ Small land size can also greatly benefit ▪ Specialized groups can be developed for provisions for organic fertilizer, packaging, distribution and marketing 	<ul style="list-style-type: none"> ▪ Quality of seed can put small farmers at risk
Medicinal plants	<ul style="list-style-type: none"> ▪ High demand in national level ▪ High ROI on certain products ▪ Quick ROI within 3-4 months on certain products 	<ul style="list-style-type: none"> ▪ Production technology is still not widely known 	<ul style="list-style-type: none"> ▪ Small land size can also greatly benefit 	<ul style="list-style-type: none"> ▪ NA

7.9 Constraints Analysis

Table 22: Constraints Analysis of VC 2

Value Chain	Inputs	Processing	Marketing	Support Services
Strawberry	<ul style="list-style-type: none"> ▪ Initial sourcing of large quantities of runners can become challenging 	<ul style="list-style-type: none"> ▪ The technology of production is not known to the local community. This can be 	<ul style="list-style-type: none"> ▪ Market still not matured based on relationship ▪ Transportation and distribution 	<ul style="list-style-type: none"> ▪ Soil testing facilities do not exist in Cox's Bazaar

	<ul style="list-style-type: none"> Organic fertilizer, compost are not available in the local area in required quantities 	addressed through demonstration plots, exchange visits, etc.	<ul style="list-style-type: none"> still not matured Lack of cool house 	
Capsicum	<ul style="list-style-type: none"> Quality of seed can be challenging, however, now BARI is producing seeds Organic fertilizer, compost are not available in the local area in required quantities 	<ul style="list-style-type: none"> The technology of production is not known to the local community. This can be addressed through demonstration plots, exchange visits, etc. 		<ul style="list-style-type: none"> Soil testing facilities do not exist in Cox's Bazaar
Medicinal Plants	<ul style="list-style-type: none"> Quality saplings and seeds can pose challenges, however this can be addressed through contract farming with large medicine companies such as Hamdard 	<ul style="list-style-type: none"> The technology of production is not known to the local community. This can be addressed through demonstration plots, exchange visits, etc. 	<ul style="list-style-type: none"> Poor quality due to lack of knowledge and technology 	<ul style="list-style-type: none"> Soil testing facilities do not exist in Cox's Bazaar

Figure 31: Constraints Analysis

FIRM INFRASTRUCTURE	<ul style="list-style-type: none"> Organized groups Engaged in livelihood options Members are linked with financial service providers No known cultural insensitivity to the existing and potential livelihood products 				
HUMAN RESOURCES	<ul style="list-style-type: none"> Poor knowledge about market 	<ul style="list-style-type: none"> Primary production knowledge known 	<ul style="list-style-type: none"> Poor market knowledge and interface 	<ul style="list-style-type: none"> Lack of marketing and sales orientation 	<ul style="list-style-type: none"> Target group not linked with service providers
TECHNOLOGY	<ul style="list-style-type: none"> Source of knowledge and technology is within close proximity Simple technology for adaptation 	<ul style="list-style-type: none"> Source of knowledge and technology is within close proximity 			<ul style="list-style-type: none"> Local provisions of services Lead farmers are source of knowledge
PROCUREMENT	<ul style="list-style-type: none"> Inputs are available in the local markets Join resource procurement can increase bargaining 				
STRENGTH	<ul style="list-style-type: none"> High market demand Scope for contract farming Relatively easy technology 	<ul style="list-style-type: none"> Resources can be pooled through formation of cooperatives 	<ul style="list-style-type: none"> Opportunities for contract farming 	<ul style="list-style-type: none"> High demand for products in local and national markets 	<ul style="list-style-type: none"> Lead farmers, Horticulture department, DAI are willing to help
WEAKNESS	<ul style="list-style-type: none"> Access to land average (size 20 decimal) 	<ul style="list-style-type: none"> The technology of production is not known to the local community 	<ul style="list-style-type: none"> Lack of post harvest storage 	<ul style="list-style-type: none"> Underdeveloped local market 	<ul style="list-style-type: none"> Lack of government services
	INBOUND LOGISTICS	OPERATIONS	OUTBOUND LOGISTICS	MARKETING & SALES	SERVICES

Increased Profit

7.10 Potential Interventions

Table 23: Potential Interventions of VC 2

Constraint	Intervention	Output	Outcome	Impact
Farmer producing traditional vegetables as they do not have access to information on high-value crops that can lead to high profit	<div>Create service provider (lead farmers) to ensure information flow to the farmers</div> <div>Provide trainings and set up demonstrations to promote cultivation of high value crops</div>	Service providers are providing information on high-value crops to the farmers	Farmers are adopting the high-value crops	Farmers are enjoying higher profit
Medicinal plant producers have limited access to quality seeds and saplings	Create contract farming to ensure quality seeds and samplings as well as embedded production technology through large herbal medicine manufacturers			

The following table summarizes the implementation plan:

Table 24: Implementation Plan for VC 2

Constraints	Intervention	Role of CREL	Potential Partner & Role	Probable time to start	Intervention maturity time	Type of beneficiary suits
<ul style="list-style-type: none"> Lack of knowledge and awareness about high-value crops – strawberry, capsicum, medicinal plants 	<ul style="list-style-type: none"> Create awareness through participatory on-the-field demonstration Exchange visit 	<ul style="list-style-type: none"> Identify strategic locations and group members in Chakaria, Himchari and Teknaf for demonstration Arrange farmers field day Arrange sharing of information through on-the-farm group meetings 	<ul style="list-style-type: none"> Existing lead farmers producing strawberry, capsicum and medicinal plants in Chakaria Role of technology transfer and market linkage with the help from the lead farmers Supplier of runners and saplings from Dhaka and lead farmers of Cox's Bazaar 	<ul style="list-style-type: none"> October – November 	<ul style="list-style-type: none"> March - April 	<ul style="list-style-type: none"> Small farmers producing conventional vegetables suffering from poor profitability
<ul style="list-style-type: none"> Lack of availability of organic fertilizer composts 	<ul style="list-style-type: none"> Develop specialized groups to produce compost Develop knowledge on organic fertilizer and composting 	<ul style="list-style-type: none"> Arrange training and orientation on organic fertilizer and composting 	<ul style="list-style-type: none"> DAI provides knowledge and information as well as arranges training on organic fertilizer and composting 	<ul style="list-style-type: none"> October – December 	<ul style="list-style-type: none"> April - May 	<ul style="list-style-type: none"> Youths and landless farmers

7.11 Recommendation

The three value chain products strawberry, capsicum, medicinal plants has excellent prospect considering the local capacity of CREL staff and the beneficiary, as well as the demand for the product in local, regional and national markets.

However, it may be noted here that CREL should consider that the cultivation season particularly for strawberry and capsicum is October/November and should make important decision fairly quickly to launch the demonstration in the sites.

CREL can continue to target high-value agricultural products such as strawberry, capsicum, medicinal plants to enhance value chains' competitiveness, and increase employment and incomes for the targeted poor, and at the same time build private sector agribusiness capabilities. Implementation of value-added strategies such as processed products and new product development and provide agro processors and producer groups with the knowledge and skills to meet buyer requirements can be an extremely useful intervention. Making the producers to understand and differentiate their products through market segmentation strategy as well as way to identify and cater special niche markets can significantly improve their livelihood.

Quality improvement has always played an important role in the farmers' ability to gain leadership and competitive advantage. CREL through the program can promote organic cultivation methods to prepare the produces get into the high-value export chains. In addition, efficient farming practices can help decrease production and processing costs can work as a very effective strategy. In today's volatile agricultural market, quality and production costs will continue to be the important factors for maintaining and increasing value chain competitiveness. Developing market and sales strategies such as improved packaging and branding focused on penetrating formal markets through optimum client service and aggressive marketing. Therefore, focus on quality improvement for buyers' compliance should remain as one of the major focus interventions in future.

The program is expected to promote sustainable natural resource management initiatives and increase the peoples' awareness about agriculture and natural resource conservation techniques. Technical assistance in areas such as environmentally friendly production and processing technologies, water and soil conservation, and integrated pest management should be integrated with the intervention.

The program is also expected to emphasis on women as participants and targeted clients in the programming activities. The interventions have specific opportunities to promote women's active involvement in agricultural as well as in the trading. The new production and business skills can strengthen the abilities and confidence of the women to participate in decision-making and leadership roles.

The program should maximize the dissemination of its interventions through continued work with association/producer groups and agricultural institutions, as well as facilitating the formation of agricultural producers' forums, and supporting information dissemination networks. Continued collaboration with associations/producer groups will increase program impact to a larger audience, as well as encourage value chain actors to take notice and share knowledge and skills as embedded service. The collaboration with producer groups, networks, forums, research, and extension workers has good potential to help ensure the sustainability of the interventions through transferring skills and knowledge to a wider range of value chain actors.

Strategic partnership can play an important role in generating positive outcomes from the interventions in targeted sectors. Although attribution of impacts is more difficult with this strategy, collaborative work helped each party (FD, international/local project implementers, and NGOs) can achieve their program objectives and facilitate changes among targeted audiences. CREL should look for such synergistic relationships with development projects and strengthen partnerships in those

areas where there is a lack of local expertise, and projects do not have the resources for additional technical assistance.

CREL should support demonstration projects in cooperation with target groups to show how innovative, low-cost technologies can increase productivity and profitability.

8. Value Chain Analysis for VC3: Floriculture and Apiculture

8.1 Brief Overview

Floriculture

- Floriculture or flower farming is a discipline of horticulture concerned with the cultivation of flowering and ornamental plants for gardens and for floristry, comprising the floral industry.
- The development, via plant breeding, of new varieties is a major occupation of floriculturists. Floriculture crops include bedding plants, houseplants, flowering garden and pot plants, cut cultivated greens, and cut flowers. As distinguished from nursery crops, floriculture crops are generally herbaceous.
- The major flowering plants in Bangladesh are rose, jarbera orchids, florist chrysanthemums, and finished florist azaleas. Foliage plants are also sold in pots and hanging baskets for indoor and patio use, including larger specimens for office, hotel, and restaurant interiors.
- Cut flowers are usually sold in bunches or as bouquets with cut foliage. The production of cut flowers is specifically known as the cut flower industry.
- Farming flowers and foliage employs special aspects of floriculture, such as spacing, training and pruning plants for optimal flower harvest; and post-harvest treatment such as chemical treatments, storage, preservation and packaging.
- Cut flowers are flowers or flower buds (often with some stem and leaf) that have been cut from the plant bearing it. It is usually removed from the plant for indoor decorative use. Typical uses are in vase displays, wreaths and garlands. Many gardeners harvest their own cut flowers from domestic gardens, but there is a significant commercial market and supply industry for cut flowers in most countries.
- The plants cropped vary by climate, culture and the level of wealth locally. Often the plants are raised specifically for the purpose, in field or glasshouse growing conditions. Cut flowers can also be harvested from the wild.

A common use is for floristry, usually for decoration inside a house or building. Typically the cut flowers are placed in a vase. A number of similar types of decorations are used, especially in larger buildings and at events such as weddings. These are often decorated with additional foliage. In some cultures, a major use of cut flowers is for worship; this can be seen especially in the Cox's Bazaar, CHT and Chittagong. Sometimes the flowers are picked rather than cut, without any significant leaf or stem. Such flowers may be used for wearing in hair, or in a button-hole. Masses of flowers may be used for sprinkling, in a similar way to confetti. Garlands and wreaths are major derived and value added products. Floriculture has emerged as a profitable agribusiness venture in the world particularly in the developing world including Bangladesh.

Apiculture

- Beekeeping (or apiculture, from Latin *apis*, bee) is the maintenance of honey bee colonies, commonly in hives, by humans.
- A beekeeper (or apiarist) keeps bees in order to collect honey and other products of the hive (including beeswax, propolis, pollen, and royal jelly), to pollinate crops, or to produce bees for sale to other beekeepers. A location where bees are kept is called an apiary or "bee yard".
- There are more than 20,000 species of wild bees.[12] Many species are solitary[13] (e.g., mason bees), and many others rear their young in burrows and small colonies, (e.g., bumblebees).

Beekeeping, or apiculture, is concerned with the practical management of the social species of honey bees, which live in large colonies of up to 100,000 individuals.

- European dark bee (*Apis mellifera mellifera*), and the Carniolan honey bee (*Apis mellifera carnica*). In the tropics, other species of social bee are managed for honey production, including *Apis cerana*.
- All of the *Apis mellifera* sub-species are capable of inter-breeding and hybridizing. Many bee breeding companies strive to selectively breed and hybridize varieties to produce desirable qualities: disease and parasite resistance, good honey production, swarming behavior reduction, prolific breeding, and mild disposition. Some of these hybrids are marketed under specific brand names, such as the Buckfast Bee or Midnite Bee.
- The advantages of the initial F1 hybrids produced by these crosses include: hybrid vigor, increased honey productivity, and greater disease resistance. The disadvantage is that in subsequent generations these advantages may fade away and hybrids tend to be very defensive and aggressive.

Types of honeybees in Bangladesh: There are four types of honeybees are found in Bangladesh and useful for honey production, they are:

- *Apis dorsata* (wild bee / rock bee): This bee species is originated from Asia. They are the largest among all the honeybees and are ferocious in nature. Each colony of *Apis dorsata* can yield 30-40 kgs of honey in average. Quality of *Apis dorsata* honey comparatively inferior. Most of the bee hunters collect honey from these colonies by adopting traditional methods. The collected honey is sold locally for through away price. These bees are found throughout Bangladesh in natural condition, however, large numbers of colonies are found in Sunderban mangrove forest.
- *Apis cerana*: The species of bee is originated from Asia. There are twelve subspecies are scientifically identified till today. Single colony have many combs and less migratory in nature, also easy to domesticate. Absconding is a common phenomenon, when management of the colony is not proper. Annual honey yield from one colony will be between 8-10 kgs in average. The quality of honey is very good.
- *Apis florea*: This bee species is also originally from Asia. It is commonly called as little bee and smallest in size among honeybees. Honey production capacity is very low. Five hundred grams of honey may be produced from a healthy colony. The quality of honey is good and has medicinal properties. *Apis mellifera*: This bee is originated from Europe and Africa, now domesticated in almost all parts of the world. *Apis mellifera* was introduced to Bangladesh during 20th century. Major honey producing bee species in the world. Less absconding and swarming habit. By practicing good management practice it is possible to harvest more than 50 kgs of honey from a single productive colony.

8.2 End Market Analysis

Growth of commercial flower production can be traced back to the early 70s that got impetus in the mid-80s when large-scale commercial production started in Jhikargacha upazila of Jessore district. Later it quickly replicated largely in Jessore, Savar, Chuandanga, Mymensingh and Gazipur which turned out as the major flower production belt in Bangladesh. Presently, Jessore is contributing about 70% of Bangladesh's flower production and engages about 10,000 growers in a small, but dynamic industry. The newly growing production belts are recently found in Chittagong, Cox's Bazaar, Rangpur for flowers and Khulna, Bandarban, Khagrachori, Rangamati for ornamental plants. Graduated model farms consisted of rudimentary greenhouses and were producing new and high value products such

as Gerbera daisies which were previously exclusively supplied by importers. Although this import substitution typically started initially with larger, more sophisticated farmers, the knowledge and skills to do this business but they were eventually trickle down to the smaller and less sophisticated farmers. Yet the flower market in the country started to expand significantly from 2000 onward with rapid urbanization and cultural proliferation with new festivities like Language Day, Religious Festivals, Valentine's Day and of course wedding ceremonies. Presently, according to the Assistant General Secretary of Dhaka Flower Traders *Kallyan Bohumukhi SomobaySamity* about 50,000 families are directly engaged in flower production while more than 1 million people are directly or indirectly dependent on this value chain.

Two interesting variants of the flow are highlighted in the value chain map:

- Integrated input supplier, trader, wholesaler: these businesses enhance profits by linking the farm directly to urban retailers. These represent a small minority of the product flow, but an interesting one to pursue and develop.
- “Flower assembly”: beyond the simple production of flowers, some common flower-based products require “assembly” or stringing at the village level. This creates off-farm employment for women although the team did note some suspect intermediary dealings with regard to the recruiting of the women.

Floriculture

To cater the market demand, different flowers such as chrysanthemum, tuberose, and gladiolus have been imported from India and orchids, gerbera, anthurium and Thai rose from Thailand every year. Bangladesh had to spend roughly Tk. 2-3 million in importing flowers and ornamental plants from abroad. About 90% of the domestic flower industry's revenues are derived from four varieties of flowers; roses, tuberoses, marigolds and gladiolas. Imports of cut flowers increased five times between 2002 and 2007. At the same time, retailers claim that as late as 2006, the flower industry was practically nonexistent. But now the locally grown flowers are taking market share from imports. At the same time the overall flower market is continuing to grow. Imports still represent somewhere between 20 to 30% of the market particularly at the high end of the scale. Retailers prefer imported flowers because of their freshness (they maintain cold chain) and wider options for selection.

Apiculture

In Bangladesh, about 1,075 metric tons of honey is produced in a year. Of those, 810 mt are produced through scientific bee cultivation, 225 MT through honey hunters in the Sundarbans region and 40 MT from other regions. It is believed that this total production can be made more than double through proper initiatives of apiculture. Bee cultivation can be a lucrative profession and the CREL target people can earn a remarkable livelihood in return for little investment. However, acute shortage of training facility, mustard cultivation, fruit orchards, research organizations and experts, has significantly undermined the sector.

8.2.1 Main Market, Buyers & competition

Floriculture

The demand for flower specially rose and merry gold is growing all over the country and especially in Cox's Bazaar district. In the last 5 years the flower sales in Cox's Bazaar has increased more than 300 times. Despite the increasing local consumption, the primary market of locally cultivated flowers is Dhaka and Chittagong. Almost 80 of the locally produced flowers are sold to Dhaka market.



Apiculture

In Cox's Bazaar apiculture is quite rare to find. There are only few collectors or bee hunter but the number is quite low. Some of the ethnic community in Whykkong still practice apiculture but not in a commercial way. They just sell them to the local villagers and use for themselves. Despite its potential for cultivation, high income opportunity and enormous benefits, apiculture is almost non-existence in Cox's Bazaar. They (almost armature, as a hobby) are farming bees and collecting honey.

8.2.2 Demand-Supply Situation

Floriculture

According to the President of Bangladesh Flower Growers and Exporters Association (BFGEA) currently the demand for Rose, Marigold, Gladiolus, Gerbera, Orchid, Lily, Tube Rose and some other flowers are also increasing and apart from meeting local demand, the flowers have excellent opportunity for exporting in large amounts if appropriate steps are taken to maintain the quality. The flower industry is growing by more than 10 per cent every year. The current market size is Tk10 billion and the flowers are cultivated in more than 2,500 acres of land across the country, particularly in Jhenidah, Savar, Tangail, Mymensingh, Gazipur, Narayanganj, Jessore and Chakaria.

To maintain the freshness of the exportable flowers, except orchid, flowers require a storage facility of less than 10 degrees Celsius temperature. In winter the natural cold chain helps the business immensely since the flowers remain fresh all day long and the growth of both flower variety and flowers increases substantially. At least 35 types of flowers are available in winter. While, in summer, both the types of flowers and the farm productivity are reduced and only a few items could be marketed because of lack of cold chain.

According to the Assistant General Secretary of Dhaka Flower Traders Kallayan Bohumukhi Somobay Samity Swapon Roy, per day about Tk 5.0 million worth of flowers are being sold in Dhaka market. More than 50,000 families are engaged in cultivating flowers and 200,000 people are directly and indirectly dependent on this sector. To meet the country demand, a large amount of flowers are imported every year.

Apiculture

Beekeeping and honey production is a low-tech, easy to start, highly profitable enterprise and is used in Bangladesh as a livelihood strategy for generating self-employment and supplemental cash income among rural poor and subsistence farmers including indigenous minorities and women. Through appropriate interventions and modest technological improvements, honey producers can increase their income significantly. In a country with a high rate of poverty, beekeeping represents a significant contribution to economic development.

Bangladesh has the potential of producing 10,000 MT of honey and current production is estimated at only about 1000 - 1100 MT. There is an estimated demand of about 2500 MT of honey in the country and the demand is gradually growing due to increased awareness of its health benefits and the use of bee hives to pollinate a number of important horticultural crops. The demand - supply gap is met by importing honey from other countries. An estimated 15 - 20,000 beekeepers, including the *Mowalis*, the honey hunters of the Sundarbans mangrove forest, are engaged in beekeeping and honey hunting in Bangladesh. FTF volunteers report that Bangladesh honey due to its unique color and flavor has high export potential but before that can happen there is a need for an organized marketing

system to boost domestic sales and further upgrade processing, packaging, and labeling to comply with international market requirements.

Due to the concerted efforts of the agencies like Bangladesh Institute of Apiculture, Bangladesh Small and Cottage Industries Corporation and other National and International agencies the total honey production in the country has increased from 596.20 tons in 2002 to 1,109.50 tons in 2005. Though there is an estimated demand of 2,500 MT of honey in the country and also the demand for honey is gradually increasing. With the technical and financial support from various International organizations like Hunger Free World, CIDA, SIDA, NORAD, WINROCK International, FAO of UN, OXFAM, UNDP, ICIMOD etc., there are 14,500 beekeepers are involved in beekeeping sector and 1,000 beekeepers are engaged in commercial honey production by practicing scientific methods of beekeeping management. The country currently producing about 800 to 900 MT of honey every year and rest are being imported from other countries.

