



EU funded Project:
Trade and Private Sector Development
Ministry of Industry, Commerce & Supplies
Singhadurbar, Kathmandu



Coffee Value Chain Upgrading Strategy

2018-2022

National Tea and Coffee Development Board (NTCDB)

Prepared by:

EU Funded: Trade and Private Sector Development Project (TPSD)
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Abbreviations

ADB/N	Agricultural Development Bank, Nepal
ADS	Agricultural Development Strategy
ASI	Austrian Standard Institute
CDC	Coffee Development Section
CoPP	Coffee Promotion Program
CTDS	Coffee and Tea Development Section
DADO	District Agricultural Development Office
DCCU	District Coffee Cooperative Unions
DFTQC	Department of Food Technology, Quality Control
DOA	Department of Agriculture
EIF	Enhanced Integrated Framework
EU-TPSD	European Union- Trade and Private Sector Development
FOS	Farmers Organizations
GAP	Good Agriculture Practices
GON	Government of Nepal
I/NGO	International Non Governmental Organization
IQC	Internal Quality Control
LISP	Local Initiative Support Initiatives
MASL	Meter Above Sea Level
MOAD	Ministry of Agricultural Development
MOCS	Ministry of Commerce and Supply
MT	Metric Ton
NARC	Nepal Agriculture Research Center
NBSM	Nepal Bureau of Standards and Metrology
NCPA	Nepal Coffee Producers' Association
NPC	Nation Planning Commission
NTCDB	Nepal Tea and Coffee Development Board
NTIS	Nepal Trade Integration Strategy
NTSOAS	National Technical Standard for Organic Agriculture System
PCCU	Primary Coffee Cooperative Unions
PDNA	Post Disaster Need Assessment
PPA	Pocket Package Area
R and D	Research and Development



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RAD	Regional Agricultural Development
SPS	Sanitary and Phytosanitary
SWOT	Strength, Weakness, Opportunity and Threats
VC	Value Chain
VDC	Village Development Committee
WTO	World Trade Organization

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The Context

In 2004, the World Trade Organization (WTO) granted the multilateral trading facility to Nepal. With the accession to this Organization Nepal can avail market access to other countries and benefit from international marketing. Export performance of Nepal is very weak. The Government of Nepal (GoN) has recently endorsed the Nepal Trade Integration Strategy (NTIS) 2016. Nepal aims to address the outstanding trade and competitiveness challenges confronted by the country's export sector. Coffee has been included as other export potentials and continuation from NTIS 2010. This has aim to seize the opportunities of trade liberalization and a stronger integration of Nepal's economy at regional and international level.

The Nepal Trade Integration Strategy (NTIS) 2016 has clearly identified coffee as one of the export potential crops and similarly, Agriculture Development Strategy (ADS) has also identified coffee as high value crop with export potential.

The Nepal Tea and Coffee Development Board under Ministry of Agricultural Development (MOAD) is an agency having a mandate to promote tea and coffee promotion. At the production level primary coffee producers, cooperatives, associations are active and there are few local traders who export Nepal's coffee.

The EU-TPSD Project

Ongoing the EU-TPSD project (The trade and private sector development project Europe Aid/134961/C/SER/NP-1) aims contribute to the efforts of the Government of Nepal reducing poverty and stimulating trade-led economic growth by strengthening trade competitiveness. The EU-TPSD project framed to be achieved three core area, these are:

- enhancing the capacity of the Ministry of Commerce and Supplies (MoICS) and related agencies for the formulation, implementation and coordination of trade policy, trade negotiations and trade promotion,
- strengthening the system of quality infrastructure to cope with issues of standards and technical regulations, and
- providing support to the development of the coffee value chain.

The stated three components of the project are mutually implemented by a consortium of three experienced development partners with a proven record in trade and private sector related assistance projects: GFA Consulting Group GmbH (GFA) with first-hand experience in implementing projects in Nepal, including the on-going EU project on reconstruction and peace building, HELVETAS, which has already been active in all 75 districts across Nepal, and the Austrian Standards Institute (ASI) with an extensive experience in quality infrastructure-related capacity building projects. There are three core components of the project:

Component 1: Trade Policy Development and Capacity Development

Component 2: Quality Infrastructure Development (Technical Barrier to Trade, TBT and Sanitary and phytosanitary (SPS))



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Component 3: Value Chain Development

This report is prepared under component 3 of the value chain development component focusing coffee sub sector.

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1. GENERAL SCENARIO OF COFFEE