8.2.3 Market opportunities

Floriculture

To satisfy the market demand, various flowers, such as chrysanthemum, tuberose, and gladiolus have been imported from India and orchids, gerbera, anthurium and Thai rose from Thailand every year. Bangladesh has to spend roughly Tk. 2-3 million in importing flowers and ornamental plants from abroad. About 90% of the domestic flower industry's revenues are derived from four varieties of flowers; roses, tuberoses, marigolds and gladiolas. Retailers prefer imported flowers because of their freshness (they are kept in a cold chain) and breadth of product selection.

Apiculture

Around 25,000 cultivators including 1,000 commercial apiculturists in the country produce at least 1,500 tons of good quality honey a year²⁶. The demand of honey in the country is around 2,500 tons annually. About 70 percent of the requirement is imported from abroad, particularly from India, Australia, China, and different European countries. A large quantity of locally produced honey is sold at an extremely low price due to lack of appropriate marketing facilities, as result the local producers are losing their interest in apiculture. Local producers sell honey to several local companies and NGOs including Ape, Fame, BASA, Proshika and other individual buyers. Honey from mustard is sold for Tk80 to Tk100 per kg while honey produced from litchi is sold for Tk110 to Tk120. Honey produced from black seed and coriander is of higher quality and expensive, they are sold at Tk140 to Tk160. After the processing, the honey marketing companies sell the honey for Tk400 to Tk600 per kg in local markets. It is generally claimed that the locally produced honey contains more nutritional value than the imported one.

Honey is produced from mustard flowers from first week of December to last week of January while guji teel (oil seed), black seed and coriander flowers from last week of January to first week of March, litchi gardens during March, keora, kholshi and bain flowers during March-April, and from sada teel (oil seed) fields from second week of April to second week of June, in different regions of the country, depending on the availability of the items, apiculturists said.

Commercial apiculturists Monir Hossain, Shahid Miah and Joynal Abedin of Gachhbari village under Kaliakair upazila in Gazipur district have set up 66 boxes (a box has three to ten frames, each containing about 3,000 to 4,000 honeybees) at a mustard field of Narandia in Kalihati upazila under Tangail this season and collects about 200 kg of honey in eleven days.

²⁶Mohammad Nurul Islam, Director, Bangladesh Institute of Apiculture (BIA), Dhaka

It was reported by the producers that honey production all over the country has declined over more than 50 percent in the mustard fields early this year due to unfavorable weather especially dense fog. The litchi orchards in the northern district also saw fall in honey production due to excessive use of insecticides which killed millions of honeybees as well as severe drought early this year. According to Afsar Ali, a honey producer of Sagardighi in Ghatail upazila of Tangail, President of Tangail District Unit of Bangladesh Apiculturists Welfare Association (BAWA), around 60 commercial cultivators of Tangail district produce over 100 tonnes of quality honey a year. Mohammad Nurul Islam, Director of Bangladesh Institute of Apiculture believes that finance is one of the major impediments in honey cultivation, in this regard access to bank finance to the producers can significantly help in developing the sector. Irresponsible pesticide spray by the orchard owners particularly before noon is a direct threat for honey cultivation. It may be noted that the honey bees generally collect the nectar before noon.

Bangladesh Small and Cottage Industries Corporation (BSCIC) first initiated bee keeping on behalf of the Government in 1977 for employment generation and poverty reduction through income generation. Initially BSCIC offered training to the interested persons and supplied a box with a queen bee and for 20 bee keepers they supplied a honey extractor free of cost. They also placed demonstration hives in the crop fields, supervised and gave technical support to the bee keepers. Their project continued up to 2005 and till then they have trained 18,000 persons. In recent years many NGOs and private entrepreneurs have become interested in promoting bee keeping. BSCIC and the Bangladesh Institute of Apiculture (BIA) an NGO, established in 1981, are currently involved in training, extension and marketing of honey and bee keeping in the country. A number of other organizations such as Proshika, CMES, Hunger free world, BASA, PROAS, Fame enterprise, etc., are also engaged in capacity development and marketing of honey on Bangladesh. BIA and Proshika are providing accessories like Bee box, Bees, knife, queen gate, bee veil, queen excluder, honey extractor etc. on credit. So far with the support and encouragement of the Government and NGOs approximately 30,000 bee keepers have been trained of which about 14,500 people are directly involved in bee keeping and about 1,000 bee keepers are engaged in commercial honey production.

The main honey producing crops in this region are:

- About 65% from mustard flower (November-February)
- About 15% from litchi flower (February-March)
- About 20% from forests

If each of these 1,000 bee keepers work for 5 months then 1,50,000 man days work is created and if 20% of the 1,000 keepers i.e. 200 people migrate to Sundarban and work for another 3 months then another 18,000 man days jobs created. Thus, the total job in this sector is 168,000 man days per year.

Among the three species of bee *Apis mellifera*, introduced in Bangladesh, is highly productive and gaining popularity day by day. It can produce 50 kg honey per colony per annum.

Supply and demand of honey in Bangladesh:

- Due to concerted efforts the total production of honey in the country has increased from 596.20 tons in 2002 to 1460 tons in 2007 (BIA Report, 2008).
- The total price of the produce at Tk 200/kg is Tk 292 million (USD 4.232 million)

- There is an estimated demand of 2,500 tons of honey in the country. Part of the demand is met through import from different countries like India, Australia, Singapore, Pakistan, USA etc.
- Despite this Bangladesh also exports some honey to different country like United Arab Emirates, India, Singapore, Thailand etc. In 2006, 530.1 tons of honey was exported to these countries and earned USD 2.89 million (BIA report 2008). This is highly encouraging.

Future prospect of Honey:

Bangladesh has a great potential for bee keeping with her vast green land covered with large number of bee plants throughout the country. Cox's Bazaar region in particular has special significance for bee keeping.

Demand of honey by pharmaceutical, cosmetic companies as well as at individual level is gradually increasing. As per prediction of BSCIC there is a potential of 20,000-30,000 tons of honey production in the country and more than 50,000 people can be engaged in this sector.

Beewax: Beewax is collected from the combs of wild hives, frame hives and capping. About 75% of beewax produced worldwide goes into cosmetics and pharmaceutical uses. Beewax also used as manufacture of candle, polishes, eyebrow pencils, rouges, pomades, ink, carbon paper, water proof canvas etc. it has numerous uses in military and atomic research.

Royal jelly: Royal jelly is used for stamina and cures of disease, as a cosmetic ingredient, a compound medicine. Royal jelly is actually a special feed / main to queen bee larvae. Production of royal jelly is to use a queen mangkokan filled with larvae aged 1-2 days (grafting) and attached to the frame of the next frame is inserted into the colony

Bees as Part of Ecosystems: Pollinators strongly influence ecological relationships, ecosystem conservation and stability, genetic variation in the plant community, floral diversity, specialization and evolution. Bees play an important, but little recognized role in most terrestrial ecosystems where there is green vegetation cover for at least 3 to 4 months each year. In tropical forests many species of plants and animals would not survive if bees were missing. This is because the production of seeds, nuts, berries and fruits are highly dependent on insect pollination, and among the pollinating insects, bees are the major pollinators. In farmed areas, bees are needed for the pollination of many cultivated crops, and for maintaining biodiversity in 'islands' of non-cultivated areas. The main role of bees in the different ecosystems is their pollination work. Other animal species are connected with bees: either because they eat the brood or honey, pollen or wax, because they are parasitic to the bees, or simply because they live within the bees nest.

Benefits of Beekeeping include:

1. Pollination
 - Bees pollinate flowering plants and thereby maintain the ecosystem.
 - Bees pollinate cultivated crops.
2. Honey
 - People everywhere know and like honey, a valuable food and income source.
3. Beeswax and other products
 - Beeswax, propolis, pollen and royal jelly. These products have many uses, and can be used to create income.

4. Few resources are needed
 - Beekeeping is feasible even for people with minimal resources.
 - Bees are obtained from the wild.
 - Equipment can be made locally.
 - Bees do not need the beekeeper to feed them.
5. Land ownership not essential
 - Hives can be placed anywhere convenient, and so beekeeping does not use up valuable land.
 - Bees collect nectar and pollen wherever they can find it, so wild, cultivated and wasteland areas all have value for beekeeping.
6. Nectar and pollen are otherwise not harvested
 - Nectar and pollen are not used by other livestock: only bees harvest these resources, so there is no competition with other crops.
 - Without bees these valuable resources could not be harvested.
7. Different sectors and trades benefit from a strong beekeeping industry
 - Other local traders benefit by making hives and equipment, and from using and selling the products.
8. Beekeeping encourages ecological awareness
 - Beekeepers have a financial reason to conserve the environment: ensuring that flowers are available and bees are protected.
9. Everybody can be a beekeeper
 - Bees can be kept by people of all ages.
 - Bees do not need daily care and beekeeping can be done when other work allows.
10. Beekeeping is benign
 - Beekeeping generates income without destroying habitat.
 - Encouraging beekeeping encourages the maintenance of biodiversity.

8.3 Value chain map and analysis of value creation activities

The value chain maps for the floriculture and apiculture were developed based on the data collected in the project areas.

8.3.1 Value Chain Overview

Floriculture

Floriculture has large opportunity in Cox's bazaar especially at Chakaria. A few enterprising farmers have started to cultivate flowers in Chakaria, Cox's Bazaar in the last few years. The results so far have been extremely encouraging both in terms of farm productivity and revenue. As a result, the value chain for floriculture has strong presence in the working area. The value chain of floriculture in Cox's Bazaar is drawn based on the experience of the few practicing farmers and the current flower market actors at Cox's Bazaar, Teknaf, Chittagong and Dhaka.

The local flower market has been developed by the local entrepreneurs/farmers with the patronization of last IPAC project. The large quantity of the locally produced roses was consumed in the Cox's Bazaar market mostly by the local people at different occasion, wedding, hotels and for other purposes as well. The flower traders are confident about the product and showed positive interest in market development.

The national market at Shahabagh, Dhaka can be the largest consumer if they can produce high quality and different varieties of flower.

Apiculture

Despite its potential for cultivation, high income opportunity and enormous benefits, apiculture is almost non-existence in Cox's Bazaar. Only a few collectors / bee hunters still works in the forest area, however, the collection is extremely low. Only a few (almost armature, as a hobby) are farming bees and collecting honey in Cox's Bazaar. Following is the value chain derived from the existing practices found in Cox's Bazaar. It may be noted here that a large number of technical service providers are working in the region on apiculture. These include Bangladesh Institute of Apiculture (BIA), Bangladesh Small & Cottage Industries Corporation (BSCIC), Bangladesh Apicultural Association (BAA), Apiculture Network Bangladesh (ANB).

8.3.2 Value Chain Actors, Functions and Map

Floriculture

Input Supplier:

The local producers are the key actors for supply of primary input (cuttings) and the regular agro input suppliers as the sources for other inputs such as fertilizer, pesticides, tools, etc. The access and availability of both cutting and other agro inputs from the national actors seems no major issue with the local input traders and producers. The presence of local agro input suppliers in all the major upazillas headquarter is satisfactory, although Cox's Bazar is the primary market for all inputs. The price difference is negligible in upazilla markets compared to Cox's Bazar central market. A few large traders in the upazillas have their own linkage with the national market players for agro inputs.

Production:

Flower cultivation is quite new, only a few producers in the target area are engaged in cultivation and sales of cut-flowers in Cox's Bazar. Experience from the local and other producers in different regions of the country suggest that flower cultivation does not require much sophisticated technology and knowledge, anybody with agriculture experience particularly in producing horticulture products, can easily start cultivating flowers for commercial marketing. A small piece of land can yield almost 300 times more income than traditional vegetable cultivation. The primary product is fresh cut-flower.

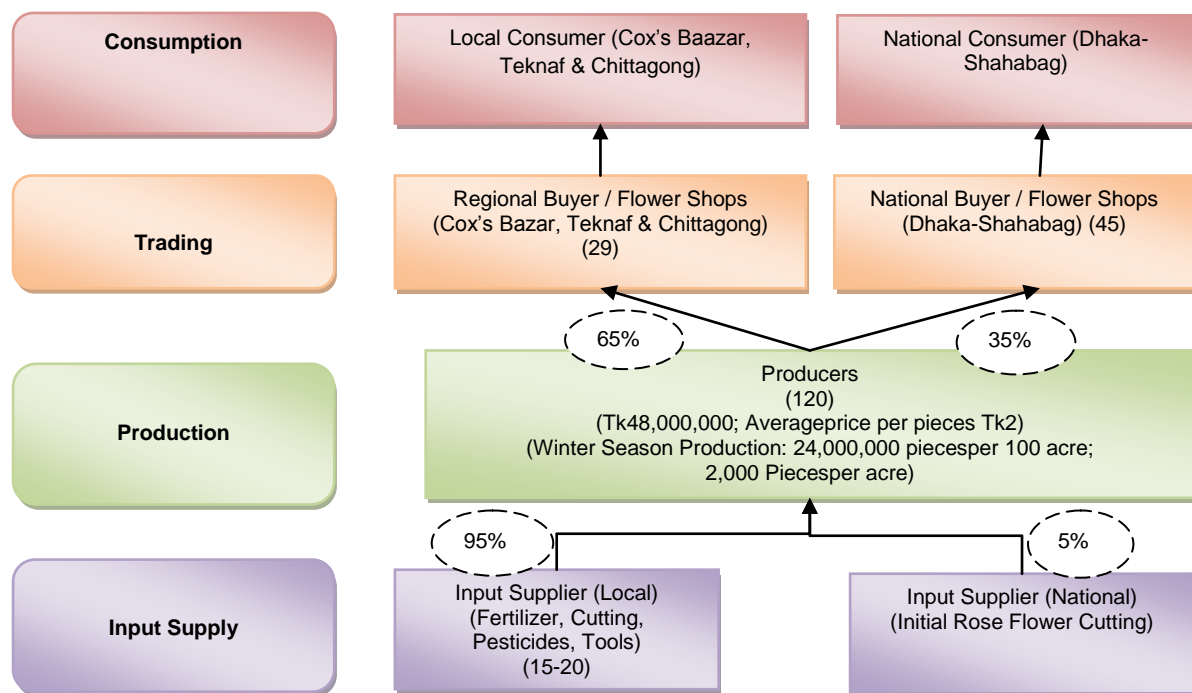
Trading:

Local flower shops trades both local as well as national cut-flower (the sourcing of flowers from national markets are particularly those that are not produced locally). The regional and national flower shops (flower shops in the working area as well as in adjacent districts – Ctg) are one of sources of fresh cut-flower. The local flower shops and the regional and national flower shops procure fresh cut-flowers from different regions of the country including Cox's Bazar.

Consumption:

The fresh cut-flowers are mostly used by the local as well as regional (people in the working area as well as in adjacent districts – Ctg) consumers. In the target areas, the primary consumer of fresh cut-flowers is still limited to special events such as weddings and festivals. A large number of hotels and resorts in the tourist district of Cox's Bazar also use a large amount of fresh cut-flower for their daily use.

Figure 32: Value Chain Map for Floriculture²⁷



²⁷ Primary data: in-depth interviews, questionnaire survey

Apiculture

Input Supplier:

The local producers are the key actors for supply of primary input (queen bee) and the regular input suppliers as the sources for other inputs such as hives, box, tools, etc. The access and availability of both queen bee and other inputs from the local and national actors has challenges. The presence of local input suppliers of apiculture in all the major upazillas headquarter is not satisfactory. The price and availability of apiculture inputs in upazilla and district makerts of Cox's Bazar is very low.

Production:

Honey cultivation is new, only a very few producers in the target area are engaged in production and sales of honey in Cox's Bazar. Experience from the local producers and other producers in different regions of the country suggest that honey cultivation does not require much sophisticated technology and knowledge. With a little knowledge, skills and safety precusion can easily start producing honey cultivation for commercial marketing. A small piece of land can yield almost 500 times more income than traditional vegetable cultivation. The primary product is fresh honey and biproducts.

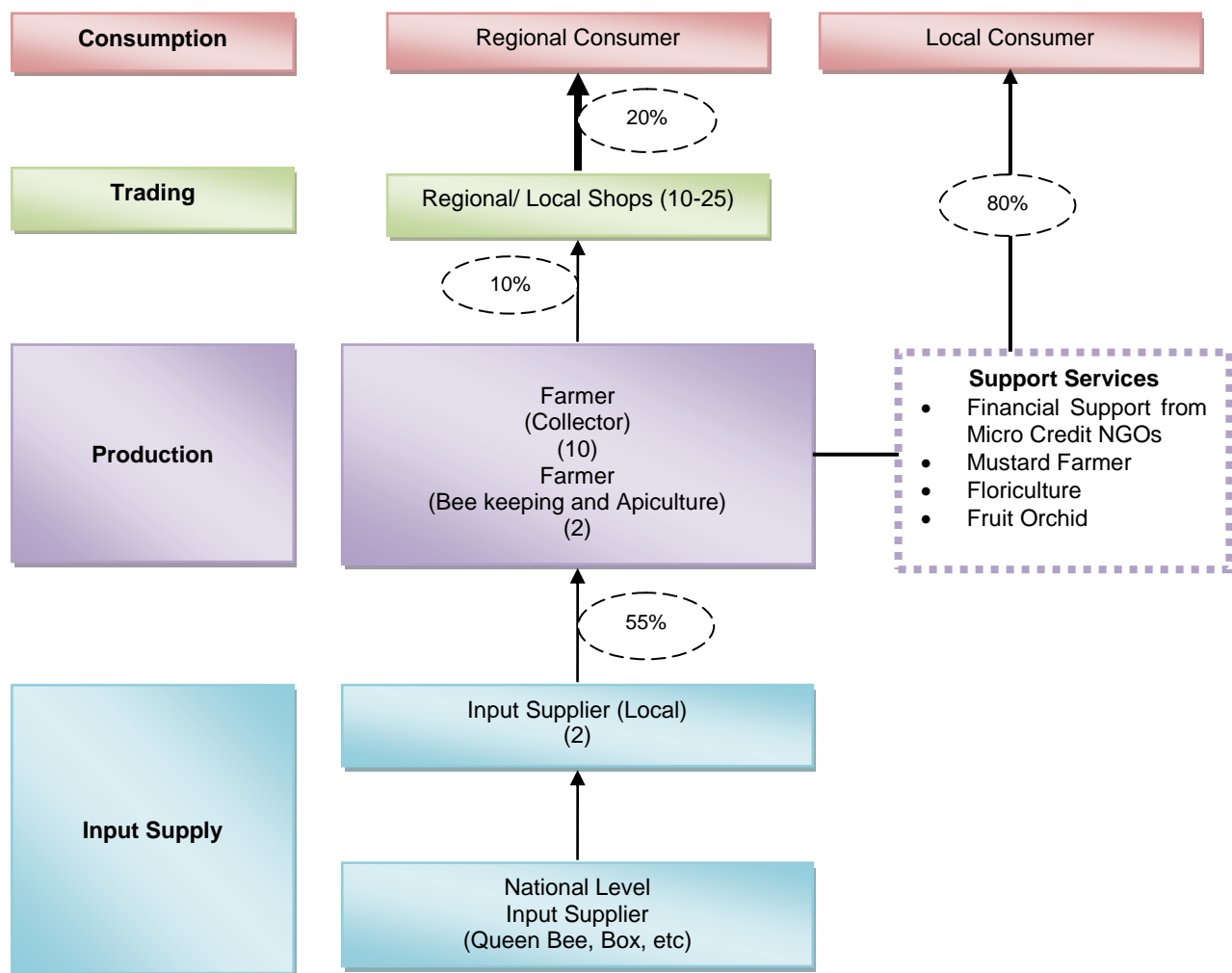
Trading:

Local shops trade honey acquired from national markets because of lack of local honey. The regional and national super shops (shops in the working area as well as in adjacent districts – Ctg) are one of the sources of fresh and branded honey both local and imported. The local shops and the regional and national super shops procure fresh honey from different regions of the country.

Consumption:

The fresh honey is mostly used by the local as well as regional (people in the working area as well as in adjacent districts – Ctg) consumers.

Figure 33: Value Chain Map for Apiculture²⁸



²⁸ Primary data: in-depth interviews, questionnaire survey

8.4 Value Chain Performance

Value Chain performance investigated above on their actors and their functions revealed some strengths and weaknesses of the floriculture and apiculture value chain to impact the beneficiaries. Analyses for this given value are below:

8.4.1 Business Enabling Environment

For floriculture sub sector, Chakaria district is famous for flower production. Although the project beneficiaries do not practice flower production however they are aware of floriculture. Therefore, Cox's Bazaar region has a good chance and favorable business environment for floriculture. Hence, apiculture has also potential to grow in this region if apiculture becomes successful. In Chakaria district commercial production flowers have been practiced for a decade.

Market actors are sufficient in number and willing to act as loaning institutions in return for contracted purchase of beneficiaries produce. The challenge remains within the production stage is to teach the new flower production technique to the beneficiaries and connect them to the existing markets in local, district, regional and national level.

Gender and cultural norms: Inhabitants of Cox's Bazaar district are not exceptionally moderate. Although ladies are having a tendency to work outside and they are additionally included in the pastoral work, however, men typically hold the real obligations regarding economic activities. Youth are additionally included and interested in diverse horticultural production.

8.4.2 Vertical Linkages

Vertical linkage among floriculture farmers in Cox's Bazaar Region is high although there is no seemingly visible linkage for apiculture in Cox's Bazaar.