1.1. Introduction

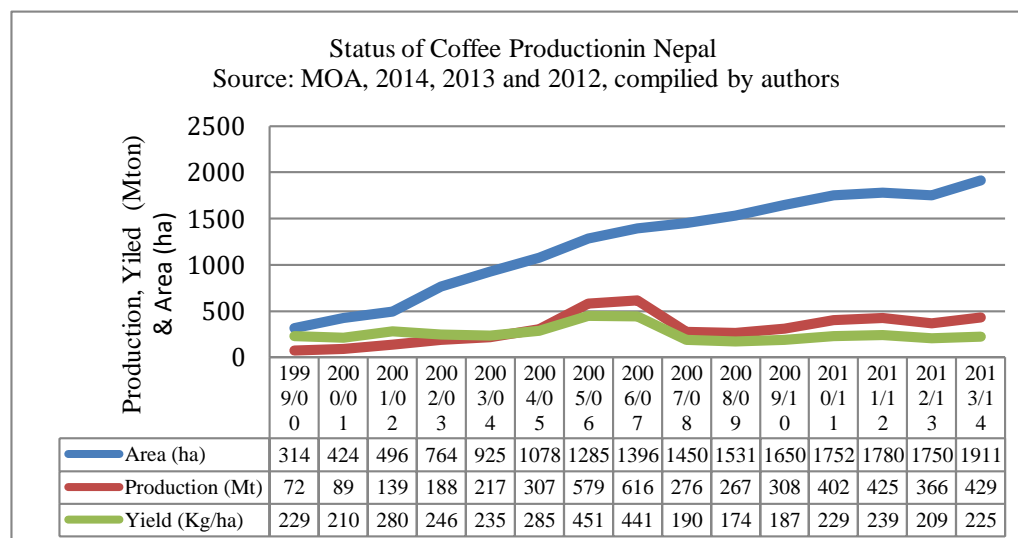
Coffee farming is a recent practice in Nepal, historically, it was introduced in Aanpchaure of Gulmi in 1995 BS (1938 AD) by Hira Giri who brought coffee seeds from Myanmar. Agriculture Development Bank (ADB/N) initiated coffee farming by importing seeds and distributing it to the smallholder farmers. Later on some I/NGOs engaged in coffee cultivation with objectives to prevent soil erosion and environmental protection. In 1981, farmers of Aanpchaure, Gulmi established coffee nursery. Coffee cherry was roasted and grinded at household level in a conventional manner and it was used for local use. Similarly, Tinau Watershed Project in 1982 initiated coffee plantation (MOAD/PACT, 2012). In 1983, processing of coffee beans at larger scale started at Manigram of Rupandehi district. The given historic movements of coffee plantation, smallholders perceived coffee an easy crop to grow; required limited inputs and can be cultivated on marginal uplands with minimal irrigation and minimal level of efforts. By analyzing and recognizing the economic, environmental and social benefits of coffee; the government adopted coffee as a potential cash crop for the mid hills mainly since seventh periodic plan and this has been continuing. Along with international development partners propelled coffee production initiatives by expanding area, supported to enhance capacity and institutional development. Seeing to the potentiality of coffee crop, the Government of Nepal started activities by establishing institutional structures such as Tea and Coffee Development Section under Fruit Development Directorate of the Department of Agriculture in 1993 to promote coffee production by area expanding in the country. In 1993, the GoN enacted Coffee and Tea Development Board Act (1993), under the Act, National Tea and Coffee Development Board formed. In 1994, for the first time, Nepali coffee was exported with dry processed green beans to Japan. Farmers from Gulmi, Palpa and Arghakhachi united and initiated coffee plantation and formed association/cooperatives as an endeavor to institutional development.

Since 2003, HELVETAS Swiss Intercooperation Nepal (Box-1) has been contributing coffee development by piloting and offering institutional support like cooperative formation, providing knowledge/skill and capacity development of coffee growers, processing entities and market linkages etc. Given efforts in the past, there are several development endeavors have been currently taking place in the country by the government led by mainly coffee production, processing, marketing/trade and institutional development areas.



1.2. Production, Area and Institutions

NTCDB (www.teacoffee.org.np) annually reports area of coffee plantation, production and export. is 2183 ha; 463.58 MT. (7726 bags¹ green beans) and about 100 MT



respectively. As informed, Nepal has exclusively *Arabica* coffee plantation, which stances great potential to scale up of production up to 41 mid hill districts due to the suitable climatic condition, geographical resources and other factors e.g. economic, social, agricultural practices.

The Ministry of Agricultural Development is the leading public agency and accountable for overall coffee production activities. The Ministry of Commerce is also key ministry responsible in promoting marketing/trading. The Ministry of Federal Affairs and Local Development is also public authorities supports occasionally to micro infrastructure development activities via district development committee and VDC since these local level public implementation agencies have mandate financing 15 percent allocated local budgets to the agricultural related development activities. Based strong convincing proposal coffee production activities occasionally receive public funds.

Large area within mid hill with altitude ranges 1000-16000 masl provides high potential of coffee production and productivity. There are varieties of actors like smallholder farmers, pulping operators; cooperatives and cooperative unions are engaged in production, processing, marketing and institutional/farmers' capacity development etc.

¹1 bag=60 Kgs



1.3. Production, Area and Institutions

NTCDB (www.teacoffee.org.np) reports area of coffee plantation, production and export is 2183ha; 463.58 MT. (7726 bags² green beans) and about 100 MT respectively (Figure 1). As informed, Nepal has exclusively *Arabica* coffee plantation, which stances great potential to scale up of production up to 41 mid hill districts due to the suitable climatic condition, geographical resources and other factors e.g. economic, social, agricultural practices.

Nepal contributes very nominal to the world coffee production. Table 8 (annex) provides major coffee producing counties and their volume. Compared with other major coffee producing countries, Nepal has to make much long way to reap benefit from coffee. Coffee productivity (green bean yield) is tightly linked to climatic variability. Climate change could impact to coffee bushes. Harsh colder nights, hotter days and unpredictable rains combined with more pests and disease are affecting to many smallholder farmers. Scientists declared an increase of 1° C can lead to a yield loss of almost 100 kg/ha or 20% of current yield (<http://www.iita.org>). Growing coffee and banana together not only generates more income for smallholder farmers compared to growing either crop alone, it can also help coffee production to cope with the effects of climate change. However, productivity of coffee varies country to country; India, Indonesia and Brazil have 852 kg/ha; 760kg/h; and Brazil 1500 kg/ha respectively. But there is trend of productivity 480kg/ha to 900 kg/ha (Source: volcafe.ch)

²1 bag=60 Kgs

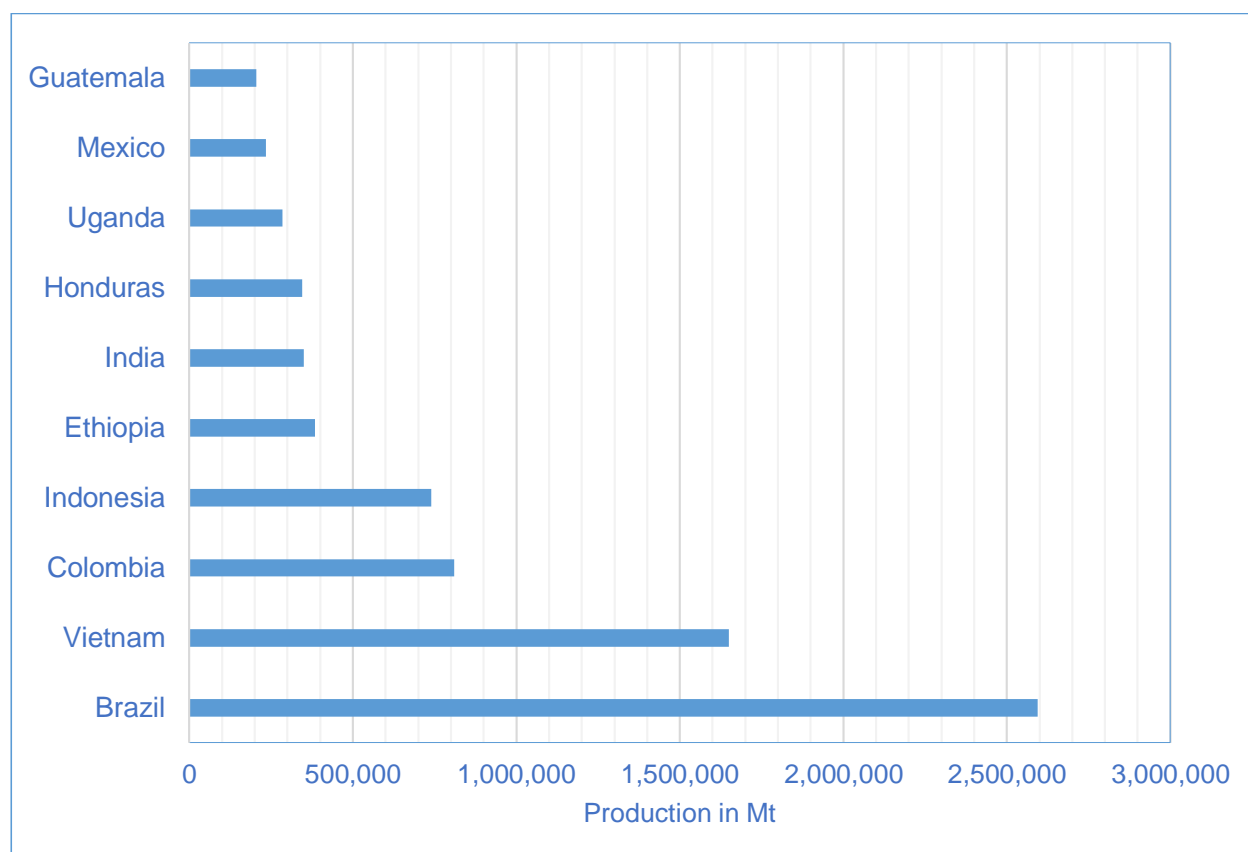


Figure 1. Top ten coffee producing Countries; Source: <http://www.worldatlas.com/articles/top-coffee-producing-countries.html>

Figure 1 provides major top ten coffee producing countries. Though; Nepal is way below productivity and production compare to coffee producing counties; but Nepal with large area within middle hill (1000-16000 masl) possesses great potential to produce high quality Arabica coffee due to its geo-physical and climatic conditions having around 11.9 million hectares potential.

The Ministry of Agricultural Development is the leading public agency and accountable for overall coffee production activities. The Ministry of Commerce is also key ministry responsible in promoting marketing/trading. The Ministry of Federal Affairs and Local Development is also public authorities supports occasionally to micro infrastructure development activities via district development committee and VDC since these local level public implementation agencies have mandate financing 15 percent allocated local budgets to the agricultural related development activities. Based strong convincing proposal coffee production activities occasionally receive public funds.

There are varieties of actors like smallholder farmers, pulping operators; cooperatives and



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cooperative unions engaged in production, processing, marketing and institutional/farmer's capacity development along the value chain.

Over 31,000 smallholder farmers, 12 district coffee cooperative unions and private nursery farm and pulp operators are directly contributing to production and processing areas as well as trading activities.

Different stakeholders including public, private and international development agencies are involved in coffee value chain development activities like providing inputs in terms of quality seeds, establishing nurseries, farm management, institutional and capacity development, production and processing technology dissemination and extension services. With these activities over the years, producers have acquired skill and knowledge on organic production and processing methods, value addition, cooperatives development as a way for strong institutional bases at the producers' level and connecting with the buyers at national and international level.

However, Table 3 and figure 1 provide existing features of coffee production. Public, private, international stakeholders via their local partners deliver demand base services, facilities and activities. These services and facilities however, are not yet sufficient to scale up of production and processing to meet current demand (6000 Mt). Further, Government of Nepal is yet to be mainstreamed as the important crop like other cereal or cash crops. It is, therefore, coffee sub sector receives nominal amount of public funding. Banking and Financial Institutions (BFIs) is also reluctant to offer financial products to finance coffee production, processing and trading schemes.