Input Access & Quality

Input access quality for floriculture is higher than apiculture. As mentioned before Chakaria is the major hub for flower production and flower farmers, input access to seeds, cut flowers, fertilizer, pesticides are available in this region. If demand is increased then there is possibility of boost up in input supplies in other project areas as well. However, input access to apiculture is not that visible in that region though flower farming can easily lead to apiculture.

Access to Markets

The linkage in the trading arena for floriculture is stronger as the same wholesaler can function as a local, district-level or regional wholesaler depending on his current volume of business. Even lead farmers have retail shops in the district and region level.

Access to Market Information

Farmers have access to market information. As well as, traders have well access to market information. As flower is very demanding and highly perishable product without proper market information loss of business occurs to every actors remaining in the value chain. On the other hand, for apiculture farmers do not have market information as there is no existing market available in that region.

8.4.3 Horizontal Linkages

Roles for the targeted beneficiaries

Horizontal linkages among beneficiaries are not present in floriculture same goes for apiculture. However, horizontal linkage among the farmers by increasing the land size can benefit the farmers in the project area.

Types & forms of collaboration & competition

At the trading level, both cooperation & solid rivalry exist inside the businesses for floriculture. This might be seen since each market, at local, region and provincial level, all have a manifestation of Flower Association which directs the operation of the commercial center. Notwithstanding, they don't impact the regular price estimation. This means the market actors are exceedingly aggressive; in both costs and quality. The retailers have a sharp awareness of the source and benchmark of quality that could be furnished in the sector.

Performance of the Value Chains and Scope for Upgrading

Floriculture

There are about twenty species and a very high number of varieties in particular hybrid varieties. Inter-specific hybridization was of big importance in cultivated roses evolution, but it needed almost a century to find associated China rosebush (*rosa indica*) blossoming characters from one side, and French roses (*rosa gallica*) strength and hardness characters on the other side. Nowadays, the principal agronomical characters on which roses are selected are based on: re-flowering character the continuous flowering capacity; awnless character lack of thorns; sarmentous character branch lengthening gives a climbing bearing; color; resistance to diseases viral diseases, crown-gall or verticilliose; resistance to climatic stress.

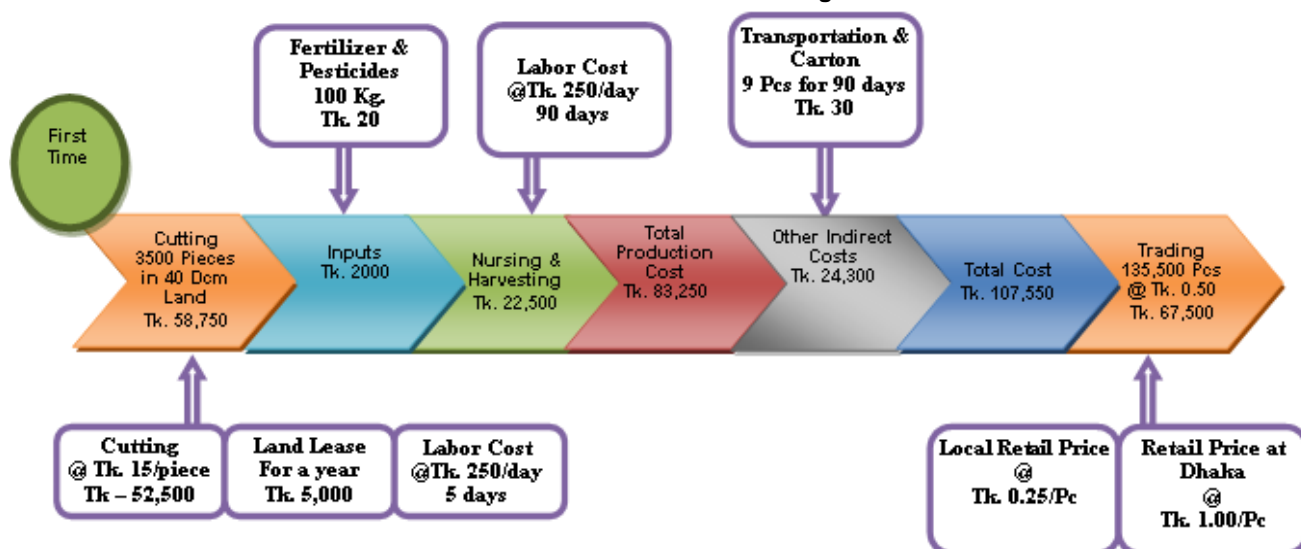
The propagation of roses can be performed in a number of different ways: by plant division and layering (for hardwood species); for other species (sarmentous rosebush and hybrids) by grafting and propagation by cuttings; by seeding (as for all species giving grains); "In vitro" propagation: a very short time, 1 to 2 months instead of 12 to 18 months with upper methods.

Division and cutting is popular, it is a good way to propagate roses quickly and easily. Most of the roses grow on their own roots than grafted. The conventional rose varieties are in general well adapted to the growing condition in the area. Roses can be rooted at any time of the years but the best results occur during the winter. However extreme cold weather can damage the cutting. The best stem for cuttings are those that they had some flowers. A good cutting length is about 6/7 inches, cut with a 45 degree angle. The leaves of the lowest half part of the cuttings are removed. It is important that the cutting should not get dry or exposed at too high or too low temperatures. Before planting the cutting, rooting hormones are used to improve the success rate and the rooting number.

Light soil is ideal for cultivation; as a result the farmers generally add sand to 1/3 of bed. The plant should receive bright sunlight but not directly the sun. The cutting requires regular watering especially during the rooting time. The ideal time for cutting is April-May and by late fall or winter that the young plant are able to move to their permanent beds. This same period is the best to divide rose and plant the new one. The air or soil layering can be practiced vigorously. The roots appear in 28 days with this technique. It is one of the quickest ways.

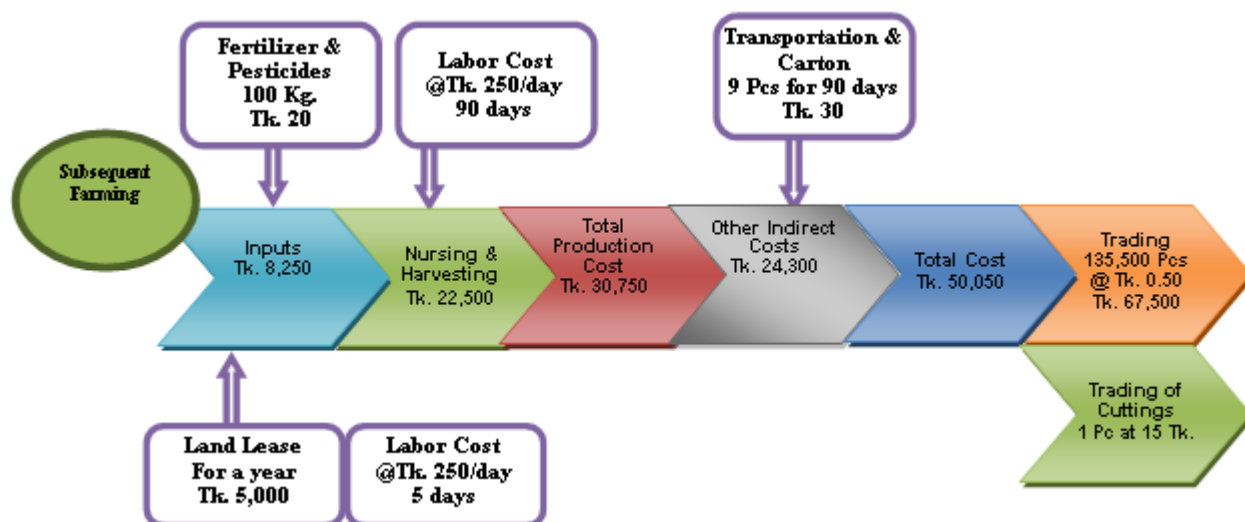
For the initial farming, the farmers generally purchase the cuttings (from other local farmers or from rose gardens in Jessore and Dhaka). Later, the primary input (cutting) is abundantly produced by the growers for their own use as well as for sales. The price of each cutting is about Tk10.

Figure 34: Flower (Roses/ Peak Season- Winter) - Cost of Production and Sales Revenue / Profit per 40 decimal land for initial farming²⁹



In subsequent cultivation, the farmer generally does not require have to purchase the cutting. He can use his own cutting and additionally sell extra cuttings to other new farmers.

Figure 35: Flower (Roses/ Peak Season- Winter) - Cost of Production and Sales Revenue / Profit per 40 decimal land for subsequent farming³⁰



8.5 Value Chain Governance

The value chain is largely influenced by traders, especially the wholesalers.

Influence & control along the chain

Most of the wholesalers are located in the Cox's Bazaar and Chittagong which is outside, of the project area. The quality and supply of flowers influence the markets greatly and the channel via which they come in is the wholesalers. The other point of influence is the support services and political situation inside the country. The ultimate control of the value chain lies with the end-market

²⁹ Primary data: in-depth interviews, questionnaire survey

³⁰ Primary data: in-depth interviews, questionnaire survey

actors – consumers – who dictate demand and pricing of flower. However, apiculture sub sector is very weak in the region.

Role of Beneficiary

Flower farmers usually sell to the fixed wholesalers or in some cases they become wholesaler as well as retailer and input seller. This situation occurs because the more they get involved in the vertical link of the chain the production price goes down exponentially. Most production is done on loans and there is pressure to pay back as soon as possible.

Inter-Firm Relationships

There is inter-firm relation in this value chain especially for the floriculture between producers, wholesalers and retailer. This inter firm relation ship is visible upto the national level. The input suppliers to commercial lead and small farmers have a very good network upto Dhaka, Chittagong, Teknaf etc. This system has developed because flower is highly perishable product and it get damaged very easily if proper measures are not taken before. Therefore, actors maintain good relations among themselves to secure the business. Often it is visible that wholesalers are giving loan to the farmers to produce any specific kind of flower at certain season when demand in the market is very high. These contracts are mostly based on verbal communication and inter trust and relation they have built for years.

8.6 Assessment of the regulatory environment and support services

Floriculture

Plant Protection Act: To prevent the exit and entry and spread of diseases and pests from foreign countries, the Plant Protection Act (PPA) mandates inspection of plants when being exported or imported. The PPA covers cut flowers. The exporter or importer must promptly submit to the Quarantine Station a “Notification Form for Importation of Foods” along with a “Phytosanitary Certificate” issued by the competent government agency of the exporting country. Only certain ports of entry equipped with plant quarantine facilities are designated for plant export and imports. If any kind of violations are detected, the importer will be ordered to fumigate, discard, or reshipment. A “Certificate of Notification” will be issued upon passing the inspection at the port of entry or exit.

Apiculture

Certification is a function of the Bangladesh Standards and Testing Institution (BSTI) a semi-autonomous public institution established by Government of Bangladesh to undertake all activities pertaining to the development of Standards and quality assurance in the country. It is the only body mandated with powers to define and assess national standards. Public service entities and public or private firms must present their standards to BSTI for adoption at national level.

The Bangladesh Standards and Testing Institution (BSTI) was established by the Government through an Ordinance passed in July 1985. BSTI is headed by a Director General (Additional Secretary to the Government). The primary activities of the Bangladesh Standards and Testing Institution (BSTI) are: standardization of services and products (S); introduction of the international unit system of weights and measures and promotion of metrology services (M); promotion of quality assurance activities; rendering testing facilities for services and products; preparation, promotion and adoption of national standards. The Institution is also empowered with some regulatory measures in these fields. The Institutional budget is fully supported by its own income, i.e., It is functioning as a self-financing organization.

8.7 Poor/Resource Dependent, Youth and Gender Analysis

Both flower cultivation and apiculture is a low-investment and low-input business and can directly generate economic gains for the CREL target members and integrates well with agriculture that forms the main economic activity for communities living in the rural areas. The advantage of apiculture is numerous and can directly involve men, women and youth equally. Apiculture can be a crucial avenue towards poverty reduction and enhancing the quality of life of the target members. The apiculture value chain harbors a great potential for increasing incomes and supportive sustainable development, especially considering the varied players and activities along the broader chain.

In most of the 86,000 villages in Bangladesh beekeeping is more or less feasible on the basis of existing natural bee plants. It can be calculated that if there would be at least 5 beekeeping in each village, there would be more than 0.4 million people directly engaged in bee-keeping activities in the country. Most of the 0.4 million people that are engaged in keeping bees about 50% - 60% of them are women and youths. If each bee-keeper on average produces 10 kg of honey, the total honey production will be about 4,000 metric tons which is worth Tk 800 million per year. It was also estimated that additional crop, vegetable and fruit production as per scientific record is to be worth Tk8,000 million by way of pollination through bee-keeping activities in the country. The scientific implementation and expansion of beekeeping in the country can not only help honey production but will also help in enhancing crop, vegetable and fruit production through pollination. Moreover it can significantly help in employment and income generation for the poor rural women and youths. Despite the above and numerous other probable advantages that can be realized from beekeeping, the value chain remains largely non-existing. This is because beekeeping is dependent on the nectar producing crops, orchards and other floriculture practices which is critically absent in the region. As such most farmers have not fully appreciated potential and value as a commercial enterprise of generating income.

8.8 SWOT Analysis

Table 25: SWOT Analysis of VC 3

Value Chain	Strengths	Weaknesses	Opportunities	Threats
Floriculture	<ul style="list-style-type: none"> ▪ High return on investment ▪ Large demand ▪ Successful demonstration in the working area ▪ Increasing local demand 	<ul style="list-style-type: none"> ▪ Lack of storage facilities both at field and retail levels ▪ Lack of appropriate knowledge of cultivation ▪ Poor product diversification, focus on only one flower – rose ▪ Lack of adequate transport facilities ▪ Lack of affordable packaging materials ▪ Inadequate market and technical information ▪ Inadequate skill inventory for the post harvest management of flowers ▪ Lack of adequate financial support 	<ul style="list-style-type: none"> ▪ Catering to the local hotels and restaurants ▪ Product diversification especially exotic varieties such as orchid ▪ Flower decoration materials (foliage) such as ferns, leaves, stems and other materials ▪ Farmers' group and associations can be created to increase their bargaining capacity ▪ Cool Chain from field to market can be developed ▪ Specialized Storage Facilities can be developed ▪ Skill development training on handling of flowers and ornamental plants 	<ul style="list-style-type: none"> ▪ Internationally imported flowers ▪ Political unrest
Apiculture	<ul style="list-style-type: none"> ▪ Little or no investment ▪ High profitability ▪ Requires very little skill and training ▪ Supports afforestation through improved pollenization 	<ul style="list-style-type: none"> ▪ Lack of nectar producing crops and fruit cultivation in the area ▪ Lack of trading of queen bee in the local market 	<ul style="list-style-type: none"> ▪ Linking with floriculture ▪ Encourages promotion of IPM ▪ Reduces indiscriminate and excessive use of harmful chemical pesticides ▪ Technical assistance from BSCIC, DOA, and other NGOs and projects ▪ Exploring the export market ▪ By-product market such as wax and royal jelly 	<ul style="list-style-type: none"> ▪ Extreme weather ▪ Lack of knowledge and compliance of sanitary and phytosanitary regulations

8.9 Constraints Analysis

Floriculture: Lack of knowledge of flower cultivation, post harvesting and marketing are the key constrains.

Apiculture: Lack of knowledge of apiculture, post harvesting and marketing are the key constrains

Table 26: Constraints Analysis of VC 3

Constraints	Intervention	Role of CREL	Leverage point	Probable time to start	Intervention maturity time	Type of beneficiary suits	Potential outreach
Farmer producing traditional vegetables as they do not have access to information on high-value crops (flower cultivation) that can lead to high profit	Create service provider (lead farmers) to ensure information flow to the farmers	Create linkage for knowledge and information about cultivation and marketing and organize demonstration	Existing lead farmers in Chakaria	November - December	6 months	Women and Youth	5,000 in Fashikhlai, Himchari, Shilkhali and Teknaf
The target groups have limited access to knowledge and technologies for apiculture	Create linkage with service providers to ensure quality inputs as well as embedded production technology	Create linkage for knowledge and information about cultivation and marketing and organize demonstrations	Apiculture Association, BSCIC	Next year after having sufficient nectar producing flowers and crops	12 months	Women and Youth	1,000 in Fashikhlai, Himchari, Shilkhali and Teknaf

8.10 Potential Interventions

Table 27: Potential Interventions of VC 3

Constraint	Intervention	Output	Outcome	Impact
Farmer producing traditional vegetables as they do not have access to information on high-value crops (flower cultivation) that can lead to high profit	Create service provider (lead farmers) to ensure information flow to the farmers	Service providers are providing information on high-value crops to the farmers	Farmers are adopting the high-value crops	Farmers are enjoying higher income
The target groups have limited access to knowledge and technologies for apiculture	Create linkage with service providers to ensure quality inputs as well as embedded production technology	Service providers are providing information on high-value crops to the farmers	Farmers are adopting the apiculture	Farmers are enjoying higher income

8.11 Recommendations

CREL can continue to target high-value agricultural products such as flower cultivation and apiculture to enhance value chains' competitiveness, and increase employment and incomes for the targeted poor, and at the same time build private sector agribusiness capabilities. Implementation of value-added strategies such as processed products and new product development and provide agro processors and producer groups with the knowledge and skills to meet buyer requirements can be an extremely useful intervention. Making the producers to understand and differentiate their products through market segmentation strategy as well as way to identify and cater special niche markets can significantly improve their livelihood.

Quality improvement has always played an important role in the farmers' ability to gain leadership and competitive advantage. CREL through the program can promote GMP, HACCP, EUREPGAP, FDA, and USDA quality and sanitation standards to prepare the produces get into the high-value export chains. In addition, efficient farming practices can help decrease production and processing costs can work as a very effective strategy. In today's volatile agricultural market, quality and production costs will continue to be the important factors for maintaining and increasing value chain competitiveness. Developing market and sales strategies such as improved packaging and branding focused on penetrating formal markets through optimum client service and aggressive marketing. Therefore, focus on quality improvement for buyers' compliance should remain as one of the major focus interventions in future.

The program is expected to promote sustainable natural resource management initiatives and increase the peoples' awareness about agriculture and natural resource conservation techniques. Technical assistance in areas such as environmentally friendly production and processing technologies, water and soil conservation, and integrated pest management should be integrated with the intervention. The program is also expected to emphasis on women as participants and targeted clients in the programming activities. The interventions have specific opportunities to promote women's active involvement in agricultural as well as in the trading. The new production and business skills can strengthen the abilities and confidence of the women to participate in decision-making and leadership roles. The program should maximize the dissemination of its interventions through continued work with association/producer groups and agricultural institutions, as well as facilitating the formation of agricultural producers' forums, and supporting information dissemination networks. Continued collaboration with associations/producer groups will increase program impact to a larger audience, as well as encourage value chain actors to take notice and share knowledge and skills as embedded service. The collaboration with producer groups, networks, forums, research, and extension workers has good potential to help ensure the sustainability of the interventions through transferring skills and knowledge to a wider range of value chain actors.

Strategic partnership can play an important role in generating positive outcomes from the interventions in targeted sectors. Although attribution of impacts is more difficult with this strategy, collaborative work helped each party (FD, international/local project implementers, and NGOs) can achieve their program objectives and facilitate changes among targeted audiences. CREL should look for such synergistic relationships with development projects and strengthen partnerships in those areas where there is a lack of local expertise, and projects do not have the resources for additional technical assistance.

CREL should support demonstration projects in cooperation with target groups to show how innovative, low-cost technologies can increase productivity and profitability.

9. Status of Ethnic Communities

In South East 2, Cox's Bazaar region different ethnic groups and their colorful lifestyles have significantly enriched the entire culture. For centuries, Bangladesh has been the dwelling place of different ethnic groups. In fact, 35 smaller groups of indigenous people covering about two percent of the total population have been living in different pockets of the hilly zones. Their historical background, economic activities, social structure, religious beliefs and festivals make them distinctive. During our assessment we have observed that there are many indigenous inhabitants in Cox's Bazaar. In Himchari there is one ethnic community named Rakhain Para. The total household number is almost sixty and total population is 300- 350 (est.). Among these people 23 members are included as VCF members. There are few Chakmas are also living in Teknaf. At Shilkhali the two ethnic villages are Dokkhin Pilkhali and Dokkhin Chakma Para and the total population is around 200. At Whykkong there are four ethnic villages - Harikola, Lombagona, Amtoli para and Putibunia Para and almost 144 VCF members. At Teknaf WS, harbors three ethnic minority communities, Rakhain, Marma and Chakma.

These ethnic communities are mainly involved in agriculture, agri. day labor, crab collectors, rice wine producer, betel leaf producer, small business holders, hand embroidery, handloom, homestead gardening. Most of the villagers have less than 40 dcm land. We can include this ethnic people into our selected value chains. People who are involved in agriculture we can involve them in Strawberry, Capsicum and Medicinal plants. We can also involve women into Sewing & Stitching, Dress Making & Hand Embroidery, Nakshikantha, Hand Crocheted Prayer Caps, and Fishing Net Making. We can also guide other farmers who have lands to practice floriculture.