Table 1- List of key actors of coffee value chain:

Table 1: Stakeholders involved in Coffee Promotion and Development	
Public	(a) Ministry of Agriculture Development (MOAD) <ul style="list-style-type: none"> • Project for Agricultural Commercialization and Trade (PACT) • Department of Agriculture (DOA) <ul style="list-style-type: none"> • Coffee and Tea Development Section (CTDS) • District Agricultural Development Office (DADO) • Nepal Tea and Coffee Development Board (NTCDB) • Agri-Commodity Export Promotion Program, Harihar Bhawan, Lalitpur • Nepal Agriculture Research Council (NARC) <ul style="list-style-type: none"> • Coffee Research Center, Gulmi (b) Ministry of Federal Affairs and Local Development (MOFALD) <ul style="list-style-type: none"> • District Development Committee (DDC) • Village Development Committee (VDC)
Private	(a) Central Coffee Cooperative Unions (CCU) (b) Nepal Coffee Producers' Association (NCPA) (c) District Coffee Cooperative Unions (DCCU) (d) Agro Enterprise Center of the FNCCI (AEC/FNCCI) (e) Traders (f) Café Houses
International	(a) HELVETAS Swiss Intercooperation Nepal (b) Beautiful Coffee-South Korea (c) Good Neighbor's International (d) International Development Enterprise (e) JICA Nepal
NGOs	(a) Love Green Nepal (b) Beautiful Coffee Nepal
Traders/Marketing Agencies	29 and have own brand

Nepal exclusively produces Arabica variety of coffee which has a comparative advantage in the world market over the others. Two types of coffee products are exported from Nepal to international markets; these products are provided in detail in Table 2. MOAD (2015) reports that international trading partner countries are 18 different countries of EU, North America, and Asia Pacific regions; these countries are: Australia, Austria,

Table-2: Types of Coffee Products for Export		
Types of coffee products exported	Unit	Total
A. Coffee green bean	Mt	43.85
	NRs/ Mil	31.21
B. Coffee, roasted, not decaffeinated (roasted bean)	Mt	5.32
	NRs./Mil	6.30
Source: Statistical Information on Nepalese Agriculture, MoAD, 2014: 129 and 130.		



Canada, China, Finland, Italy, Germany, Japan, S Korea, Netherlands, New Zealand, Oman, Philippines, Switzerland, Taiwan, UAE, USA and UK etc. In addition to export, domestic consumption habit of coffee drinking is also getting popular. National market consumes 79 percent of total production. Modern café houses, hotel and restaurants are also expanding; these properties sell good amount of coffee.

Coffee production relies on varieties of services; these include: availability of quality seeds, supply of healthy seedlings, efficient irrigation facility for moisture management, knowledge of orchard management, pest/ disease control, and good agriculture practices (GAP) on the processing side, good harvesting knowledge, pulping and preparation of parchments, preparation of green beans processing etc. are important components of processing activities which contribute to making high standard of quality of green beans.

1.3.1. Concerns and Issues

1. Overall production situation of coffee production in Nepal

As according to the data of National Tea and Coffee Development Board (NTCDB), Nepal produced 463.58 metric tons of green bean (GB) coffee. Total plantation of coffee is in around 2381 ha of land with 32,186 farmers. According to the data, national average of GB production per hectare of land is around 0.195 mt which is far below than other major coffee producing countries.

Table 3: Total coffee production in Nepal (district-wise)

S.N	Districts	Total Plantation (ha)	Production (MT) Green Bean	Farmers	Remarks
1	Arghakhachi	126	28.75	1652	
2	Baglung	60	14.30	1331	
3	Bhojpur	11	3.00	162	
4	Dhading	69	18.25	726	
5	Gorkha	25	5.50	734	
6	Gulmi	150	35.10	1780	
7	Ilam	60	19.20	715	
8	Kaski	146	30.10	4242	
9	Kavre	186	40.00	3250	
10	Khotang	17	4.60	278	
11	Lalitpur	130	23.59	980	
12	Lamjung	126	18.40	1333	
13	Makawanpur	30	11.00	812	



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S.N	Districts	Total Plantation (ha)	Production (MT) Green Bean	Farmers	Remarks
14	Myagdi	28	7.00	471	
15	Nuwakot	162	28.10	1375	
16	Palpa	115	27.30	2271	
17	Panchthar	250	12.50	712	New Plantation
18	Parbat	85	18.00	1913	
19	Pyuthan	25	8.00	412	
20	Rasuwa	44	7.00	362	
21	Sankhuwashava	28	6.00	368	
22	Sindhupalchok	117	30.00	1572	
23	Syangja	290	50.50	3311	
24	Tanahu	31	2.39	612	
25	Other 15 District	70	15.00	812	
	Total	2381	463.58	32186	

Source: NTCDB, 2015

2. Issues to be addressed

Low productivity of coffee is one of the major areas of concern and this can be improved by providing extensive training on plantation and harvesting methods by applying organic methods. In order to improve the farming and productivity there requires an increased support on organic plantation methods, management of orchard, strengthening of producers' ability to organize and manage coffee farming, strengthening of cooperatives and to educate farmers on quality and market concept so that they produce the coffee beans as per the market requirement.

There is a huge unmet demand for Nepali coffee at domestic and international market. Reportedly, there is a demand for 8,000 mt of green bean coffee as opposed to 463 mt green bean. However, effective implementation of coffee logo and coffee standard is yet to take place to ensure the originality of Nepali coffee and assurance of the quality which help promote Nepali coffee. Implementation of the concept on Branding and coffee brewing and preparation methods needs to be extended in major townships of Nepal other than capital city. So activities geared to promote the local market are equally important while focusing on international trade.