10. Introduced Technology / Methods

Throughout the study we have observed and suggested some new technology and methods for most of the value chains. Below table is listed for these technologies with brief description:

Table 28: Introduced Technology / Methods for All Value Chains

Value Chains	Introduced Technology / Methods	Description
Strawberry	Intercropping	Intercropping can be done e.g. garlic, onion, spinach, lettuce; however avoid peppers, tomatoes, egg plants and potatoes could harbor verticillium wilt and land which was recently covered by grass area also not advised for strawberry cultivation
	Raised-bed and shallow plantation	Can be prepared with 15cm height and 30cm width, where two rows can be planted in one bed. The spacing for planting should be considered at 25cm x 20cm in each bed.
	Runners (seedlings)	One lakh (100,000) fresh and healthy runners (seedlings) are required for planting in one hectare of land. Late afternoon is the best time to plant the runners (seedlings).
Capsicum	New Seeds- OP capsicum/ Misti Morich 1, California Wonder, Yolo Wonder, Yellow Wonder	2009 Olericulture Division, HRC, BARI has released an OP capsicum variety named BARI Misti Morich 1. California Wonder, Yolo Wonder, Yellow Wonder are the most high yield commercial popular hybrid varieties suitable for Cox's Bazaar
Medicinal Plants	Plants grow within 6 months	Holy Basil (Tulshi Pata), Aloe vera (Ghrito Kumari), Stevia, Mentha (Pudina Pata), Indian Pennywort (Thankuni pata)
Floriculture	Plant breeding technique	New varieties breeding are a major occupation of floriculturists. Floriculture crops include bedding plants, houseplants, flowering garden and pot plants, cut cultivated greens, and cut flowers. As distinguished from nursery crops, floriculture crops are generally herbaceous.
	Cut flowers	Cut from the plant bearing it. It is usually removed from the plant for indoor decorative use. Many gardeners harvest their own cut flowers from domestic gardens.
Apiculture	Bee yard	A location where bees are kept is called an apiary. A beekeeper (or apiarist) keeps bees in order to collect honey and other products of the hive (including beeswax, propolis, pollen, and royal jelly), to pollinate crops, or to produce bees for sale to other beekeepers.

ANNEX

Term of Reference

1. Background

Climate-Resilient Ecosystem and Livelihoods (CREL) is an USAID funded project implemented by a team led by Winrock International. CREL project will scale up and adapt successful co-management models to conserve ecosystem and protected areas (PA's) in Bangladesh, improve governance of natural resources and bio-diversity, and increase resilience to climate change through improved planning and livelihoods diversification. CREL will build the capacity of resource users for financial and entrepreneurial literacy so they participate profitably in value chain activities that will increase access to inputs, credit, markets, information, and improved technology. The result will be viable livelihoods and enterprises that increase incomes, sustain resources and productivity, and improve resiliency, especially among marginal and vulnerable populations. A brief background of the project is attached with TOR as Annex I.

CREL aims to provide sustainable alternative livelihood opportunity to the CREL target beneficiaries who are disadvantaged, poor/ultra poor, women, youth and highly dependent on natural resources through strengthening suitable and climate resilient value chains.

2. Objectives of the Study

The main objective of the study is to find out the potential Value Chains and analyzing the Value Chains to come up with strategies and interventions to ensure sustainable livelihoods for the beneficiaries of the project that lead to reduce pressure on natural resources. The study will be conducted in two phases. Specific objectives of each Phase of study can be defined as follows:

Phase 1: Analyze all potential Value Chains and select 4 Value Chains (including nature-tourism which is preselected) for full analysis from each region according to the criteria mentioned below:

- Climate Resilient – Value Chains that are climate resilient and/or has the potential to reduce risk from climate change threats.
- Potential to reduce extraction of natural resources
- Ensured Market Demand and/or Opportunity to link with markets
- Potential to increase income of the marginal and vulnerable populations who have small amount of land or totally landless
- Potential to create employment throughout the value chain
- Potential to incorporate women and youth
- Potential to involve MSMEs
- Potential for growth
- Potential to be benefited from the available support services
- Suitable for the economically disadvantaged area particularly in the landscape/wetland area of CREL regions

Phase 2: A detail analysis of the selected value chains to get a vivid picture of each value chain and to formulate the strategy/interventions to strengthen the value chains and create scope for sustainable livelihoods.

3. Scope of Work

Working area for this study is Bangladesh. Following cites will be covered in the study:

Table 29: Annex-Scope of Work

Zone	District	Upazila	Site
Northeast	Habiganj	Chunarughat and Madhabpur	Satchari NP
		Chunarughat	RemaKhalenga WS
	Maulavibazar	MaulavibazarSadar and Sreemangal	HailHaor
		Kamalganj and Sreemongol	Lawachara NP
		Kularua, Juri, Baralekha, Fenchuganj & Golapganj	HakalukiHaor ECA
	Sunamganj	Dharmapasha, Tahirpur	TanguarHaor ECA (Only based on secondary literature)
	Sylhet	SylhetSadar, Goainghat	Kadimnagar NP
Southeast Zone 1	Chittagong	Lohagara, Banshkhali	Chunati WS
	Rangamati and Banderban	Chandanise, BanderbanSadar,	Rangunaia, Dudhpukuria- Dhupchari WS
		Rangamati Kaptai	Kaptai NP
Southeast Zone 2	Cox's bazar	Cox's bazar Sadar, Ramu	Himchari NP
		Chakaria,	Fashiakhali WS
		Teknaf	Medhakachapia NP
		Ukhiya	Teknaf WS Inani proposed NP
Southwest	Bagerhat	Sarankhola, Mongla, Morrelganj and Rampaul	Sundarbans (West)
	Khulna	Dacope and Koyra	SunderbanECA
	Satkhira	Shyamnagar	Sundarbans (East)

Innovision will assess all available Value Chains of the project areas to shortlist the Value Chains which are close to the criteria mentioned in the objectives. In addition to the mentioned criteria, Innovision will need to assess the available backward & forward linkages, business & financial services, infrastructure and enabling environment in project sites which are directly linked with the Value Chains. After the initial assessment, Innovision will submit a report elaborating the selection process of the shortlisted Value Chains. Once the value chains are shortlisted, Innovision will do an in-depth analysis of each value chain. This analysis should be in line with USAID guideline for analyzing value chains provided in the website <http://microlinks.kdid.org/>. CREL project will need separate report for each of the selected value chain according to the following guideline:

- End Market Analysis (Main market, buyers, competition) and market demand
- Descriptions of the Value Chains (Actors, their roles and functions, map and relationships of the actors and service providers)
- Performance of the Value Chains and Scope for Upgrading (performance in each stage, Cost-benefit, value addition)
- Poor/resource dependent, youth and gender Analysis and scope of integration in value chains

- Assessment of Business , Financial and other services
- Assessment of Policy/Regulations
- SWOT Analysis
- Summary of the constraints
- Recommended Strategies/Interventions

Though market demands will be assessed and incorporated in Value Chain Study report, CREL will need a separate report on market demand assessment of each Value Chain.

4. Timeframe

Table 30: Time Frame

Task	Deliverables	Deadlines
Phase 1: Selection of Value Chains	Report on detailing the selection process and selected Value Chains	20 th Calendar day
Phase 2: Full Analysis of the selected Value Chains	Report on full analysis of the selected Value Chains.	70 th Calendar day

Innovision will need to provide a detail work plan mentioning breakdown of the activities with dates. Alteration of dates during the implementation stage should be made in consultation with the Livelihood team of CREL/Winrock International.

5. Methodology

Innovision will propose methodology for the each phase of the study. However, proposed methodology should include following steps (not exhaustive):

- Desk Research
- Field Study and analysis of the findings
 - FGD
 - Interview of different actors
- Key Informant Interview
- Workshop

Innovision will consult with the livelihood team of CREL to finalize indicative sample size and methodology.

6. Deliverables

The deliverables to be provided by Innovision under the PO are the following:

Phase 1:

- Summary findings of the desk research
- Matrix of the key findings from the stakeholders workshop(if any)
- Detail report on selected value chains elaborating selection process and methodology
- Presentation at CREL on selection process and selected Value Chains

Phase 2:

- Report on desk research(with draft value chains)
- Workshop report
- Report on full analysis of each of the selected value chains
- Market Demand Assessment Report

- Database of the study (including all filled questionnaire, list of the interviewees)
- Presentation on the findings of the study

7. Resource Facilities by Winrock, CODEC, CNRS and NACOM

To supervise the study, Winrock and their partners will use their own resources. However, Livelihood Officer, Market Development Officer and Livelihood Facilitator will assist Innovision in conducting the study. This assistance include, arranging interview, facilitate interview process and organizing workshops at regional level.

8. Key Contact Person

Mr. Sadruddin Imran, Chairman & CEO of Innovision will be key person from the vendors side while CREL project's Enterprise and Livelihood Manager Mr. Mahmud Hossain will be the key contract person for the this activity.

All Communication with GOB and USAID must be coordinated with the Chief of Party of Project, CREL.

Detailed Field Plan

Table 31: CREL Field Plan: Phase 1

CREL Field Plan (Tentative)									
Date	Day	Location	Staying at	Checkout	Morning (8am-1pm)	Afternoon(2pm-5pm)	Evening(5pm-9pm)	Night (9pm-12am)	End of Day Staying at?
16th August	Friday	From Dhaka	Cox's Bazar Sadar	No	Travel (Start at 10:00 am, reach by 1:20 pm)	Discussion with RC for finalizing Field Plan (Tentative)			Cox's Bazar Sadar
17th August	Saturday	Cox's Bazar Sadar	Cox's Bazar Sadar	No	Training @ CREL Office		Official Dinner (1)		Cox's Bazar Sadar
18th August	Sunday	Himchari	Cox's Bazar Sadar	No	FGD 1	FGD 2,	In-Depth Interview 3,4	Official Dinner (2)	Cox's Bazar Sadar
					In-depth Interview 1	In-Depth Interview 2	KII 1 & 2		
19th August	Monday	Shilkhali, Haikong (2 other sites of Teknaf)	Cox's Bazar Sadar	No	FGD 3	FGD 4	In-Depth Interview 5,6	Official Dinner (3)	Cox's Bazar Sadar
					KII 3	KII 4	In-Depth Interview 7,8		
20th August	Tuesday	Fashiakhali, Medhakachapia	Cox's Bazar Sadar	No	FGD 5	FGD 6	In-Depth Interview 11,12	-	Cox's Bazar Sadar
					KII 5	In-Depth Interview 9,10			
21th August	Wednesday	Teknaf	Cox's Bazar Sadar	No	Traveling to Teknaf	FGD 7	In-Depth Interview 13,14	-	Cox's Bazar Sadar
						KII 7	In-Depth Interview 15,16		
22nd August	Thursday	Teknaf	Cox's Bazar Sadar	No	Traveling to Teknaf	FGD 8	In-Depth Interview 17,18	Data collection of Soft copy from CREL staffs	Cox's Bazar Sadar
						KII 8	In-Depth Interview 19,20		
23rd	Friday	Cox's Bazar	Cox's	No	Collate, Analyze and make presentation for workshop				Cox's Bazar Sadar

August		Sadar	Bazar Sadar						
24th August	Saturday	Cox's Bazar Sadar	Cox's Bazar Sadar	No	Workshop, work on reports/ Presentation				Cox's Bazar Sadar
					Collect CREL Staff questionnaire hard copies				
25th August	Sunday	Dhaka	Cox's Bazar Sadar	Yes	Travel to Dhaka				Dhaka

Table 32: CREL Field Plan: Phase 2

CREL Value Chain In Depth Analysis Cox's Bazar (Chakaria, Himchari and Teknaf) Region South East Zone 2 Innovision Team - Shoilee, Tamjid & Harun				
Date	Day	Activity	Responsible Person (s) from Innovision	Night Stay
10-Sep	Tuesday	At 3.00 PM discussion with RC, Livelihood officer, Livelihood Facilitators regarding our plans, such as required types of actors of selected value chain, detailing the questionnaire, responsibility of the CREL staffs Contact with vendor for vehicles and provide the route plan	Shoilee, Tamjid & Harun	Cox's Bazar
11-Sep	Wednesday	Cox's Bazar local market review for capsicum, strawberry, mushroom and medicinal plants/herbs (arotdar, faria, retailers, etc.)	Shoilee, Tamjid & Harun	Cox's Bazar
		Chakaria market review for cut-flower as well as capsicum, strawberry, mushroom and medicinal plants/herbs (arotdar, fari, retailers, etc) Chakaria Vegetable Producer skills and willingness to participate in cultivation of capsicum, strawberry, mushroom, cut flower and medicinal plants/herbs	Shoilee, Tamjid & Harun	Cox's Bazar

12-Sep	Thursday	<p>Himchari, interview with Hand Embroidery, dress making producer (2)</p> <p>Himchari Vegetable Producer skills and willingness to participate in cultivation of capsicum, strawberry, mushroom, cut flower and medicinal plants/herbs (arotdar 2, fari 2, retailers 2, etc.)</p> <p>Himchari Safari Park Review and Assessment (forest ranger 1, tour operator 1, local support actors 2)</p>	Shoilee, Tamjid & Harun	Cox's Bazar
13-Sep	Friday	<p>Teknaf local market review for capsicum, strawberry, mushroom, cut flower and medicinal plants/herbs (arotdar 1, fari 1, retailers 1, input seller 2)</p> <p>Teknaf Vegetable Producer skills and willingness to participate in cultivation of capsicum, strawberry, mushroom, cut flower and medicinal plants/herbs (2)</p>	Shoilee, Tamjid & Harun	Teknaf
14-Sep	Saturday	<p>Teknaf interview with Hand Embroidery, dress making, producers (2)</p> <p>Teknaf interview with Hand Embroidery, dress making market actors (trader 1, retailer 1)</p> <p>Teknaf Nature Tourism National Park Review and Assessment (forest ranger 1, tour operator 1, local support actors 2)</p>		
15-Sep	Sunday	Shilkhali Vegetable Producer skills and willingness to participate in cultivation of capsicum, strawberry, mushroom, cut flower and medicinal plants/herbs (2)	Shoilee, Tamjid & Harun	Cox's Bazar
16-Sep	Monday	<p>Cox's Bazar Interview with agro input seller 2, super market 2, hotels 2, and boutique house 2</p> <p>Department of Horticulture, BADC, Mushroom center, Municipal Sewing training provider, Cox's Bazar Krishi Bank, Jubo Unnoyon official, tour operators</p>	Shoilee, Tamjid & Harun	Cox's Bazar
17-Sep	Tuesday	<p>Meeting with CREL (Codec and Nacom) sharing top-line findings</p> <p>Meeting with local NGOs and Projects working on high value crop promotion,</p>	Shoilee, Tamjid & Harun	Cox's Bazar
18-Sep	Wednesday	Return to Dhaka	Shoilee, Tamjid & Harun	Cox's Bazar

Data Collection Tools

Table 33: Phase 1-Beneficiary Profile

Name of target beneficiary				Age:..... Years			
Occupation:							
Literacy							
1. Illiterate	2. Can sign only	3. below class 8	4. Class 8 to 10 pass	5.SSC passed	6.HSC passed	7.Graduate	8.Above graduate
Address:							
Mobile number							
Own Land (dcm)							
Pond size (dcm)							
Number of Members in the Household:							
Age of the family members:							
Male	0 -18		18- 33		33 - 60		60+
female							
Number of earning members:							
Number of dependent members							
Sources of income for the household		Source	Earning Member	Income Generating Months	Monthly Income	Yearly Income	
Major expenses of the household							
Type, amount and source of resource extracted							
Experiences in production, trading,							
Skills in VCA		Average	Good	Skilled	Skilled with Training		
No of hours per day that can be spared for VCA by the respondent							
No of available households members to assist							
Amount and type of assets to support the VCA							
Are you involve with any NGO/Club/Committee; if yes; Name of the committee;							
Purpose of the Committee and Are you satisfied with this committee							

Table 34: Phase 2-Beneficiary Profile

CREL Value Chain In-Depth Market Assessment and Analysis

Cox's Bazar (Chakaria, Himchari and Teknaf) Region

South East Zone 2

Site Location:

Chakaria	Himchari	Teknaf
----------	----------	--------

Date: _____

Respondent: _____
Address: _____

Sex and Age:

Male	Female	
------	--------	--

Name _____ of _____ market _____ or _____ village:

Years in Business: _____ Telephone: _____
Type of Business: _____ Number of

Employees: _____

Name of the Product(s) or Service(s): (use on questionnaire for one product/service only)

1	<input type="checkbox"/> Sewing & Stitching	<input type="checkbox"/> Dress Making	<input type="checkbox"/> Hand Embroidery
	<input type="checkbox"/> Nakshikantha	<input type="checkbox"/> Hand Crocheted Prayer Caps	<input type="checkbox"/> Fishing Net making
2	<input type="checkbox"/> Strawberry	<input type="checkbox"/> Capsicum	<input type="checkbox"/> Medicinal plants
3	<input type="checkbox"/> Floriculture	<input type="checkbox"/> Apiculture	
4	<input type="checkbox"/> Mushroom		
5	<input type="checkbox"/> Nature-Tourism		

Description _____ of _____ the _____ VC _____ actor:

(producer, input seller, trader, commissioning agent, processor, service provider)

Describe the business operations:

Describe transaction (purchase and sales dynamics) of product or services

Transaction Quantum:

Purchase or sourced from: *This is primarily an input or raw material of the VC actor*

Purchased from including place:	Qty (Mention unit – Kg, Liter, Sack-full, Basketful, Piece, etc.)	Price	Amount	Explanations (Seasonal variation, high price, low price, supply variation, issues relating to quality, overall satisfaction, etc.)

Number of similar seller in the market/village:

Sold or supplied to: *This is primarily an output or value-added product of the VC actor*

Sold to including place:	Qty (Mention unit – Kg, Liter, Sack-full, Basketful, Piece, etc.)	Price	Amount	Explanations (Seasonal variation, high price, low price, demand variation, issues relating to quality, overall satisfaction, etc.)

Number of similar buyer in the market/village:

Any other critical information relating sales and purchase (particularly satisfaction, suggestions for improvement, future prospects, projection, challenges, etc.):

Respondent List

Table 35: Respondent List of Cox's Bazaar

Sl. No.	Name	Mobile	Address	Project Site	District	Region	Occupation	Actor	Tools that used in data collection	Phase of the study	Interviewer
1	Shona Ali	01832737001	Kader Para	Shilkhali	Cox's Bazaar	South East Zone 2	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
2	Eklas Mia	01828091577	Kader Para	Shilkhali	Cox's Bazaar	South East Zone 2	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
3	Haji Abdus Salam	01832939675	Kader Para	Shilkhali	Cox's Bazaar	South East Zone 2	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
4	Forid Mia	01846428899	Hallbunia	Shilkhali	Cox's Bazaar	South East Zone 2	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
5	Jafar Mia	01845224024	Hallbunia	Shilkhali	Cox's Bazaar	South East Zone 2	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
6	Nur Mohammad	01840103470	Hallbunia	Shilkhali	Cox's Bazaar	South East Zone 2	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
7	Abdur Razzak	01825924756	Mathpara	Shilkhali	Cox's Bazaar	South East Zone 2	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
8	Abdul Khalek	01819887297	Mathpara	Shilkhali	Cox's Bazaar	South East Zone 2	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
9	Md. Habib Hossain	01811256929	Jahazpura	Shilkhali	Cox's Bazaar	South East Zone 2	Small Grocery Business	Producer	Questionnaire Survey	Phase 1	Project Staff
10	Khurshida Begum	01830741124	Jahazpura	Shilkhali	Cox's Bazaar	South East Zone 2	Service Holder	NA	Questionnaire Survey	Phase 1	Project Staff

11	Khurshida Begum	01826695116	Jahazpura	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
12	Monowara Begum	01852910920	Jahazpura	Shilkhali	Cox's Bazaar	South Zone 2	East	Dry Fish	Producer	Questionnaire Survey	Phase 1	Project Staff
13	Saberunna har	01830741124	Jahazpura	Shilkhali	Cox's Bazaar	South Zone 2	East	Dry Fish	Producer	Questionnaire Survey	Phase 1	Project Staff
14	Gultaj Begum	01852135001	Motherbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
15	Arefa Akter	01852135001	Motherbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Service Holder	NA	Questionnaire Survey	Phase 1	Project Staff
16	Khurshida Begum	01832303204	Motherbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
17	Abul Amin	01835837381	Sampolplot	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
18	Nasima Khatun	0	Jahalia Para	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
19	Rashida Khatun	01846431404	Jahalia Para	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
20	Senowara Begum	01839422296	Baraitoli	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
21	Samjida Begum	01726229458	Baraitoli	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
22	Md Ali	01826307828	Mathpara	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff

23	Sajeda akhter	01850618050	Mathpara	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
24	Sakina Khatun	01840884013	Tulatoli	Teknaf	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
25	Jahanara	01832097172	South Leda	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
26	Abdus Sukur	01825652040	South Leda	Teknaf	Cox's Bazaar	South Zone 2	East	Salt cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
27	Mukter Ahmed	01836631670 (On request)	Mouchani	Teknaf	Cox's Bazaar	South Zone 2	East	Salt cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
28	MD Jahangir Alam	01832737185	Mouchani	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
29	samina Begum	01836633509	Islamabad	Teknaf	Cox's Bazaar	South Zone 2	East	House wife	NA	Questionnaire Survey	Phase 1	Project Staff
30	Hasina Begum	01823759101	Lambori	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
31	Anowara	01843263649	Lambori	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
32	Monowara	01823758994	Kerontoli	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
33	Jaheda Begum	01829295408	Kerontoli	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
34	Sayedur Rahaman	01821571116	Nitong para	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff

35	Nur nahar	01813274571	Vill-Cha Bagan,Po-Dulahajra	Fashiakhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
36	Ziabul	01821894917	Vill-Dumkhali,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Wood Seller	NA	Questionnaire Survey	Phase 1	Project Staff
37	Ahamod Hossen	01674814973	Vill-Dumkhali,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Van Driver	NA	Questionnaire Survey	Phase 1	Project Staff
38	Khaleda Begum	01843560025	Vill-Dumkhali,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
39	Anawara Begum	01815952232	Vill-Dumkhali,Po-Dulahajra	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
40	Sokhi Das	0	Vill-Cha Bagan,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
41	Hamida Begum	01837577814	Vill-East Dumkhali,PoD ulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
42	Rokeya Begum	01815112407	Vill-East Dumkhali,PoD ulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
43	Manowara Begum	01843599319	Vill-East Dumkhali,PoD ulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
44	Ashiya Khatun	01821661603	Vill-East Dumkhali,PoD ulahajra, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
45	Rehana Akter	01851274387	Vill-East Dumkhali,PoD ulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff

46	Parvin Akter	01778941118	Vill-Cha Bagan,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
47	Hazera Begum	01831463174	Vill-Maijpara,PoDulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
48	Kamruddin	01826984922	Vill- Boiragir Khill,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Carpenter	NA	Questionnaire Survey	Phase 1	Project Staff
49	Hasan Ali	01827269871	Vill- Boiragir Khill,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Wood Business	NA	Questionnaire Survey	Phase 1	Project Staff
50	Delowara	01829121466	Vill- Boiragir Khill,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
51	Ismail	01814444886	Vill-Maijpara,PoDulahajra,Ps-Chakaria,	Fashiakhali	Cox's Bazaar	South Zone 2	East	Making Improve stove	NA	Questionnaire Survey	Phase 1	Project Staff
52	Khurshida Akter	01835296996 (on request)	Vill-Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
53	Halima Begum	01816616860	Vill-Bakkumpar, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
54	Jaheda Begum	01830737959	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
55	Rahima Begum	01837284081	Vill-Bakkumpar, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Nursery	Producer	Questionnaire Survey	Phase 1	Project Staff
56	Mushan Akter	01822639034	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff

57	Shahana Akter	01835336728 (Daughter)	Vill- Mashjidpara, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
58	Nu Nahar Begum	01836828126	Vill- Shegunbagicha, Khutakhali, Chakaria,	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
59	Jannatul Ferdouse	01835296996	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
60	Nargis Ara (Widow)	01834635324 (Mother)	Shegunbagicha, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Maid Servent	NA	Questionnaire Survey	Phase 1	Project Staff
61	Toiyaba Begum	01816616860 (on request)	Vill- Bakkumpar, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
62	Rashida Begum	01835296996 (Sister in law)	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
63	Shabnam Mustafa	01835336728	Vill- Mashjidpar, Khutakhali	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
64	Fatema Khatun	01852460592 (Son)	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
65	Fatema Begum (Widow)	01845687504 (Nasir Uddin)	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
66	Asia Begum	01826594883 (Son)	Vill- Mashjidpar, Khutakhali,	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
67	Rokeya Begum	01845103699	Vill- Bakkumpar, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff

68	Manowara Begum	01835296996	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
69	Layli Begum	01824829643	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
70	Nur Nahar Begum	01832847941	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
71	Safura Begum	0	Fater guna	Himchari	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
72	Anuwara	0	Sukna Chari	Himchari	Cox's Bazaar	South Zone 2	East	House wife	NA	Questionnaire Survey	Phase 1	Project Staff
73	Aiysha	0	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Small Business	Retailer	Questionnaire Survey	Phase 1	Project Staff
74	Rabeya Begum	01837917628	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
75	Fatema Khaton	01828364744	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
76	Mosa. Hamida Begum	01828408529	South Mongla	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
77	Nujahan Begum	01832800639	Uttar gona Janar gona	Himchari	Cox's Bazaar	South Zone 2	East	Day labour	NA	Questionnaire Survey	Phase 1	Project Staff
78	Lebus Khaton	01846960008	Uttar gona Janar gona	Himchari	Cox's Bazaar	South Zone 2	East	House wife	NA	Questionnaire Survey	Phase 1	Project Staff
79	Firoza Begum	01840477616	Sukna Chari	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff

80	Sanuwara Begum	01831166134	Sahitica Polli	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
81	Sayad Alam	01822324671	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
82	Abu Taleb	01843137793	Himchari	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
83	Nur Kabir	01843723510	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
84	Masuma akter	01830420208	batsar gona	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
85	Lal Mohamod	01833477034	Lar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
86	Habib ahamod	01824898511	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture & Writer	Producer	Questionnaire Survey	Phase 1	Project Staff
87	Abu Husan	0	Uttar Janar gona	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
88	Abul Kasem Sikder	01822301350	Gayam Tali	Himchari	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
89	Rokeya Akthar-Widow	0	Passhim Moheskalia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Small Bussiness	Retailer	Questionnaire Survey	Phase 1	Project Staff
90	Hosen Banu-Widow	0	Passhim Moheskalia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Small Bussiness	Retailer	Questionnaire Survey	Phase 1	Project Staff
91	Romija Begam	0	Dokkin Lombabil	Whykkong	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff

92	Mahamuda sabbir	01831511293	Dokkin Lombabil	Whykkong	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
93	Hajera Begam	01857169160	Korachi Para	Whykkong	Cox's Bazaar	South Zone 2	East	Housewife	NA	Questionnaire Survey	Phase 1	Project Staff
94	Jahanara Begam-Widow	0	Korachi Para	Whykkong	Cox's Bazaar	South Zone 2	East	Agri labour day	NA	Questionnaire Survey	Phase 1	Project Staff
95	Rehana Akthar	01832777585	Naya Para	Whykkong	Cox's Bazaar	South Zone 2	East	Tailor	Producer	Questionnaire Survey	Phase 1	Project Staff
96	Monaja Begam	01826981369	Naya Para	Whykkong	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
97	Nasima Akthar	01828702876	Whykkyang Majer Para	Whykkong	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
98	Nur Mahal	0	Whykkyang Majer Para	Whykkong	Cox's Bazaar	South Zone 2	East	Housewife	NA	Questionnaire Survey	Phase 1	Project Staff
99	Md. Ibrahim	01823029782	Kombonia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Small Bussiness	Retailer	Questionnaire Survey	Phase 1	Project Staff
100	Abdus salam	01831816498	Kombonia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Small Bussiness	Retailer	Questionnaire Survey	Phase 1	Project Staff
101	Aungchaig gya Chk.	0	Putibunia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
102	Mongchatai n Chakma	0	Putibunia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
103	Md. Jokoria	01834488097	Monirgona Para	Whykkong	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff

104	Md. Nurul Alam	01832302800	Doinggyakata Para	Whykkong	Cox's Bazaar	South Zone 2	East	Small Bussiness	Producer	Questionnaire Survey	Phase 1	Project Staff
105	Md. Islam	01811204209	Roikkyong Dokkin Para	Whykkong	Cox's Bazaar	South Zone 2	East	Village Doctor	NA	Questionnaire Survey	Phase 1	Project Staff
106	Nurul Hossain	01826554020	Roikkyong Dokkin Para	Whykkong	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
107	Sumon Chakma	01715513311	Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Sr. Asst. Director, BADC	Service Provider	In-depth Interview	Phase 1	Consultant
108	Md. Jahangir Alam	01743907402	Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	AMDU, Mushroom Center	Service Provider	In-depth Interview	Phase 1	Consultant
109	Shamima Akhter	01712210704	Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Asst. Cox's Bazaar Pouroshobha	Service Provider	In-depth Interview	Phase 1	Consultant
110	ABM Jashim Uddin	01834001009	Bangabondhu Safari Park	Himchari	Cox's Bazaar	South Zone 2	East	Forest Ranger	Service Provider	In-depth Interview	Phase 1	Consultant
111	Joynal Membar	01715047344	Chakaria Bazaar	Medhakacchapia	Cox's Bazaar	South Zone 2	East	CMC Cashier	Service Provider	In-depth Interview	Phase 1	Consultant
112	Momotaz Ahmed Chowdhury	0	Shilkhali	Shilkhali	Cox's Bazaar	South Zone 2	East	CMC Asst. Secretary	Service Provider	In-depth Interview	Phase 1	Consultant
113	Muktar Ahmed Chowdhury	01718598455	Fashiakhali	Fashiakhali	Cox's Bazaar	South Zone 2	East	CMC Secretary	Service Provider	In-depth Interview	Phase 1	Consultant
114	Harun Rashid Shikder	01731650530	Whykkong	Whykkong	Cox's Bazaar	South Zone 2	East	CMC Treasurer	Service Provider	In-depth Interview	Phase 1	Consultant
115	Saiful Islam	0	Cha Bagan, Dulahajara	Fashiakhali	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	In-depth Interview	Phase 1	Consultant

116	Motahara Begum	01770483435	Chanida Khandakar para, Mithachuri	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	In-depth Interview	Phase 1	Consultant
117	Jotsna Akhter	01820270216	Dokkhin Adorsho Gram, Kolatoli	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	In-depth Interview	Phase 1	Consultant
118	Monir Ahmed	01818292175	Hajong Para, Baharchara	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation (NS of VCF)	Producer	In-depth Interview	Phase 1	Consultant
119	Gul Bahar	0	Kader Para, 5 No. Baharchara	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	In-depth Interview	Phase 1	Consultant
120	Shahana Akter	01835336728	Mojid Para	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	In-depth Interview	Phase 1	Consultant
121	Sanjida Akhter Shathi	0	Uttor Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	In-depth Interview	Phase 1	Consultant
122	Halima Begum	01816616860	Vill: Nalbunia, Union: Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	In-depth Interview	Phase 1	Consultant
123	Abul Kashem	01822345574	Light House Para	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	In-depth Interview	Phase 1	Consultant
124	Runa Islam	01770044828	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
125	Nur Nahar	01813274571	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
126	Moshrofa Begum	01928871434	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
127	Anjuman Ara	0	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant

128	Baby Akhter	0	Cha Bagan, Fashiakhali	Fashiakhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
129	Ayesh Haq	01778941118 (On request)	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
130	Hamida Begum	0	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	FGD	Phase 1	Consultant
131	Setara Begum	0	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	FGD	Phase 1	Consultant
132	Shokhi das	01778941118 (On request)	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	FGD	Phase 1	Consultant
133	Ismail	01814114886	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Mobile Servicing	NA	FGD	Phase 1	Consultant
134	Akbar Ahmad	01812953434	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Workshop	NA	FGD	Phase 1	Consultant
135	Saiful Islam	01813584338	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Fish Cultivation	Producer	FGD	Phase 1	Consultant
136	Moktar Ahmed	01673684860	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Fish Cultivation	Producer	FGD	Phase 1	Consultant
137	Md. Sharif	01813339991	Kanjar Para, Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Small Business	Retailer	FGD	Phase 1	Consultant
138	Ayub Kalam	0	Kanjar Para, Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Agriculture	Producer	FGD	Phase 1	Consultant
139	Jafar Alam	01815579448	Kanjar Para, Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Shrimp Cultivation	Producer	FGD	Phase 1	Consultant

140	Md. Nurul Haque	01834020143	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	FGD	Phase 1	Consultant
141	Rupban	01816466948	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
142	Khaleda Akhter	01846104975	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
143	Rehana Akhter	01829258578	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
144	Somira Akhter	0	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
145	Rasheda Begum	01826133585	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
146	Habib Ullah	01819538311	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Shrimp Cultivation	Producer	FGD	Phase 1	Consultant
147	Md. Hafij Uddin	01816251584	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Shrimp Cultivation	Producer	FGD	Phase 1	Consultant
148	Kala Mia	01838249388	Kanjar Teknaf	Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Small Business	Producer	FGD	Phase 1	Consultant
149	Monir Ahmed	01818292175	Kader Teknaf	Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Pharmacist	Service Provider	FGD	Phase 1	Consultant
150	Noor Ahmed	0	Kader Teknaf	Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
151	Syed Ahmed Basa	001811256929 (On request)	Kader Teknaf	Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant

152	Azizul Haque	01839422600	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
153	Noor Mohammad	01832304177	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
154	Babu	01849874325	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
155	Gulbahar	01825023507	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
156	Taslima	01826141237	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Small Business & Tailoring	Producer	FGD	Phase 1	Consultant
157	Kamrunnahar	01825444228	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
1	Shona Ali	01832737001	Kader Para	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
2	Eklas Mia	01828091577	Kader Para	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
3	Haji Abdus Salam	01832939675	Kader Para	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
4	Forid Mia	01846428899	Hallbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
5	Jafar Mia	01845224024	Hallbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
6	Nur Mohammad	01840103470	Hallbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff

7	Abdur Razzak	01825924756	Mathpara	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
8	Abdul Khalek	01819887297	Mathpara	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
9	Md. Habib Hossain	01811256929	Jahazpura	Shilkhali	Cox's Bazaar	South Zone 2	East	Small Grocery Business	Producer	Questionnaire Survey	Phase 1	Project Staff
10	Khurshida Begum	01830741124	Jahazpura	Shilkhali	Cox's Bazaar	South Zone 2	East	Service Holder	NA	Questionnaire Survey	Phase 1	Project Staff
11	Khurshida Begum	01826695116	Jahazpura	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
12	Monowara Begum	01852910920	Jahazpura	Shilkhali	Cox's Bazaar	South Zone 2	East	Dry Fish	Producer	Questionnaire Survey	Phase 1	Project Staff
13	Saberunna har	01830741124	Jahazpura	Shilkhali	Cox's Bazaar	South Zone 2	East	Dry Fish	Producer	Questionnaire Survey	Phase 1	Project Staff
14	Gultaj Begum	01852135001	Motherbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
15	Arefa Akter	01852135001	Motherbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Service Holder	NA	Questionnaire Survey	Phase 1	Project Staff
16	Khurshida Begum	01832303204	Motherbunia	Shilkhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
17	Abul Amin	01835837381	Sampolplot	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
18	Nasima Khatun	0	Jahalia Para	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff

19	Rashida Khatun	01846431404	Jahalia Para	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
20	Senowara Begum	01839422296	Baraitoli	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
21	Samjida Begum	01726229458	Baraitoli	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
22	Md Ali	01826307828	Mathpara	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
23	Sajeda akhter	01850618050	Mathpara	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
24	Sakina Khatun	01840884013	Tulatoli	Teknaf	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
25	Jahanara	01832097172	South Leda	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
26	Abdus Sukur	01825652040	South Leda	Teknaf	Cox's Bazaar	South Zone 2	East	Salt cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
27	Mukter Ahmed	01836631670 (On request)	Mouchani	Teknaf	Cox's Bazaar	South Zone 2	East	Salt cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
28	MD Jahangir Alam	01832737185	Mouchani	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
29	samina Begum	01836633509	Islamabad	Teknaf	Cox's Bazaar	South Zone 2	East	House wife	NA	Questionnaire Survey	Phase 1	Project Staff
30	Hasina Begum	01823759101	Lambori	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff

31	Anowara	01843263649	Lambori	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
32	Monowara	01823758994	Kerontoli	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
33	Jaheda Begum	01829295408	Kerontoli	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
34	Sayedur Rahaman	01821571116	Nitong para	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
35	Nur nahar	01813274571	Vill-Cha Bagan,Po-Dulahajra	Fashiakhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
36	Ziabul	01821894917	Vill-Dumkhali,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Wood Seller	NA	Questionnaire Survey	Phase 1	Project Staff
37	Ahamod Hossen	01674814973	Vill-Dumkhali,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Van Driver	NA	Questionnaire Survey	Phase 1	Project Staff
38	Khaleda Begum	01843560025	Vill-Dumkhali,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
39	Anawara Begum	01815952232	Vill-Dumkhali,Po-Dulahajra	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
40	Sokhi Das	0	Vill-Cha Bagan,Po-Dulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
41	Hamida Begum	01837577814	Vill-East Dumkhali,PoD ulahajra,Ps-Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff

42	Rokeya Begum	01815112407	Vill- East Dumkhali, PoD ulahajra, Ps-Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
43	Manowara Begum	01843599319	Vill- East Dumkhali, PoD ulahajra, Ps-Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
44	Ashiya Khatun	01821661603	Vill- East Dumkhali, PoD ulahajra, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
45	Rehana Akter	01851274387	Vill- East Dumkhali, PoD ulahajra, Ps-Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
46	Parvin Akter	01778941118	Vill-Cha Bagan, Po-Dulahajra, Ps-Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
47	Hazera Begum	01831463174	Vill- Maijpara, PoDul ahajra, Ps-Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
48	Kamruddin	01826984922	Vill- Boiragir Khill, Po-Dulahajra, Ps-Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Carpenter	NA	Questionnaire Survey	Phase 1	Project Staff
49	Hasan Ali	01827269871	Vill- Boiragir Khill, Po-Dulahajra, Ps-Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Wood Business	NA	Questionnaire Survey	Phase 1	Project Staff
50	Delowara	01829121466	Vill- Boiragir Khill, Po-Dulahajra, Ps-Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
51	Ismail	01814444886	Vill- Maijpara, PoDul ahajra, Ps-Chakaria,	Fashiakhali	Cox's Bazaar	South East Zone 2	Making Improve stove	NA	Questionnaire Survey	Phase 1	Project Staff

52	Khurshida Akter	01835296996 (on request)	Vill-Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
53	Halima Begum	01816616860	Vill-Bakkumpar, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
54	Jaheda Begum	01830737959	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
55	Rahima Begum	01837284081	Vill-Bakkumpar, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Nursery	Producer	Questionnaire Survey	Phase 1	Project Staff
56	Mushan Akter	01822639034	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
57	Shahana Akter	01835336728 (Daughter)	Vill-Mashjidpara, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
58	Nu Nahar Begum	01836828126	Vill-Shegunbagicha, Khutakhali, Chakaria,	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
59	Jannatul Ferdouse	01835296996	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
60	Nargis Ara (Widow)	01834635324 (Mother)	Shegunbagicha, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Maid Servent	NA	Questionnaire Survey	Phase 1	Project Staff
61	Toiyaba Begum	01816616860 (on request)	Vill-Bakkumpar, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
62	Rashida Begum	01835296996 (Sister in law)	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff

63	Shabnam Mustafa	01835336728	Vill- Mashjidpar, Khutakhali	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
64	Fatema Khatun	01852460592 (Son)	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
65	Fatema Begum (Widow)	01845687504 (Nasir Uddin)	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
66	Asia Begum	01826594883 (Son)	Vill- Mashjidpar, Khutakhali,	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
67	Rokeya Begum	01845103699	Vill- Bakkumpar, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 1	Project Staff
68	Manowara Begum	01835296996	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
69	Layli Begum	01824829643	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
70	Nur Nahar Begum	01832847941	Vill- Nalbunia, Khutakhali, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
71	Safura Begum	0	Fater guna	Himchari	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
72	Anuwara	0	Sukna Chari	Himchari	Cox's Bazaar	South Zone 2	East	House wife	NA	Questionnaire Survey	Phase 1	Project Staff
73	Aiysha	0	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Small Business	Retailer	Questionnaire Survey	Phase 1	Project Staff
74	Rabeya Begum	01837917628	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff

75	Fatema Khaton	01828364744	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
76	Mosa. Hamida Begum	01828408529	South Mongla	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
77	Nujahan Begum	01832800639	Uttar gona Janar	Himchari	Cox's Bazaar	South Zone 2	East	Day labour	NA	Questionnaire Survey	Phase 1	Project Staff
78	Lebus Khaton	01846960008	Uttar gona Janar	Himchari	Cox's Bazaar	South Zone 2	East	House wife	NA	Questionnaire Survey	Phase 1	Project Staff
79	Firoza Begum	01840477616	Sukna Chari	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
80	Sanuwara Begum	01831166134	Sahitica Polli	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	Questionnaire Survey	Phase 1	Project Staff
81	Sayad Alam	01822324671	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
82	Abu Taleb	01843137793	Himchari	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
83	Nur Kabir	01843723510	Boro Chara	Himchari	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
84	Masuma akter	01830420208	batsar gona	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 1	Project Staff
85	Lal Mohamod	01833477034	Lar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
86	Habib ahamod	01824898511	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture & Writer	Producer	Questionnaire Survey	Phase 1	Project Staff

87	Abu Husan	0	Uttar Janar gona	Himchari	Cox's Bazaar	South East Zone 2	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
88	Abul Kasem Sikder	01822301350	Gayam Tali	Himchari	Cox's Bazaar	South East Zone 2	Fish Cultivation	Producer	Questionnaire Survey	Phase 1	Project Staff
89	Rokeya Akthar-Widow	0	Passhim Moheskalia Para	Whykkong	Cox's Bazaar	South East Zone 2	Small Bussiness	Retailer	Questionnaire Survey	Phase 1	Project Staff
90	Hosen Banu-Widow	0	Passhim Moheskalia Para	Whykkong	Cox's Bazaar	South East Zone 2	Small Bussiness	Retailer	Questionnaire Survey	Phase 1	Project Staff
91	Romija Begam	0	Dokkin Lombabil	Whykkong	Cox's Bazaar	South East Zone 2	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
92	Mahamuda sabbir	01831511293	Dokkin Lombabil	Whykkong	Cox's Bazaar	South East Zone 2	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
93	Hajera Begam	01857169160	Korachi Para	Whykkong	Cox's Bazaar	South East Zone 2	Housewife	NA	Questionnaire Survey	Phase 1	Project Staff
94	Jahanara Begam-Widow	0	Korachi Para	Whykkong	Cox's Bazaar	South East Zone 2	Agri day labour	NA	Questionnaire Survey	Phase 1	Project Staff
95	Rehana Akthar	01832777585	Naya Para	Whykkong	Cox's Bazaar	South East Zone 2	Tailor	Producer	Questionnaire Survey	Phase 1	Project Staff
96	Monaja Begam	01826981369	Naya Para	Whykkong	Cox's Bazaar	South East Zone 2	Fish Net Making	Producer	Questionnaire Survey	Phase 1	Project Staff
97	Nasima Akthar	01828702876	Whykkyang Majer Para	Whykkong	Cox's Bazaar	South East Zone 2	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
98	Nur Mahal	0	Whykkyang Majer Para	Whykkong	Cox's Bazaar	South East Zone 2	Housewife	NA	Questionnaire Survey	Phase 1	Project Staff