So the major focus of the TPSD project will be on the following areas which covers production and productivity improvement; processing; quality and standard improvement; logo implementation and promote domestic and international market:

- Improve production and production related activities (nursery, plantation areas, create farmers associations in a new and expanded area)
- Training on organic farming practices and harvesting method



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- Strengthen farmers cooperatives and association
- Productivity improvement
- Processing facilities and infrastructure development
- Market concept, branding and coffee preparation methods
- Quality improvement and implementation of traceability system
- Implementation of coffee logo and standards for both domestic and international market

Currently Nepal has embarked on the process of economic transformation; coffee commodity could be crucial crop that could be spark to the prosperity. Since it, demands unlock to the existing geographical potential, demographic and climatic advantage that are available in the country. This upgrading strategy commits to address the problems inherent on coffee sub sector value chain through upgrading. A large number of diverse actors and stakeholders are currently involved in the coffee sub sector value chain in Nepal. They have been contributing to different roles ranging from governance/institutional development, input supply, seedling production, cherry production, pulping and parchment preparation, processing/exporting, wholesaling, and retailing. Over 30000 smallholder farmers are primary producers throughout the nation within 41 districts. The majority of farmers are smallholders, growing less than half *ropani* of land; farmers even plant less than 10 plants in their land. It is estimated that 50 percent of coffee production is consumed within the country.

A stable vertical and horizontal linkage is yet to be established in the coffee sub sector value chain. This impedes effective communication, linkage, networking and effective relationship between actors. Exporters and DCCUs are found to captivity in the sub sector value chain. There are a number of supply side constraints in the coffee value chain. Limited allocations of public budget on developing micro infrastructures, skill/knowledge disseminations, and delivering extension services, controlling to diseased/insecticide, efficient governance/institutional, safety net schemes, R and D and incentives etc. could be key factors which played vital role to the sustainability of coffee sub sector and competitiveness development, expanding area of plantation and productivity.

Farmers continuously seek improved inputs, materials and services, know how technology, and skills for achieving a higher production and productivity, sizable growing land, land use planning and extension services and safety nets schemes, these are also demand side constraints. These are also contributing negative externality to the sub sector. In addition, pulping and preparation of parchment, processing green beans and grading and storage systems are not efficient and good standard level. Market information systems are not effective at the farmer and traders of green bean levels. The input supply system should be strengthened to ensure the availability of high quality seeds and healthy seedlings at the farmer level. Government, non-government, and private sector actors should closely coordinate to achieve export-led economic



growth within the sub sector. Private/public and cooperative partnerships should take a lead role in infrastructure development, such as land management, shed management, irrigation facilities, pulping and parchment preparation, green bean processing including grading, storage and research development (R&D). Examples of R&D investment opportunities include varietal improvements in cherry production level, quality seeds and healthy seedling, and enhancing cheery quality standards and productivity. Provisions should be made for smallholder farmers and processors to receive incentives on capital, inputs, grading and parchment preparation technology, equipment, and micro-irrigation systems. Cooperation among market actors is the most essential factor for establishing a functional coffee value chain. Coffee farmers are in a traditional system of cultivation, which is the common method. The cost of production is not based on recording system, and thus the production related costs reflect the general idea of the farmers reflecting a typical pattern of plantation and management. The major constraints include:

SN	Constraints
1	Absence of alternative income or food security measures to stallholder farmers
2	Improper technology for an economic scale up production
3	Limited provision of appropriate land and shed management and irrigation facilities for winter harsh condition and summer super dry time
4	Poor practice (hygiene and clean facility issues) and infrastructure in pulping and parchment preparation and storage management (space, air flow, and slot management)
5	Limited provision of good seeds to produce seedling
6	Stiff and poor financial products in primary production and processing
7	Low priority by banking sector to collator lands and property in the rural areas, occurrence of high interest rate
8	Transportation undefined
9	No incentive or support on means of production or safety net measure
10	Limited experts and human resources or limited extension technicians, and
11	Limited market information.

1.4. The Coffee: Key features and development challenges

The first and overarching goal is to realize economic scale of organic production by spur innovation in micro infrastructures more inclusive. Currently coffee sub sector has limited dedicated policy and investment strategies. Absence of these important elements is the threat to the sub sector. Impact of such position, proper actions and investment choices could not be shaped out. Existing public governance/institutional setting is weak and ineffective. Limited skill/knowledge and technology in areas of production, processing and trading/marketing is available to the growers. Existing skills/knowledge further is no favor to better match the comparative advantage and requirements of scale of economical production and processing. It has severely impacted to practice competitiveness and innovations.



Priorities to sustainable organic production include building resilience to climate change, providing sustainable infrastructure, creating ecosystem services and making efficient and sustainable use of natural resources particularly water, which is central to sustainable production. Currently it is noticed that most affected by climate change is long period of drought. Interaction made with the smallholder farmers of Nuwakot, Sindhupalchowk and Kavrepalanchowk shared their stories on absence of irrigation services, the nursery seedlings, newly planted and matured plants one had suffered much by the longer period of drought. Resulting this climatic change impact, great amount of reduction in production is expected in coming crop calendar.

Key Features	Development Challenges	Possible Approaches
<ul style="list-style-type: none">• Producers/smallholder farmers are in low income segment with poor wealth and assets capacity• Coffee contributes significantly to boot income, employment and human development• Government/public spending in the coffee sub sector is very low• Majority of smallholders/producers group and their institutions concentrate in mid hill with development challenges	<ul style="list-style-type: none">• Having limited land for plantation• Poor production capacity, process knowledge and market access• High development Costs• Poor/little investment• No investment on technology and innovation and quality control• Institutional barriers/weak governance• Organic certification• SPS measures	<ul style="list-style-type: none">• Help the coffee sub sector plays its role as one of the engine of development, poverty reduction and employment creation• Applying measure that increase productivity• Delivering location specific technologies tailored that enhance production, functioning and processing aiming to both productivity and sustainability increase• Provide efficient policy, governance/institution inclusive for coffee sub sector development• Improve access to market and develop start of art value chain system• Increasing spending and efficient investment in infrastructure communication• Strengthen governance for implementation of coffee policy strategy• Providing an enabling policy environment that includes reduce market barriers, increase quality, volume etc.