99	Md. Ibrahim	01823029782	Kombonia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Small Bussiness	Retailer	Questionnaire Survey	Phase 1	Project Staff
100	Abdus salam	01831816498	Kombonia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Small Bussiness	Retailer	Questionnaire Survey	Phase 1	Project Staff
101	Aungchaig gya Chk.	0	Putibunia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
102	Mongchatai n Chakma	0	Putibunia Para	Whykkong	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
103	Md. Jokoria	01834488097	Monirgona Para	Whykkong	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	Questionnaire Survey	Phase 1	Project Staff
104	Md. Nurul Alam	01832302800	Doinggyakata Para	Whykkong	Cox's Bazaar	South Zone 2	East	Small Bussiness	Producer	Questionnaire Survey	Phase 1	Project Staff
105	Md. Islam	01811204209	Roikkyong Dokkin Para	Whykkong	Cox's Bazaar	South Zone 2	East	Village Doctor	NA	Questionnaire Survey	Phase 1	Project Staff
106	Nurul Hossain	01826554020	Roikkyong Dokkin Para	Whykkong	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	Questionnaire Survey	Phase 1	Project Staff
107	Sumon Chakma	01715513311	Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Sr. Asst. Director, BADC	Service Provider	In-depth Interview	Phase 1	Consultant
108	Md. Jahangir Alam	01743907402	Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	AMDU, Mushroom Center	Service Provider	In-depth Interview	Phase 1	Consultant
109	Shamima Akhter	01712210704	Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Asst. Cox's Bazaar Pouroshobha	Service Provider	In-depth Interview	Phase 1	Consultant
110	ABM Jashim Uddin	01834001009	Bangabondhu Safari Park	Himchari	Cox's Bazaar	South Zone 2	East	Forest Ranger	Service Provider	In-depth Interview	Phase 1	Consultant

111	Joynal Membar	01715047344	Chakaria Bazaar	Medhakacchapia	Cox's Bazaar	South Zone 2	East	CMC Cashier	Service Provider	In-depth Interview	Phase 1	Consultant
112	Momotaz Ahmed Chowdhury	0	Shilkhali	Shilkhali	Cox's Bazaar	South Zone 2	East	CMC Asst. Secretary	Service Provider	In-depth Interview	Phase 1	Consultant
113	Muktar Ahmed Chowdhury	01718598455	Fashiakhali	Fashiakhali	Cox's Bazaar	South Zone 2	East	CMC Secretary	Service Provider	In-depth Interview	Phase 1	Consultant
114	Harun Rashid Shikder	01731650530	Whykkong	Whykkong	Cox's Bazaar	South Zone 2	East	CMC Treasurer	Service Provider	In-depth Interview	Phase 1	Consultant
115	Saiful Islam	0	Cha Bagan, Dulahajara	Fashiakhali	Cox's Bazaar	South Zone 2	East	Fish Cultivation	Producer	In-depth Interview	Phase 1	Consultant
116	Motahara Begum	01770483435	Chanida Khandakar para, Mithachuri	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	In-depth Interview	Phase 1	Consultant
117	Jotsna Akhter	01820270216	Dokkhin Adorsho Gram, Kolatoli	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	In-depth Interview	Phase 1	Consultant
118	Monir Ahmed	01818292175	Hajong Para, Baharchara	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation (NS of VCF)	Producer	In-depth Interview	Phase 1	Consultant
119	Gul Bahar	0	Kader Para, 5 No. Baharchara	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	In-depth Interview	Phase 1	Consultant
120	Shahana Akter	01835336728	Mojid Para	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	In-depth Interview	Phase 1	Consultant
121	Sanjida Akhter Shathi	0	Uttor Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	In-depth Interview	Phase 1	Consultant
122	Halima Begum	01816616860	Vill: Nalbunia, Union: Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	In-depth Interview	Phase 1	Consultant

123	Abul Kashem	01822345574	Light House Para	Cox's Bazaar Sadar	Cox's Bazaar	South East Zone 2	Tailoring	Producer	In-depth Interview	Phase 1	Consultant
124	Runa Islam	01770044828	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	FGD	Phase 1	Consultant
125	Nur Nahar	01813274571	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
126	Moshrofa Begum	01928871434	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
127	Anjuman Ara	0	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
128	Baby Akhter	0	Cha Bagan, Fashiakhali	Fashiakhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
129	Ayesh Haq	01778941118 (On request)	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
130	Hamida Begum	0	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	FGD	Phase 1	Consultant
131	Setara Begum	0	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	FGD	Phase 1	Consultant
132	Shokhi das	01778941118 (On request)	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Handicrafts	Producer	FGD	Phase 1	Consultant
133	Ismail	01814114886	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Mobile Servicing	NA	FGD	Phase 1	Consultant
134	Akbar Ahmad	01812953434	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Workshop	NA	FGD	Phase 1	Consultant

135	Saiful Islam	01813584338	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Fish Cultivation	Producer	FGD	Phase 1	Consultant
136	Moktar Ahmed	01673684860	Cha Bagan, Chakaria	Fashiakhali	Cox's Bazaar	South East Zone 2	Fish Cultivation	Producer	FGD	Phase 1	Consultant
137	Md. Sharif	01813339991	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Small Business	Retailer	FGD	Phase 1	Consultant
138	Ayub Kalam	0	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Agriculture	Producer	FGD	Phase 1	Consultant
139	Jafar Alam	01815579448	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Shrimp Cultivation	Producer	FGD	Phase 1	Consultant
140	Md. Nurul Haque	01834020143	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Fish Cultivation	Producer	FGD	Phase 1	Consultant
141	Rupban	01816466948	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Fish Net Making	Producer	FGD	Phase 1	Consultant
142	Khaleda Akhter	01846104975	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Tailoring	Producer	FGD	Phase 1	Consultant
143	Rehana Akhter	01829258578	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Agriculture	Producer	FGD	Phase 1	Consultant
144	Somira Akhter	0	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Tailoring	Producer	FGD	Phase 1	Consultant
145	Rasheda Begum	01826133585	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Fish Net Making	Producer	FGD	Phase 1	Consultant
146	Habib Ullah	01819538311	Kanjar Teknaf	Whykkong	Cox's Bazaar	South East Zone 2	Shrimp Cultivation	Producer	FGD	Phase 1	Consultant

147	Md. Hafij Uddin	01816251584	Kanjar Teknaf Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Shrimp Cultivation	Producer	FGD	Phase 1	Consultant
148	Kala Mia	01838249388	Kanjar Teknaf Para,	Whykkong	Cox's Bazaar	South Zone 2	East	Small Business	Producer	FGD	Phase 1	Consultant
149	Monir Ahmed	01818292175	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Pharmacist	Service Provider	FGD	Phase 1	Consultant
150	Noor Ahmed	0	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
151	Syed Ahmed Basa	001811256929 (On request)	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
152	Azizul Haque	01839422600	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
153	Noor Mohammad	01832304177	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
154	Babu	01849874325	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
155	Gulbahar	01825023507	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
156	Taslima	01826141237	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Small Business & Tailoring	Producer	FGD	Phase 1	Consultant
157	Kamrunnahar	01825444228	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
158	Yasmin Akhter	01826578389	Kader Teknaf Para,	Shilkhali	Cox's Bazaar	South Zone 2	East	House wife	NA	FGD	Phase 1	Consultant

159	Johra Begum	01845215571	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Service Holder	NA	FGD	Phase 1	Consultant
160	Nurul Alam	01840336835	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
161	Reshma Akhter	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
162	Rasheda Akhter	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
163	Rubina Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
164	Khurshida Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
165	Taslima Akhter	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
166	Fatema Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
167	Rokeya Begum	01826306888	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
168	Minara Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
169	Rehana Akhter	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
170	Monowara Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant

171	Nur Jahan	01839414934	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
172	Laila Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
173	Shamjida Begum Sathi	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
174	Julekha	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
175	Salma Begum	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
176	Motahara	01770483435	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
177	Rabeya Begum	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
178	Moriyom Khatun	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
179	Jahanara Begum	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
180	Rashida Begum	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
181	Monir Ahmod	01820069567	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
182	Nurul Islam	01830036204	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant

183	Shirajul Islam	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
184	Mohammad Hossain	01830564703	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
185	Obaidul Hoque	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
187	Syed Akbar	01825368063	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
188	Abul Kashem	01822345574	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
189	Rafiq	01914446079	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Service Holder	NA	FGD	Phase 1	Consultant
190	Lutfunnesa	01812800514	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Housewife	NA	FGD	Phase 1	Consultant
191	Johra Khatun	01813879763	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
192	Tofura Begum	01987529820	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
193	Rahima	01820270216	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
194	Lutfuna Doli	01825913343	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
195	Jotsna	01823971933	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant

196	Jahir Alam	01815078121	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Supply Business	Trader	FGD	Phase 1	Consultant
197	Abdur Munaf	01823637524	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Small Business	Retailer	FGD	Phase 1	Consultant
198	Bashir Ahmed	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
199	Ahmed Hossain	01778444222	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
200	Najir Ahmed	01840530821	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
201	Abdus Shukkur	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
202	Rahima Begum	01837284081	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
203	Shobnom Mostafa	01835336728	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
204	Jannatul Ferdouse	01835296996	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
205	Amina Begum	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
206	Rokeya Begum	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
207	Romena Akhter	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant

208	Shahana Akter	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Making Net	Producer	FGD	Phase 1	Consultant
209	Asia Begum	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Making Net	Producer	FGD	Phase 1	Consultant
210	Habiba Khatun	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Making Net	Producer	FGD	Phase 1	Consultant
211	Halima khatun	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
212	Hafez Ahmmod	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
213	Siddique Ahamed	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
214	Md. Sharid	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
215	Ali Ahmod	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
216	Ayesha Khatun	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
217	Shona Meher	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
218	Rashida Begum	01828701384	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
219	Nur Bahar	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	agriculture	Producer	FGD	Phase 1	Consultant

220	Moriyom Khatun	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
221	Fatema Khatun	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
222	Shamsunn ahar	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
223	Golapjaan	01811226603	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Nursery	Producer	FGD	Phase 1	Consultant
224	Abdul Malek	01975615622	Coastal Peace Hotel, Kolatoli Mor	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Purchase and Store in Charge, Coastal Peace	Service Provider	In-depth Interview	Phase 2	Consultant
225	Abul Kashem Shikder	01822535001	Diamond Hotel, Kolatoli Mor	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Director, Hotel Tourism Association	Service Provider	In-depth Interview	Phase 2	Consultant
226	Sazal Babu	0181779797884	6 No. Biman Bondor Road, Bikari Ghat	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Motor Mechanic	Service Provider	In-depth Interview	Phase 2	Consultant
227	Hosen Kutub	01819644741	7 No. Biman Bondor Road, Bikari Ghat	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Boat Mechanic	Service Provider	In-depth Interview	Phase 2	Consultant
228	Farid Mia	01964980648	8 No. Biman Bondor Road, Bikari Ghat	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Boat Mechanic	Service Provider	In-depth Interview	Phase 2	Consultant
229	Abdul Karim	01715739004	Jilongjha, Horticulture Centre	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Uposhohokari Uddan Kormokorta, Horticulture Center	Service Provider	In-depth Interview	Phase 2	Consultant
230	Nurul Afsar	01819488987	Cox's Bazaar Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Deputy Director; Department of Agriculture Extension	Service Provider	In-depth Interview	Phase 2	Consultant

231	Jahanara Islam	01558615971; 01839965590	Cox's Bazaar Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Medicinal Plants Cultivator	Service Provider	In-depth Interview	Phase 2	Consultant
232	Nurul Absar	01818810706	Kakara, Chakaria	Chakaria	Cox's Bazaar	South Zone 2	East	Flower Cultivation, Intermediary for flowers	Producer & Trader	In-depth Interview	Phase 2	Consultant
233	Pushpo Niloy (Nurul Absar)	01711111611	Laal Dighir Mor, Cox's Bazaar	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Flower Shop	Retailer	In-depth Interview	Phase 2	Consultant
234	Dr. Fazal Karim	01717262401	Hashem Market, Chiringa	Chakaria	Cox's Bazaar	South Zone 2	East	Kobiraj Clinic Center	Retailer	In-depth Interview	Phase 2	Consultant
235	Matamuhuri Bhandar	011995544297	Sub. Regi. Office Road, Jonota Market, Chiringa	Chakaria	Cox's Bazaar	South Zone 2	East	Kobiraj Shop	Retailer	In-depth Interview	Phase 2	Consultant
236	Bagha Store	01818204865	Boro Bazaar Road	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Kobiraj Shop	Retailer	In-depth Interview	Phase 2	Consultant
237	Santosh	01677097976	Boro Bazaar Road	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Kobiraj Shop	Retailer	In-depth Interview	Phase 2	Consultant
238	Md. Nurul Amin; New Shah Omar Baniijaloy	01818702393	Al-Jamia Market, 3 No. Shop, Old Bus Station Road	Teknaf	Cox's Bazaar	South Zone 2	East	Fruits Trading Shop	Wholeseller	In-depth Interview	Phase 2	Consultant
239	Rezaul Karim (Zenith Strawberry)	01815023409	Kakara, Chakaria	Chakaria	Cox's Bazaar	South Zone 2	East	Strawberry Producer	Producer	In-depth Interview	Phase 2	Consultant
240	Abu Taher	01558636500	Boro Bazaar Road	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Strawberry Producer	Producer	In-depth Interview	Phase 2	Consultant
241	Jafar Alam	01819932312	Pouro Super market, Boro bazaar	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Input Seller; (Dress Making)	Input Seller	In-depth Interview	Phase 2	Consultant

242	Md. Abul Kashem	01558573998	Diamond Hotel, Kolatoli Mor	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Hotel Association Member	Service Provider	In-depth Interview	Phase 2	Consultant
243	Md. Gias uddin	01843745886	Himchari NP	Himchari	Cox's Bazaar	South Zone 2	East	BIT Officer	Service Provider	In-depth Interview	Phase 2	Consultant
244	Abu Salek	01813696148	Mach Bazaar, Boro Bazaar	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Capsicum Seller	Retailer	In-depth Interview	Phase 2	Consultant
245	Shah Amanat Ful Bitan	01815483997	Al-Jamia Market, Old Bus Station Road	Chakaria	Cox's Bazaar	South Zone 2	East	Flower Shop	Retailer	In-depth Interview	Phase 2	Consultant
246	Ruoshi Bitan	01815363803	Al-Jamia Market, Old Bus Station Road	Chakaria	Cox's Bazaar	South Zone 2	East	Flower Shop	Retailer	In-depth Interview	Phase 2	Consultant
247	Mr. Abdur Rajjak	01832216309	Teknaf Natural Park- Wildlife Sanctuary	Teknaf	Cox's Bazaar	South Zone 2	East	BIT Officer	Service Provider	In-depth Interview	Phase 2	Consultant
248	Naf Radio Station (Humayun)	01712810626	Teknaf Sadar	Teknaf	Cox's Bazaar	South Zone 2	East	Director	Service Provider	In-depth Interview	Phase 2	Consultant
249	Ajjul Haq	01710973004	Siddique Bazaar	Dhaka	Cox's Bazaar	South Zone 2	East	Valentines Flower Shop	Retailer	In-depth Interview	Phase 2	Consultant
250	Alamgir Seed House	01712108385	Shahabagh	Dhaka	Cox's Bazaar	South Zone 2	East	Seed Shop	Input Seller	In-depth Interview	Phase 2	Consultant
251	Dr. N. Zoha	01711520440	Shantinagar	Dhaka	Cox's Bazaar	South Zone 2	East	Former Member of Executive Body of BHMMA	Service Provider	In-depth Interview	Phase 2	Consultant
252	Dr. Md. Mahadi Hasan Khan	01716883817	Maghbazaar	Dhaka	Cox's Bazaar	South Zone 2	East	Research and Medical officer, Modern herbal	Service Provider	In-depth Interview	Phase 2	Consultant

253	Monowar Sultana Tulsi	01911488535	Maghbazaar	Dhaka	Cox's Bazaar	South Zone 2	East	Consultant, Modern Herbal	Service Provider	In-depth Interview	Phase 2	Consultant
254	Hakim Mohammad Ferdous Wahid	01715123040	Elephant Road	Dhaka	Cox's Bazaar	South Zone 2	East	Secretary General, Bangladesh Unani Medical Association	Service Provider	In-depth Interview	Phase 2	Project Staff
255	Rokeya Khanam	01814179873	Vill: Rongmohol, Po: Dulahajara, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Producer; Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
256	Barek	01828105000	Barek Store, New Super market, Chakaria	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Trader; Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
257	Shahana Akter	01833895484	Vill: Rongmohol, Po: Dulahajara, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Consumer; Sewing & Stitching	Consumer	Questionnaire Survey	Phase 2	Project Staff
258	Amina Begum	01811858617	Vill: Beragirkhil, Po: Dulahajara, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Producer; Fish Net Making	Producer	Questionnaire Survey	Phase 2	Project Staff
259	Aurun Kanti Dey	01846103757	Dulahajara Bazaar, Dulahajara, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Input Seller; Fish Net Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff
260	Noman	01812768735	Baytusrof Road	Fashiakhali	Cox's Bazaar	South Zone 2	East	Trader; Fish Net Making	Faria	Questionnaire Survey	Phase 2	Project Staff
261	Saleha Begum	01849872247	Beragirkhil, Dulahajara	Fashiakhali	Cox's Bazaar	South Zone 2	East	Prayer Caps	Producer	Questionnaire Survey	Phase 2	Project Staff
262	Nurucchofa	01819692668	Pabgori Bostro Bitan, Baytushrof Road	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Trader; Hand Crocheted Prayer Caps	Faria	Questionnaire Survey	Phase 2	Project Staff

263	Shakera Begum	01845504492	Vill: Maizpara, Po: Dulahajara	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Producer; Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
264	Helal Uddin	01813700511	Shundori Cloth Store, Anowar Shopping Complex	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Trader; Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
265	Md. Abdul Mannan	01837470055	Shahjalal Shuta Ghor, Kazi Market	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Trader; Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
266	Nasrin Mostofa	01811975719	Vill: Rongmohol, Po: Dulahajara	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Producer; Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
267	Saber Ahmed	01838975614	Dulahajara Bazaar, Dulahajara	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Input Seller; Sewing & Stitching	Input Seller	Questionnaire Survey	Phase 2	Project Staff
268	Badsha & Jalal Showdagar (Ms/s Ekota Banijalloy)	01817315053; 01819605483	Shadhon Market, Girls' School Road, Chiringa	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Retailer; Vegetables	Retailer	In-depth Interview	Phase 2	Consultant
269	Nur Jahan	01839414934	Uttar Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
270	Selina Akhtar	01775424944	Uttar Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
271	Tarekul Islam	01838372359	Teknaf Bazaar	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Wholeseller & Retailer	Questionnaire Survey	Phase 2	Project Staff
272	Parveen Akhter	01829179295	Vill: Rongikhali, Po: Rongikhali	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
273	Md. Golam Azam	01824005845	Vill: Rongikhali, Po: Rongikhali	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff

274	Muslima Akhter	01818423156	Vill: Rongikhali, Po: Rongikhali	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 2	Project Staff
275	Md. Shaha Alam	01684346667	Vill: Fuler dheil, Hnila	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
276	Kamrun Nahar	01825444228	Vill: Kader para, Po: Jahajpuri, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
277	Md. Atikullah Showdagor	01818848941	Vill: Shamlapur, Po: Baharcharaa, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Input Seller	Questionnaire Survey	Phase 2	Project Staff
278	Nurjahan	01851455247	Vill: Holbunia, Po: Jahajpur, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 2	Project Staff
279	Md. Hamidullah Showdagor	01815956647	Vill: Shamlapur, Po: Baharcharaa, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Fish Net Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff
280	Rehana Akhter	01845192275	Vill: Mathpara, Po: Jahajpur, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 2	Project Staff
281	Modul Hossain	01834978961	Vill: Fuler dheil, Hnila	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Input Seller	Questionnaire Survey	Phase 2	Project Staff
282	Rojina Akter	0	vill;Jhimongkhali Para	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 2	Project Staff
283	Rehana Akter	0	vill;Jhimongkhali Para	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Ambroidery	Producer	Questionnaire Survey	Phase 2	Project Staff
284	Monoara Begum	0	vill;Jhimongkhali Para	Teknaf	Cox's Bazaar	South Zone 2	East	Dress Making	Producer	Questionnaire Survey	Phase 2	Project Staff

285	Safika Begum	01832466052	vill: North Lambaril Para	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Making Net	Producer	Questionnaire Survey	Phase 2	Project Staff
286	Abdul Kalam	01813909386	vill:Whoaikhang Bazar	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Making Net	Input Seller	Questionnaire Survey	Phase 2	Project Staff
287	Lutfun Nahar Dolly	01825913343	vill: 14 gram	Himchari	Cox's Bazaar	South Zone 2	East	Dress Making	producer	Questionnaire Survey	Phase 2	Project Staff
288	Haji Shaheb & Nabab	01816086819	Haji Cloth store, Pouro super market,Boro bazar	Himchari	Cox's Bazaar	South Zone 2	East	Dress Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff
289	Md Jamal Uddin	0	Five star Trade House,Borobazar	Himchari	Cox's Bazaar	South Zone 2	East	Dress Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff
290	Md.Morshe d	01846999862	Hokar Market	Himchari	Cox's Bazaar	South Zone 2	East	Dress Making	Trader	Questionnaire Survey	Phase 2	Project Staff
291	Shamima Akter	01822345574	vill:Chouddo gram,PO:Kolatali,Cox's Bazar	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	producer	Questionnaire Survey	Phase 2	Project Staff
292	Karim	01819932312	Alpona ChumkihHouse,Pouro super Market,Boro Bazar	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Input Seller	Questionnaire Survey	Phase 2	Project Staff
293	Ujjal Das	01820184761	Purba Mach Bazar Shorok	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Wholeseller & Retailer	Questionnaire Survey	Phase 2	Project Staff
294	Md.Azizul Haq	01817703397	Biman Bandar Shorok	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Wholeseller & Retailer	Questionnaire Survey	Phase 2	Project Staff
295	Sabekunna har	01840279764	Chainda Murar Khacha	Himchari	Cox's Bazaar	South Zone 2	East	Nakshikantha	producer	Questionnaire Survey	Phase 2	Project Staff

296	Jafar Alam	01819932312	Alpona Chumki House,Pouro super Market,Boro Bazar	Himchari	Cox's Bazaar	South Zone 2	East	Nakshikantha	Input Seller	Questionnaire Survey	Phase 2	Project Staff
297	Nabab Shaheb	01816086819	Haji Cloth stora,Pouro super market,Boro bazar	Himchari	Cox's Bazaar	South Zone 2	East	Nakshikantha	Input Seller	Questionnaire Survey	Phase 2	Project Staff
298	Fatema Begum	0	Badshahar Ghona,Boroba zar	Himchari	Cox's Bazaar	South Zone 2	East	Fish Net Making	producer	Questionnaire Survey	Phase 2	Project Staff
299	Rahim Uddin	01815056711	Light House Para	Himchari	Cox's Bazaar	South Zone 2	East	Fish Net Making	producer	Questionnaire Survey	Phase 2	Project Staff
300	Abul Kashem	01816462475	Boro Bazar,Mashjid Road	Himchari	Cox's Bazaar	South Zone 2	East	Fish Net Making	input Seller& Producer	Questionnaire Survey	Phase 2	Project Staff
301	Mamtazul Haq Saudagar	01733707209	Majhirghat,Tek para	Himchari	Cox's Bazaar	South Zone 2	East	Fish Net Making	Consumer	Questionnaire Survey	Phase 2	Project Staff
302	Abdul Halim	01829429440	Alamnagar,Baraitoli	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Floriculture	producer	Questionnaire Survey	Phase 2	Project Staff
303	Sentu Kumar Das	01818577759	S Brothers,Goru Bazar	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Floriculture	Service Provider	Questionnaire Survey	Phase 2	Project Staff
304	Borhan Uddin	01828979950	Khaja Nursary,Siddiq Market	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Floriculture	input seller	Questionnaire Survey	Phase 2	Project Staff
305	Jahangir	01820554144	Estern Plaza	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Fish Net Making	Trader	Questionnaire Survey	Phase 2	Project Staff
306	Beluak	01825659263	Kutubdia,Eidga h Market	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Fish Net Making	producer	Questionnaire Survey	Phase 2	Project Staff

307	Osman Gani	01853411611	Uportola, Baraitoli	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Floriculture	Producer	Questionnaire Survey	Phase 2	Project Staff
308	Rafiq ahmed	01820841711	vill: King Sadek, Koiarbill, Chakaria	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Trader	Questionnaire Survey	Phase 2	Project Staff
309	Hamida Begum	01834045943	vill: Mashjid Para, Medhakacapia, Kutakali	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	producer & Commissioning Agent	Questionnaire Survey	Phase 2	Project Staff
310	Monoara Begum	01820107775	Khutakhali	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Nakshikantha	Producer	Questionnaire Survey	Phase 2	Project Staff
311	Md. Ehsanul Haq	01815885506	Al Rahmat Shopping, Kochembazar	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
312	Rabiul Hasan Lavi	01838509791	New Saudia Bazar, Khutakhali Bazar	Chakaria Sadar	cox's Bazaar	South Zone 2	East	Sewing & Stitching	input seller	Questionnaire Survey	Phase 2	Project Staff
313	Shairak Zahan Munni	01838211871	Kutubdia para, Khutakhali	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	producer	Questionnaire Survey	Phase 2	Project Staff
314	Rahima Begum	01837284081	Nolbunia, Kutubdia	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Dress Making	producer	Questionnaire Survey	Phase 2	Project Staff
315	Kadekhul Karim	01917187434	Chakaria Shopping Complex	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	input seller	Questionnaire Survey	Phase 2	Project Staff
316	Abdul Mannan	01817769680	Khutakhali bazar	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	input seller	Questionnaire Survey	Phase 2	Project Staff
317	Syed Humayun Morshed	01812383070	DOF, Teknaf	Teknaf	Cox's Bazaar	South Zone 2	East	SUFO	Service Provider	Workshop	Phase 1	Consultant
318	Shamima	01822342574	Adorsha Gram	Himchari	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant

319	Monir Ahmed	01818292175	Hajam Para	Teknaf	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
320	Nur Bahar	01813274571	Cha Bagan	Fashiakhali	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
321	Reshma Akhter	01811572404	Uttar Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
322	Parvez	01813584338	Cha Bagan	Fashiakhali	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
323	Saiful Islam	01813584338	Cha Bagan	Fashiakhali	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
324	Abu Morshed	01811624610	Himchari	Himchari	Cox's Bazaar	South Zone 2	East	President CMC Himchari	Service Provider	Workshop	Phase 1	Consultant
325	Harunur Rashid Shikder	01731650530	Whykkong	Whykkong	Cox's Bazaar	South Zone 2	East	Treasurer, Whykkong, CMC	Service Provider	Workshop	Phase 1	Consultant
326	Muha Nurul Hoque	01834020143	Whykkong	Whykkong	Cox's Bazaar	South Zone 2	East	VCF Secretary, Whykkong	Service Provider	Workshop	Phase 1	Consultant
327	Lutnunnesa	01812800514	Kolatoli, Adorsho Gram	Himchari	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
328	ABS Akul Hossain Raju	01819622188	Teknaf	Teknaf	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
329	Nimatullah	01812340180	Jhlongjha	Himchari	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
330	Rahima	01837281081	Bakkum, Medhakacchapia	Chakaria	Cox's Bazaar	South Zone 2	East	Bakkum, NS	Beneficiary	Workshop	Phase 1	Consultant

331	Halima	01816616860	Bakkum, Medhakacchapia	Chakaria	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
332	Jannatul Ferdouse	018335296996	Nolbunia, Medhakacchapia	Chakaria	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Validation Workshop	Phase 1	Consultant
333	Shamima Akhter	01712210704	Pals Cox's Bazaar	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Asst. Secretary	Service Provider	Validation Workshop	Phase 1	Consultant
334	Md. Jahangir Alam	01743907402	Mushrrom Unnoyon Prokolpo	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	AMDO	Service Provider	Validation Workshop	Phase 1	Consultant
335	Dr. Moinuddin Ahmed	01554313175	Fishries Department	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	SUFO	Service Provider	Validation Workshop	Phase 1	Consultant
336	Asaduzzaman	01755599547	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Livelihood Officer	NA	Validation Workshop	Phase 1	Consultant
337	Syed Tamjidur Rahman	01742747378	Innovision	Dhaka	Cox's Bazaar	South Zone 2	East	Lead Consultant	NA	Validation Workshop	Phase 1	Consultant
338	Atindrela Sharmin	01939900456	Innovision	Dhaka	Cox's Bazaar	South Zone 2	East	VC Specialist	NA	Validation Workshop	Phase 1	Consultant
339	Harun Ahmed	01818327015	Innovision	Dhaka	Cox's Bazaar	South Zone 2	East	Associate	NA	Validation Workshop	Phase 1	Consultant
340	Mahmud Hossain	01729293366	CREL	Dhaka	Cox's Bazaar	South Zone 2	East	Livelihood Manager	NA	Validation Workshop	Phase 1	Consultant
341	Shafiqur Rahman	01767887997	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Regional Coordinator	NA	Validation Workshop	Phase 1	Consultant
342	Ruma Majumder	01726395668	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Livelihood Facilitator	NA	Validation Workshop	Phase 1	Consultant

343	Shupto Shekhor	01717200270	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Market Development Officer	NA	Validation Workshop	Phase 1	Consultant
344	Animesh Poaul	01716112497	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Livelihood Facilitator	NA	Validation Workshop	Phase 1	Consultant
345	Shadhon Chakma	01716885299	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Livelihood Facilitator	NA	Validation Workshop	Phase 1	Consultant
346	Dr. Manjur Hossain	0 1716288356	Rajshahi University	Rajshahi	Rajshahi	South Zone 2	East	Dean Plant Science; General Secretary, Bangladesh Strawberry Association	Service Provider	In-depth Interview	Phase 2	Consultant
347	Dr Mithu	0171 112 4722	BAU-Mymensing	Mymensing	Mymensing	South Zone 2	East	Professor	Service Provider	In-depth Interview	Phase 2	Consultant
348	Dr Rahim Talukdar	0171 185 4471	BAU-Mymensing	Mymensing	Mymensing	South Zone 2	East	Professor	Service Provider	In-depth Interview	Phase 2	Consultant
349	M Ahsanullah	0	NA	NA	NA	South Zone 2	East	President; Bangladesh Flower Growers and Exporters Association	Service Provider	In-depth Interview	Phase 2	Consultant
350	Nasim Iqbal Ali	0	NA	NA	NA	South Zone 2	East	President; Orchid Society of Bangladesh	Service Provider	In-depth Interview	Phase 2	Consultant
351	Rezaul Karim Siddique	0	Rampura Dhaka	Dhaka	Dhaka	South Zone 2	East	Program Producer; Mati-O-Manush Bangladesh Television	Service Provider	In-depth Interview	Phase 2	Consultant

352	P.K. Pasha	01199194928	Winrock International	Dhaka	Dhaka	South Zone 2	East	EDS	NA	Strategic Workshop	Phase 2	Consultant
353	M. Abul Hossain	01711431667	Winrock International	Dhaka	Dhaka	South Zone 2	East	VCS	NA	Strategic Workshop	Phase 2	Consultant
354	Md. Abdul Kaiyum	01818908199	NACOM	Dhaka	Dhaka	South Zone 2	East	SO	NA	Strategic Workshop	Phase 2	Consultant
355	Nesar Ahmed	01815650809	NACOM	Dhaka	Dhaka	South Zone 2	East	SO	NA	Strategic Workshop	Phase 2	Consultant
356	Md. Shahidul Alam	01712411779	NACOM	Dhaka	Dhaka	South Zone 2	East	LF	NA	Strategic Workshop	Phase 2	Consultant
357	Ruma Majumder	01726395668	CODEC	Dhaka	Dhaka	South Zone 2	East	Livelihood Facilitator	NA	Strategic Workshop	Phase 2	Consultant
358	Shupta Shekhar Das	01717200270	Winrock International	Dhaka	Dhaka	South Zone 2	East	Market Development Officer	NA	Strategic Workshop	Phase 2	Consultant
359	Shafiqur Rahman	01767887997	NACOM	Dhaka	Dhaka	South Zone 2	East	Regional Coordinator	NA	Strategic Workshop	Phase 2	Consultant
360	Mahmud Hossain	0	CREL	Dhaka	Dhaka	South Zone 2	East	Livelihood Manager	NA	Strategic Workshop	Phase 2	Consultant
361	Munir Helal	01711392033	CODEC	Dhaka	Dhaka	South Zone 2	East	Focal Person CREL	NA	Strategic Workshop	Phase 2	Consultant
362	Shazia Mohsin	0	Winrock International	Dhaka	Dhaka	South Zone 2	East	Gov. Manager	NA	Strategic Workshop	Phase 2	Consultant
363	Albaab ur Rahman	01712822886	Innovision	Dhaka	Dhaka	South Zone 2	East	Sr. Research Associate	NA	Strategic Workshop	Phase 2	Consultant

364	Sadruzzam an Noor	01723776200	Innovision	Dhaka	Dhaka	South Zone 2	East	Sr. Research Associate	NA	Strategic Workshop	Phase 2	Consultant
365	Sadrudin Imran	01713004666	Innovision	Dhaka	Dhaka	South Zone 2	East	CEO	NA	Strategic Workshop	Phase 2	Consultant
366	Sushanta Kumer Sarker	01732525383	Innovision	Dhaka	Dhaka	South Zone 2	East	Research Manager	NA	Strategic Workshop	Phase 2	Consultant
367	Syed Tamjidur Rahman	01742747378	Innovision	Dhaka	Dhaka	South Zone 2	East	Consultant	NA	Strategic Workshop	Phase 2	Consultant
368	Atindrela Sharmin	01939900456	Innovision	Dhaka	Dhaka	South Zone 2	East	GMC Associate	NA	Strategic Workshop	Phase 2	Consultant
158	Yasmin Akhter	01826578389	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	House wife	NA	FGD	Phase 1	Consultant
159	Johra Begum	01845215571	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Service Holder	NA	FGD	Phase 1	Consultant
160	Nurul Alam	01840336835	Kader Para, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
161	Reshma Akhter	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
162	Rasheda Akhter	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
163	Rubina Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
164	Khurshida Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant

165	Taslma Akhter	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
166	Fatema Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
167	Rokeya Begum	01826306888	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
168	Minara Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
169	Rehana Akhter	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
170	Monowara Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
171	Nur Jahan	01839414934	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
172	Laila Begum	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
173	Shamjida Begum Sathi	0	Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
174	Julekha	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
175	Salma Begum	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
176	Motahara	01770483435	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant

177	Rabeya Begum	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
178	Moriyom Khatun	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
179	Jahanara Begum	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	FGD	Phase 1	Consultant
180	Rashida Begum	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
181	Monir Ahmod	01820069567	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
182	Nurul Islam	01830036204	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
183	Shirajul Islam	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
184	Mohammad Hossain	01830564703	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
185	Obaidul Hoque	0	Chainda Khandakar para	Himchari	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
187	Syed Akbar	01825368063	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
188	Abul Kashem	01822345574	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
189	Rafiq	01914446079	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Service Holder	NA	FGD	Phase 1	Consultant

190	Lutfunnesa	01812800514	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Housewife	NA	FGD	Phase 1	Consultant
191	Johra Khatun	01813879763	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
192	Tofura Begum	01987529820	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
193	Rahima	01820270216	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
194	Lutfuna Doli	01825913343	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
195	Jotsna	01823971933	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
196	Jahir Alam	01815078121	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Supply Business	Trader	FGD	Phase 1	Consultant
197	Abdur Munaf	01823637524	Choddogram, Jhilongji	Himchari	Cox's Bazaar	South Zone 2	East	Small Business	Retailer	FGD	Phase 1	Consultant
198	Bashir Ahmed	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
199	Ahmed Hossain	01778444222	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
200	Najir Ahmed	01840530821	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
201	Abdus Shukkur	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant

202	Rahima Begum	01837284081	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
203	Shobnom Mostafa	01835336728	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
204	Jannatul Ferdouse	01835296996	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
205	Amina Begum	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
206	Rokeya Begum	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
207	Romena Akhter	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
208	Shahana Akter	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
209	Asia Begum	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
210	Habiba Khatun	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	FGD	Phase 1	Consultant
211	Halima khatun	0	Nolbunia, Chakaria	Medhakacchapia	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	FGD	Phase 1	Consultant
212	Hafez Ahmmod	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
213	Siddique Ahamed	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant

214	Md. Sharid	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
215	Ali Ahmod	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
216	Ayesha Khatun	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
217	Shona Meher	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Agriculture	Producer	FGD	Phase 1	Consultant
218	Rashida Begum	01828701384	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Tailoring	Producer	FGD	Phase 1	Consultant
219	Nur Bahar	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	agriculture	Producer	FGD	Phase 1	Consultant
220	Moriyom Khatun	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Handicrafts	Producer	FGD	Phase 1	Consultant
221	Fatema Khatun	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
222	Shamsunn ahar	0	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Betel leaf Cultivation	Producer	FGD	Phase 1	Consultant
223	Golapjaan	01811226603	Pallan Para	Teknaf	Cox's Bazaar	South Zone 2	East	Nursery	Producer	FGD	Phase 1	Consultant
224	Abdul Malek	01975615622	Coastal Peace Hotel, Kolatoli Mor	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Purchase and Store in Charge, Coastal Peace	Service Provider	In-depth Interview	Phase 2	Consultant
225	Abul Kashem Shikder	01822535001	Diamond Hotel, Kolatoli Mor	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Director, Hotel Tourism Association	Service Provider	In-depth Interview	Phase 2	Consultant

226	Sazal Babu	018177979788 4	6 No. Biman Bondor Road, Bikari Ghat	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Motor Mechanic	Service Provider	In-depth Interview	Phase 2	Consultant
227	Hosen Kutub	01819644741	7 No. Biman Bondor Road, Bikari Ghat	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Boat Mechanic	Service Provider	In-depth Interview	Phase 2	Consultant
228	Farid Mia	01964980648	8 No. Biman Bondor Road, Bikari Ghat	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Boat Mechanic	Service Provider	In-depth Interview	Phase 2	Consultant
229	Abdul Karim	01715739004	Jilongjha, Horticulture Centre	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Uposhohokari Uddan Kormokorta, Horticulture Center	Service Provider	In-depth Interview	Phase 2	Consultant
230	Nurul Afsar	01819488987	Cox's Bazaar Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Deputy Director; Department of Agriculture Extension	Service Provider	In-depth Interview	Phase 2	Consultant
231	Jahanara Islam	01558615971; 01839965590	Cox's Bazaar Pouroshobha	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Medicinal Plants Cultivator	Service Provider	In-depth Interview	Phase 2	Consultant
232	Nurul Absar	01818810706	Kakara, Chakaria	Chakaria	Cox's Bazaar	South Zone 2	East	Flower Cultivation, Intermediary for flowers	Producer & Trader	In-depth Interview	Phase 2	Consultant
233	Pushpo Niloy (Nurul Absar)	01711111611	Laal Dighir Mor, Cox's Bazaar	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Flower Shop	Retailer	In-depth Interview	Phase 2	Consultant
234	Dr. Fazal Karim	01717262401	Hashem Market, Chiringa	Chakaria	Cox's Bazaar	South Zone 2	East	Kobiraj Clinic Center	Retailer	In-depth Interview	Phase 2	Consultant
235	Matamuhur i Bhandar	011995544297	Sub. Regi. Office Road, Jonota Market, Chiringa	Chakaria	Cox's Bazaar	South Zone 2	East	Kobiraj Shop	Retailer	In-depth Interview	Phase 2	Consultant
236	Bagha Store	01818204865	Boro Bazaar Road	Cox's Bazaar Sadar	Cox's Bazaar	South Zone 2	East	Kobiraj Shop	Retailer	In-depth Interview	Phase 2	Consultant

237	Santosh	01677097976	Boro Bazaar Road	Cox's Bazaar Sadar	Cox's Bazaar	South East Zone 2	Kobiraj Shop	Retailer	In-depth Interview	Phase 2	Consultant
238	Md. Nurul Amin; New Shah Omar Baniijaloy	01818702393	Al-Jamia Market, 3 No. Shop, Old Bus Station Road	Teknaf	Cox's Bazaar	South East Zone 2	Fruits Trading Shop	Wholeseller	In-depth Interview	Phase 2	Consultant
239	Rezaul Karim (Zenith Strawberry)	01815023409	Kakara, Chakaria	Chakaria	Cox's Bazaar	South East Zone 2	Strawberry Producer	Producer	In-depth Interview	Phase 2	Consultant
240	Abu Taher	01558636500	Boro Bazaar Road	Cox's Bazaar Sadar	Cox's Bazaar	South East Zone 2	Strawberry Producer	Producer	In-depth Interview	Phase 2	Consultant
241	Jafar Alam	01819932312	Pouro Super market, Boro bazaar	Cox's Bazaar Sadar	Cox's Bazaar	South East Zone 2	Input Seller; (Dress Making)	Input Seller	In-depth Interview	Phase 2	Consultant
242	Md. Abul Kashem	01558573998	Diamond Hotel, Kolatoli Mor	Cox's Bazaar Sadar	Cox's Bazaar	South East Zone 2	Hotel Association Member	Service Provider	In-depth Interview	Phase 2	Consultant
243	Md. Gias uddin	01843745886	Himchari NP	Himchari	Cox's Bazaar	South East Zone 2	BIT Officer	Service Provider	In-depth Interview	Phase 2	Consultant
244	Abu Salek	01813696148	Mach Bazaar, Boro Bazaar	Cox's Bazaar Sadar	Cox's Bazaar	South East Zone 2	Capsicum Seller	Retailer	In-depth Interview	Phase 2	Consultant
245	Shah Amanat Ful Bitan	01815483997	Al-Jamia Market, Old Bus Station Road	Chakaria	Cox's Bazaar	South East Zone 2	Flower Shop	Retailer	In-depth Interview	Phase 2	Consultant
246	Ruoshi Bitan	01815363803	Al-Jamia Market, Old Bus Station Road	Chakaria	Cox's Bazaar	South East Zone 2	Flower Shop	Retailer	In-depth Interview	Phase 2	Consultant
247	Mr. Abdur Rajjak	01832216309	Teknaf Natural Park- Wildlife Sanctuary	Teknaf	Cox's Bazaar	South East Zone 2	BIT Officer	Service Provider	In-depth Interview	Phase 2	Consultant