Ensuring the quality, uniformity and standard cherries, parchments and green beans; production and processing is important to compete with other countries' coffee and meet expectation of end markets. High probability of the occurrence of a mycotoxin, ochratoxin A (OTA), fungi contamination, mould formation etc. which raise alarm amongst consumer and food safety authorities over the potential health implications of drinking coffee. Existing practices of processing, packaging and storage are not sufficient to control fungi contamination and mould formation. Less priorities to research and development, that should focus to the specific development challenges, problems. Specific production pocket areas could face a great variety



of challenges and issues, approaches to improving policies, institutions, and markets must be spatial and context specific. The given table summarizes the entire picture of the sub sector.

1.5. Method and Data

Coffee value chain analysis and upgrading strategy has been conceptualized at three frameworks; these are: mapping value chains including stakeholder/actors analysis, sub sector analysis, and qualitative analysis. The deployed methods are primary and secondary data collections, field visits, and interaction with growers, pulp operators and district coffee cooperative union, traders, and key informants' interaction. These methods facilitate to generate required amount of qualitative and quantities data to feed value chain analysis and upgrading strategy. Area has been taken to national level; however, field visit was made to Nuwakot, Sindhupalchok and Kavrepalanchowk. Information from input supplies including nursery, primary producers, pulping operators'/parchment preparation, and cooperative, traders and coffee houses were collected. Analysis to these collected, MS excel and MS words used however financial analysis especially cost benefit was assessed at Nursery level, fresh cherry producer and pulp entities, and green beans processing.

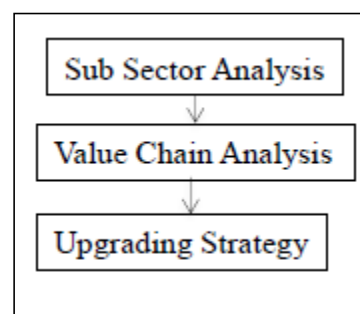


2. COFFEE VALUE CHAIN ANALYSIS

2.1. Introduction

All food items possess specific characteristics. These are their state, appearance like weight, volume, size, shape, color, solubility, moisture content etc. Coffee is no exception. From a tree to a cup, the various physical characteristics of coffee in its different forms play an important part in the way it is treated and in the design of equipment to process it.

This section of the report provides brief introduction of the sub sector and value chain approach of the coffee framework. By considering to these frameworks provide overall picture of the sub sector. This assists to analyzing capacity to be focused for designing upgrading strategy. The value chain upgrading strategy has adapted the framed structure in given chart 1. The



given structure provides contextual understanding of the sub

Figure 2 Process of Upgrading Strategy

sector, this assists mapping of involved actors and stakeholders. Beside these, the given structure asks to examine the existing policy landscape and governance system of within the sub sector.

2.2. Subsector Approach

The sub sector approach suggests reviewing to as "systems" which focuses to quantitative analysis (economic and financial) activity within sub sector. Coffee sub sector underlines to the interdependence of cost centers of input supply, production, processing, marketing and trading as well as knowledge dissemination etc. Such interdependence in the coffee sub sector plays

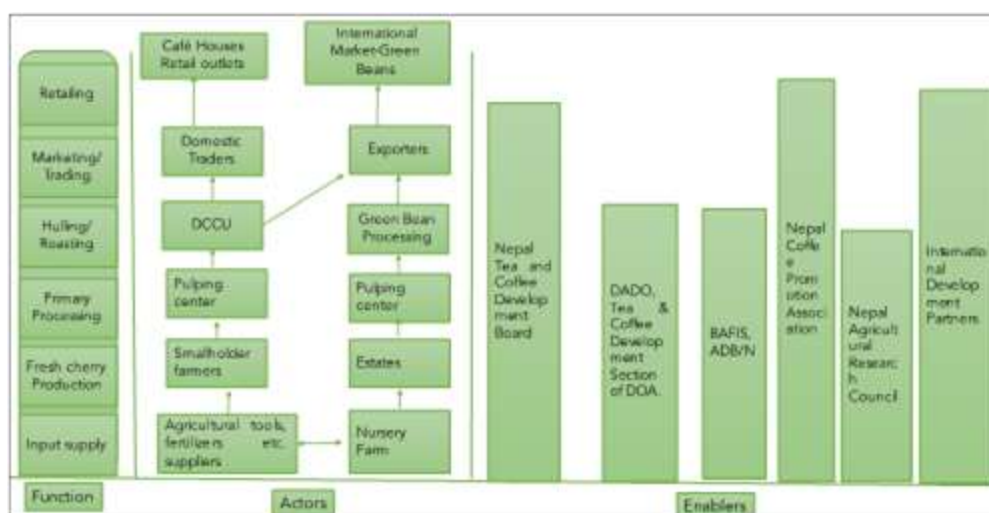


Figure 3 Value chain of coffee sub sector



Central role in understanding to dynamics of sustainability, competitiveness and change. The coffee subsector analysis also provides for comparative analysis; examining to the implications of alternative development and alternative policy changes or project interventions for short, medium and long-term perspectives. The creation of a product from its beginning as a seedling, "as a prime raw material" until it ends to cup of coffee as finished product in the hands of consumers. Stated movement comprises to a progression through a production, several steps of processing, logistics, and distribution system.

2.3. Value chain approach

In the coffee sub sector, value chain comprises both to a set of interdependent production activities and to a group of vertically linked value (economic) agents, focusing with the production of a primary commodity "cherry"; ends with the consumption of the final product-a cup of coffee. It includes all the economic activities undertaken between these phases such as: input supplies, seedling production, orchard management, processing, delivery, grading/sorting/packaging, wholesaling, and retailing. Actors received such ancillary activities in erratic in nature by the stakeholders from government, private sector and including international development partners. The value chain analysis provides (figure 2) here constellation of actor and stakeholder engaged in the sub sector.

The upgrading strategy targets to the entire coffee sub sectors' sustainable development and competitiveness. It does firmly believe to the understanding and assembling of experience on how far coffee sub sector has come in the past, and where it wishes to go to in the future. Upgrading means improvement and introducing to start of art knowledge/technology to address issues and problems in the occurrence areas of the sub sector. The figure 3 provides coffee value chain flow process. It further advocates realizing the efficiencies in primary and supportive areas of coffee sub sector.

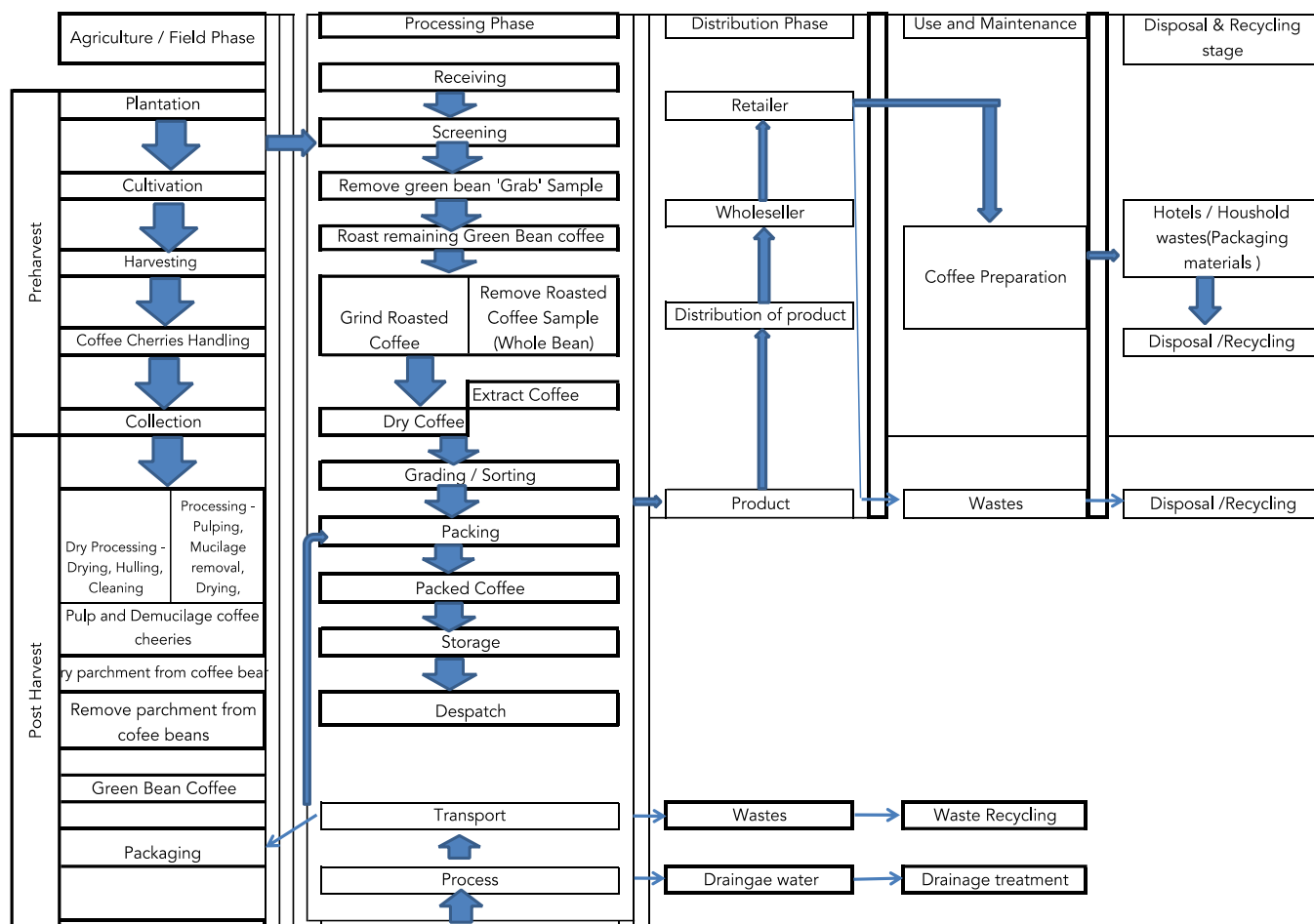


Figure 4 : Coffee Sub Sector Value Chain Flow Process

Value Chain framework considered

The work of Gereffi and Korzeniewicz (1994) and Kaplinsky (1999) provide the framework of value chain that examines firms and countries are globally integrated and to assess the determinants of global income distribution. Kaplinsky and Morris (2001) observe in globalization, there has been a perception of gap in incomes within and between countries has increased. They claim that value chain analysis can help to explain this process, particularly in a dynamic perspective in three perspectives.

- By mapping the range of activities along a chain, a value chain analysis breaks down total value chain earnings into the rewards that are achieved by different parties in the chain. A value chain analysis is the most accurate way of understanding the distribution of earnings.



- b) A value chain analysis can show how firms, regions and countries are linked to the global economy. This will largely determine the distributional outcomes of global production systems and the capacity which individual producers have to build in order to upgrade their operations and thus to launch themselves onto a path of sustainable income growth.
- c) Theory of governance of globally integrated production systems that is relevant to the power of lead firms to set standards that define the terms on which producers participate in these systems. Particularly, Gereffi, Humphrey, and Sturgeon (2003) point the mode of governance of a value chain to a combination of complexity of transactions, ability to systemize transactions, and the competency of the supplier base, the combination(s) of which result in different coordination structures of value chains. According to this approach, low supplier competency is a key barrier to participation of the poor in globally integrated chains.