248	Naf Radio Station (Humayun)	01712810626	Teknaf Sadar	Teknaf	Cox's Bazaar	South Zone 2	East	Director	Service Provider	In-depth Interview	Phase 2	Consultant
249	Ajjul Haq	01710973004	Siddique Bazaar	Dhaka	Cox's Bazaar	South Zone 2	East	Valentines Flower Shop	Retailer	In-depth Interview	Phase 2	Consultant
250	Alamgir Seed House	01712108385	Shahabagh	Dhaka	Cox's Bazaar	South Zone 2	East	Seed Shop	Input Seller	In-depth Interview	Phase 2	Consultant
251	Dr. N. Zoha	01711520440	Shantinagar	Dhaka	Cox's Bazaar	South Zone 2	East	Former Member of Executive Body of BHMMA	Service Provider	In-depth Interview	Phase 2	Consultant
252	Dr. Md. Mahadi Hasan Khan	01716883817	Maghbazaar	Dhaka	Cox's Bazaar	South Zone 2	East	Research and Medical officer, Modern herbal	Service Provider	In-depth Interview	Phase 2	Consultant
253	Monowar Sultana Tulsi	01911488535	Maghbazaar	Dhaka	Cox's Bazaar	South Zone 2	East	Consultant, Modern Herbal	Service Provider	In-depth Interview	Phase 2	Consultant
254	Hakim Mohammad Ferdous Wahid	01715123040	Elephant Road	Dhaka	Cox's Bazaar	South Zone 2	East	Secretary General, Bangladesh Unani Medical Association	Service Provider	In-depth Interview	Phase 2	Project Staff
255	Rokeya Khanam	01814179873	Vill: Rongmohol, Po: Dulahajara, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Producer; Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
256	Barek	01828105000	Barek Store, New Super market, Chakaria	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Trader; Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
257	Shahana Akter	01833895484	Vill: Rongmohol, Po: Dulahajara,	Fashiakhali	Cox's Bazaar	South Zone 2	East	Consumer; Sewing & Stitching	Consumer	Questionnaire Survey	Phase 2	Project Staff

			Chakaria									
258	Amina Begum	01811858617	Vill: Beragirkhil, Po: Dulahajara, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Producer; Fish Net Making	Producer	Questionnaire Survey	Phase 2	Project Staff
259	Aurun Kanti Dey	01846103757	Dulahajara Bazaar, Dulahajara, Chakaria	Fashiakhali	Cox's Bazaar	South Zone 2	East	Input Seller; Fish Net Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff
260	Noman	01812768735	Baytusrof Road	Fashiakhali	Cox's Bazaar	South Zone 2	East	Trader; Fish Net Making	Faria	Questionnaire Survey	Phase 2	Project Staff
261	Saleha Begum	01849872247	Beragirkhil, Dulahajara	Fashiakhali	Cox's Bazaar	South Zone 2	East	Prayer Caps	Producer	Questionnaire Survey	Phase 2	Project Staff
262	Nurucchofa	01819692668	Pabgori Bostro Bitan, Baytushrof Road	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Trader; Hand Crocheted Prayer Caps	Faria	Questionnaire Survey	Phase 2	Project Staff
263	Shakera Begum	01845504492	Vill: Maizpara, Po: Dulahajara	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Producer; Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
264	Helal Uddin	01813700511	Shundori Cloth Store, Anowar Shopping Complex	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Trader; Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
265	Md. Abdul Mannan	01837470055	Shahjalal Shuta Ghor, Kazi Market	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Trader; Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
266	Nasrin Mostofa	01811975719	Vill: Rongmohol, Po: Dulahajara	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Producer; Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
267	Saber Ahmed	01838975614	Dulahajara Bazaar, Dulahajara	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Input Seller; Sewing & Stitching	Input Seller	Questionnaire Survey	Phase 2	Project Staff

268	Badsha & Jalal Showdagor (Ms/s Ekota Banijalloy)	01817315053; 01819605483	Shadhon Market, Girls' School Road, Chiringa	Chakaria Sadar	Cox's Bazaar	South East Zone 2	Retailer; Vegetables	Retailer	In-depth Interview	Phase 2	Consultant
269	Nur Jahan	01839414934	Uttar Naitong Para	Teknaf	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
270	Selina Akhtar	01775424944	Uttar Naitong Para	Teknaf	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
271	Tarekul Islam	01838372359	Teknaf Bazaar	Teknaf	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Wholeseller & Retailer	Questionnaire Survey	Phase 2	Project Staff
272	Parveen Akhter	01829179295	Vill: Rongikhali, Po: Rongikhali	Teknaf	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
273	Md. Golam Azam	01824005845	Vill: Rongikhali, Po: Rongikhali	Teknaf	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
274	Muslima Akhter	01818423156	Vill: Rongikhali, Po: Rongikhali	Teknaf	Cox's Bazaar	South East Zone 2	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 2	Project Staff
275	Md. Shaha Alam	01684346667	Vill: Fuler dheil, Hnila	Teknaf	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Faria	Questionnaire Survey	Phase 2	Project Staff
276	Kamrun Nahar	01825444228	Vill: Kader para, Po: Jahajpuri, Teknaf	Shilkhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff
277	Md. Atikullah Showdagor	01818848941	Vill: Shamlapur, Po: Baharcharaa, Teknaf	Shilkhali	Cox's Bazaar	South East Zone 2	Sewing & Stitching	Input Seller	Questionnaire Survey	Phase 2	Project Staff
278	Nurjahan	01851455247	Vill: Holbunia, Po: Jahajpur, Teknaf	Shilkhali	Cox's Bazaar	South East Zone 2	Fish Net Making	Producer	Questionnaire Survey	Phase 2	Project Staff

279	Md. Hamidullah Showdagor	01815956647	Vill: Shamlapur, Po: Baharcharaa, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Fish Net Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff
280	Rehana Akhter	01845192275	Vill: Mathpara, Po: Jahajpur, Teknaf	Shilkhali	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 2	Project Staff
281	Modul Hossain	01834978961	Vill: Fuler dheil, Hnila	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Input Seller	Questionnaire Survey	Phase 2	Project Staff
282	Rojina Akter	0	vill;Jhimongkhali Para	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Producer	Questionnaire Survey	Phase 2	Project Staff
283	Rehana Akter	0	vill;Jhimongkhali Para	Teknaf	Cox's Bazaar	South Zone 2	East	Hand Ambroidery	Producer	Questionnaire Survey	Phase 2	Project Staff
284	Monoara Begum	0	vill;Jhimongkhali Para	Teknaf	Cox's Bazaar	South Zone 2	East	Dress Making	Producer	Questionnaire Survey	Phase 2	Project Staff
285	Safika Begum	01832466052	vill: North Lambaril Para	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Net Making	Producer	Questionnaire Survey	Phase 2	Project Staff
286	Abdul Kalam	01813909386	vill:Whoaikhang Bazar	Teknaf	Cox's Bazaar	South Zone 2	East	Fish Net Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff
287	Lutfun Nahar Dolly	01825913343	vill: 14 gram	Himchari	Cox's Bazaar	South Zone 2	East	Dress Making	producer	Questionnaire Survey	Phase 2	Project Staff
288	Haji Shaheb & Nabab	01816086819	Haji Cloth store, Pouro super market,Boro bazar	Himchari	Cox's Bazaar	South Zone 2	East	Dress Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff
289	Md Jamal Uddin	0	Five star Trade House,Borobazar	Himchari	Cox's Bazaar	South Zone 2	East	Dress Making	Input Seller	Questionnaire Survey	Phase 2	Project Staff

290	Md.Morshe d	01846999862	Hokar Market	Himchari	Cox's Bazaar	South Zone 2	East	Dress Making	Trader	Questionnaire Survey	Phase 2	Project Staff
291	Shamima Akter	01822345574	vill:Chouddo gram,PO:Kol oli,Cox's Bazar	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	producer	Questionnaire Survey	Phase 2	Project Staff
292	Karim	01819932312	Alpona Chumki hHouse,Pouro super Market,Boro Bazar	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Input Seller	Questionnaire Survey	Phase 2	Project Staff
293	Ujjal Das	01820184761	Purba Mach Bazar Shorok	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Wholesell er & Retailer	Questionnaire Survey	Phase 2	Project Staff
294	Md.Azizul Haq	01817703397	Biman Bandar Shorok	Himchari	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Wholesell er & Retailer	Questionnaire Survey	Phase 2	Project Staff
295	Sabekunna har	01840279764	Chainda Murar Khacha	Himchari	Cox's Bazaar	South Zone 2	East	Nakshikantha	producer	Questionnaire Survey	Phase 2	Project Staff
296	Jafar Alam	01819932312	Alpona Chumki House,Pouro super Market,Boro Bazar	Himchari	Cox's Bazaar	South Zone 2	East	Nakshikantha	Input Seller	Questionnaire Survey	Phase 2	Project Staff
297	Nabab Shaheb	01816086819	Haji Cloth stora,Pouro super market,Boro bazar	Himchari	Cox's Bazaar	South Zone 2	East	Nakshikantha	Input Seller	Questionnaire Survey	Phase 2	Project Staff
298	Fatema Begum	0	Badshahar Ghona,Boroba zar	Himchari	Cox's Bazaar	South Zone 2	East	Fish Net Making	producer	Questionnaire Survey	Phase 2	Project Staff
299	Rahim Uddin	01815056711	Light House Para	Himchari	Cox's Bazaar	South Zone 2	East	Fish Net Making	producer	Questionnaire Survey	Phase 2	Project Staff

300	Abul Kashem	01816462475	Boro Bazar,Mashjid Road	Himchari	Cox's Bazaar	South Zone 2	East	Fish Making Net	input Seller& Producer	Questionnaire Survey	Phase 2	Project Staff
301	Mamtazul Haq Saudagar	01733707209	Majhirghat,Tek para	Himchari	Cox's Bazaar	South Zone 2	East	Fish Making Net	Consumer	Questionnaire Survey	Phase 2	Project Staff
302	Abdul Halim	01829429440	Alamnagar,Baraitoli	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Floriculture	producer	Questionnaire Survey	Phase 2	Project Staff
303	Sentu Kumar Das	01818577759	S Brothers,Goru Bazar	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Floriculture	Service Provider	Questionnaire Survey	Phase 2	Project Staff
304	Borhan Uddin	01828979950	Khaja Nursary,Siddiq Market	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Floriculture	input seller	Questionnaire Survey	Phase 2	Project Staff
305	Jahangir	01820554144	Estern Plaza	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Fish Making Net	Trader	Questionnaire Survey	Phase 2	Project Staff
306	Beluak	01825659263	Kutubdia,Eidgah Market	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Fish Making Net	producer	Questionnaire Survey	Phase 2	Project Staff
307	Osman Gani	01853411611	Uportola,Baraitoli	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Floriculture	Producer	Questionnaire Survey	Phase 2	Project Staff
308	Rafiq ahmed	01820841711	vill:King Sadek,Koiarbill ,Chakaria	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	Trader	Questionnaire Survey	Phase 2	Project Staff
309	Hamida Begum	01834045943	vill:Mashjid Para,Medhaka ccapia,Kutakali	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Hand Crocheted Prayer Caps	producer & Commissioning Agent	Questionnaire Survey	Phase 2	Project Staff
310	Monoara Begum	01820107775	Khutakhali	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Nakshikantha	Producer	Questionnaire Survey	Phase 2	Project Staff
311	Md.Ehsanul Haq	01815885506	Al Rahmat Shopping,Koch embazar	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	Producer	Questionnaire Survey	Phase 2	Project Staff

312	Rabiul Hasan Lavi	01838509791	New Saudia Bazar, Khutakhali Bazar	Chakaria Sadar	cox's Bazaar	South Zone 2	East	Sewing & Stitching	input seller	Questionnaire Survey	Phase 2	Project Staff
313	Shairak Zahan Munni	01838211871	Kutubdia para, Khutakhali	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	producer	Questionnaire Survey	Phase 2	Project Staff
314	Rahima Begum	01837284081	Nolbunia, Kutubdia	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Dress Making	producer	Questionnaire Survey	Phase 2	Project Staff
315	Kadekhul Karim	01917187434	Chakaria Shopping Complex	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	input seller	Questionnaire Survey	Phase 2	Project Staff
316	Abdul Mannan	01817769680	Khutakhali bazar	Chakaria Sadar	Cox's Bazaar	South Zone 2	East	Sewing & Stitching	input seller	Questionnaire Survey	Phase 2	Project Staff
317	Syed Humayun Morshed	01812383070	DOF, Teknaf	Teknaf	Cox's Bazaar	South Zone 2	East	SUFO	Service Provider	Workshop	Phase 1	Consultant
318	Shamima	01822342574	Adorsha Gram	Himchari	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
319	Monir Ahmed	01818292175	Hajam Para	Teknaf	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
320	Nur Bahar	01813274571	Cha Bagan	Fashiakhali	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
321	Reshma Akhter	01811572404	Uttar Naitong Para	Teknaf	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
322	Parvez	01813584338	Cha Bagan	Fashiakhali	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
323	Saiful Islam	01813584338	Cha Bagan	Fashiakhali	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant

324	Abu Morshed	01811624610	Himchari	Himchari	Cox's Bazaar	South Zone 2	East	President CMC Himchari	Service Provider	Workshop	Phase 1	Consultant
325	Harunur Rashid Shikder	01731650530	Whykkong	Whykkong	Cox's Bazaar	South Zone 2	East	Treasurer, Whykkong, CMC	Service Provider	Workshop	Phase 1	Consultant
326	Muha Nurul Hoque	01834020143	Whykkong	Whykkong	Cox's Bazaar	South Zone 2	East	VCF Secretary, Whykkong	Service Provider	Workshop	Phase 1	Consultant
327	Lutnunnesa	01812800514	Kolatoli, Adorsho Gram	Himchari	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
328	ABS Akul Hossain Raju	01819622188	Teknaf	Teknaf	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
329	Nimatullah	01812340180	Jhlongjha	Himchari	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
330	Rahima	01837281081	Bakkum, Medhakacchapia	Chakaria	Cox's Bazaar	South Zone 2	East	Bakkum, NS	Beneficiary	Workshop	Phase 1	Consultant
331	Halima	01816616860	Bakkum, Medhakacchapia	Chakaria	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Workshop	Phase 1	Consultant
332	Jannatul Ferdouse	018335296996	Nolbunia, Medhakacchapia	Chakaria	Cox's Bazaar	South Zone 2	East	VCF Member	Beneficiary	Validation Workshop	Phase 1	Consultant
333	Shamima Akhter	01712210704	Pals Cox's Bazaar	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Asst. Secretary	Service Provider	Validation Workshop	Phase 1	Consultant
334	Md. Jahangir Alam	01743907402	Mushrrom Unnoyon Prokolpo	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	AMDO	Service Provider	Validation Workshop	Phase 1	Consultant
335	Dr. Moinuddin Ahmed	01554313175	Fishries Department	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	SUFO	Service Provider	Validation Workshop	Phase 1	Consultant

336	Asaduzzaman	01755599547	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Livelihood Officer	NA	Validation Workshop	Phase 1	Consultant
337	Syed Tamjidur Rahman	01742747378	Innovision	Dhaka	Cox's Bazaar	South Zone 2	East	Lead Consultant	NA	Validation Workshop	Phase 1	Consultant
338	Atindrela Sharmin	01939900456	Innovision	Dhaka	Cox's Bazaar	South Zone 2	East	VC Specialist	NA	Validation Workshop	Phase 1	Consultant
339	Harun Ahmed	01818327015	Innovision	Dhaka	Cox's Bazaar	South Zone 2	East	Associate	NA	Validation Workshop	Phase 1	Consultant
340	Mahmud Hossain	01729293366	CREL	Dhaka	Cox's Bazaar	South Zone 2	East	Livelihood Manager	NA	Validation Workshop	Phase 1	Consultant
341	Shafiqur Rahman	01767887997	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Regional Coordinator	NA	Validation Workshop	Phase 1	Consultant
342	Ruma Majumder	01726395668	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Livelihood Facilitator	NA	Validation Workshop	Phase 1	Consultant
343	Shupto Shekhor	01717200270	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Market Development Officer	NA	Validation Workshop	Phase 1	Consultant
344	Animesh Paul	01716112497	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Livelihood Facilitator	NA	Validation Workshop	Phase 1	Consultant
345	Shadhon Chakma	01716885299	CREL	Cox's Bazaar	Cox's Bazaar	South Zone 2	East	Livelihood Facilitator	NA	Validation Workshop	Phase 1	Consultant
346	Dr. Manjur Hossain	0 1716288356	Rajshahi University	Rajshahi	Rajshahi	South Zone 2	East	Dean Plant Science; General Secretary, Bangladesh Strawberry Association	Service Provider	In-depth Interview	Phase 2	Consultant

347	Dr Mithu	0171 112 4722	BAU-Mymensing	Mymensing	Mymensing	South Zone 2	East	Professor	Service Provider	In-depth Interview	Phase 2	Consultant
348	Dr Rahim Talukdar	0171 185 4471	BAU-Mymensing	Mymensing	Mymensing	South Zone 2	East	Professor	Service Provider	In-depth Interview	Phase 2	Consultant
349	M Ahsanullah	0	NA	NA	NA	South Zone 2	East	President; Bangladesh Flower Growers and Exporters Association	Service Provider	In-depth Interview	Phase 2	Consultant
350	Nasim Iqbal Ali	0	NA	NA	NA	South Zone 2	East	President; Orchid Society of Bangladesh	Service Provider	In-depth Interview	Phase 2	Consultant
351	Rezaul Karim Siddique	0	Rampura Dhaka	Dhaka	Dhaka	South Zone 2	East	Program Producer; Mati-O-Manush Bangladesh Television	Service Provider	In-depth Interview	Phase 2	Consultant
352	P.K. Pasha	01199194928	Winrock International	Dhaka	Dhaka	South Zone 2	East	EDS	NA	Strategic Workshop	Phase 2	Consultant
353	M Abul Hossain	01711431667	Winrock International	Dhaka	Dhaka	South Zone 2	East	VCS	NA	Strategic Workshop	Phase 2	Consultant
354	Md. Abdul Kaiyum	01818908199	NACOM	Dhaka	Dhaka	South Zone 2	East	SO	NA	Strategic Workshop	Phase 2	Consultant
355	Nesar Ahmed	01815650809	NACOM	Dhaka	Dhaka	South Zone 2	East	SO	NA	Strategic Workshop	Phase 2	Consultant
356	Md. Shahidul Alam	01712411779	NACOM	Dhaka	Dhaka	South Zone 2	East	LF	NA	Strategic Workshop	Phase 2	Consultant

357	Ruma Majumder	01726395668	CODEC	Dhaka	Dhaka	South Zone 2	East	Livelihood Facilitator	NA	Strategic Workshop	Phase 2	Consultant
358	Shupta Shekhar Das	01717200270	Winrock International	Dhaka	Dhaka	South Zone 2	East	Market Development Officer	NA	Strategic Workshop	Phase 2	Consultant
359	Shafiqur Rahman	01767887997	NACOM	Dhaka	Dhaka	South Zone 2	East	Regional Coordinator	NA	Strategic Workshop	Phase 2	Consultant
360	Mahmud Hossain	0	CREL	Dhaka	Dhaka	South Zone 2	East	Livelihood Manager	NA	Strategic Workshop	Phase 2	Consultant
361	Munir Helal	01711392033	CODEC	Dhaka	Dhaka	South Zone 2	East	Focal Person CREL	NA	Strategic Workshop	Phase 2	Consultant
362	Shazia Mohsin	0	Winrock International	Dhaka	Dhaka	South Zone 2	East	Gov. Manager	NA	Strategic Workshop	Phase 2	Consultant
363	Albaab ur Rahman	01712822886	Innovision	Dhaka	Dhaka	South Zone 2	East	Sr. Research Associate	NA	Strategic Workshop	Phase 2	Consultant
364	Sadruzzaman Noor	01723776200	Innovision	Dhaka	Dhaka	South Zone 2	East	Sr. Research Associate	NA	Strategic Workshop	Phase 2	Consultant
365	Sadrudin Imran	01713004666	Innovision	Dhaka	Dhaka	South Zone 2	East	CEO	NA	Strategic Workshop	Phase 2	Consultant
366	Sushanta Kumer Sarker	01732525383	Innovision	Dhaka	Dhaka	South Zone 2	East	Research Manager	NA	Strategic Workshop	Phase 2	Consultant
367	Syed Tamjidur Rahman	01742747378	Innovision	Dhaka	Dhaka	South Zone 2	East	Consultant	NA	Strategic Workshop	Phase 2	Consultant
368	Atindrela Sharmin	01939900456	Innovision	Dhaka	Dhaka	South Zone 2	East	GMC Associate	NA	Strategic Workshop	Phase 2	Consultant

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