In the value chain framework international trading/marketing are considered part of networks of producers, exporters, importers, and retailers, whereby knowledge and relationships are developed to gain access to markets and suppliers. In this context, the success, actors in lies in the ability of accessing these networks.

While talking about Nepal, the Nepali coffee can be said that it has already entered into global value chain. Though coffee volume is low quantity compared to other coffee producing countries.



3. Stakeholder, and Actors and Policy Provisions

In this section a brief analysis of the major stakeholders, actors and policy provisions are discussed pertinent to the coffee sub-sector. Similarly, their current role is discussed. Public, private, civil societies and international development agencies are supporting to enhancing coffee promotion and development. Their supports are mainly for production, institutional development, policy strategy formulation, lobby/advocacy, knowledge/skill development of producers' level, micro infrastructure development (nursery farm, irrigation, pulping center, processing equipment) and their organization. The following table provides in details of the stakeholder and list of stakeholder and their area of involvements: the following section of the report provides stakeholders and actors and their level of involvement.

GOVERNMENT

Ministry of Agricultural Development

The Government institutions working in agriculture development in Nepal are associated with the Ministry of Agriculture Development (MOAD). The MOAD has the mandate in formulating policies, programs and provides overall coordination. The MOAD organizational structure is divisions, departments, boards, corporations and councils, and these are involved in facilitating, promoting research and development (R&D) of the sub sector.

Department of Agriculture (DOA)

The Department of Agriculture (DOA) is engaged to extension with its network arms as well as field offices within the country. Under the DOA, there are several other organizations and programs responsible in development and quality control of seed sub-sector. Among them District Agriculture Development Offices (DADOs) are the most important at local level. Public extension services, including dissemination of technology, information and training for increasing agricultural production, income generation and sustainability are conducted by the DADOs and agricultural sub-centers under them. Extension activities get technical supports from related agencies in the different districts and also from regional and national level programs. DADOs have collaboration with public, private and non-government organizations. The district level extension programs are supervised, monitored and evaluated at regional level by the Regional Agriculture Directorate (RAD) and at national level by the Department of Agriculture (DOA). Under the DOA there are two institutions dedicated to development of coffee.

Coffee and Tea Development Section (CTDS)

The CTDS, Kirtipur under the Fruit Development Directorate of the DoA was established in 1993 with specific objective of promoting coffee and tea production and trade in the country. Coffee Development Center (CDC) engages in field level research and development of coffee; the research farm is located in Aapchaur VDC of Gulmi. The CDC has 1.3 ha coffee demonstration plot and conducts regular varietal trial for the benefit of coffee farmers. It provides technical



services in Gulmi, Syangja and Arghakhachi district. The major activities of the center include research on quality of coffee in different location, shed types and capacity development of coffee stakeholders.

Nepal Agricultural Research Council (NARC)

NARC is an apex public organization for agricultural research is responsible for policy making and research coordination, is chaired by the Minister of Agriculture, and the implementing body. One of the mandatory functions of NARC is to conduct research in horticultural crops including coffee. Within NARC, there is Agriculture Research Station (ARS) situated in Malepatan, Pokhara.

National Tea and Coffee Development Board (NTCDB)

The NTCDB is established on 02/06/1993 under Tea and Coffee Development Board Act 1992. The broad objective is to promote and strengths tea and coffee sector through policy formulation, technical and managerial Support.

Village Development Committees (VDCs)

Village Development Committees are at the lowest rung of the administrative unit of the government. VDCs prepare periodic and annual programs and budget every year in a participatory manner and to redress the needs of every community on the basis of demand and resources are allocated on priority basis. In this regard, VDCs have a significant amount of budget provided through the DDC. Of the total grant budget provided by the government's regular budget, VDC are supposed to spend about 15% of the budget for agricultural development activities. Over the years, some of the PCCs have already obtained the fund in coffee growing districts. However, for further development of coffee, a programmatic approach through PCCs or DCCU needs to be put in action more vigorously than before.

PRIVATE SECOTOR

Nepal Coffee Producers' Association (NCPA)

The NCPA is associated to NTCDB for a combine strategy for tea and coffee development in Nepal. It is farmers' forum dedicated for the production, processing and marketing of quality coffee through policy lobbying, technical service and institutional strengthening support to farmers' groups. It is active since 1991 and became central federation in 1998. At the district level there are 14 District Coffee Producers Association and more are under process of registration. Each of those institutions is involved in promotion and/or value addition in coffee sub-sector. There is one District Coffee Cooperative Union in each of the Syangja, Parbat,



Kavre and Lalitpur districts. Out of the 37 primary coffee cooperatives 33 are reported to be functional. Functions within the coffee value chain, actors involved in different.

Nurseries

Nursery is also an important value chain actor. NCPA record shows that there are 57 coffee nurseries registered. Special care is taken while selecting beans for growing seedlings. First step starts from selecting coffee garden. Most healthy plants are selected from the orchard and healthy seed of uniform size are collected. NCPA is involved in coordinating supply of seed to nursery and seedling to the growers.

Processers and Traders

Pulping centers are managed on the individual or cooperative management. In recent years, there are several traders involved in coffee collection, processing and trade. There are eleven of them involved in large scale. Of the eleven institutions involved in coffee processing and trade, two are cooperatives and remaining 9 are registered as companies. Four of them supply to domestic market and to exporters while six of them export coffee in addition to supply to domestic markets. A list of registered coffee processor and traders are enclosed in Annex.

INTERNATIONAL DEVELOPMENT PARTNERS

Since 2014 European Union has supported the Trade and Private Sector Development Project and coffee is chosen as for value chain development. The project supports the capacity development of NTCD in areas of training and policy formulation. The Project supports production and productivity gain of coffee in eight districts of central and western Nepal where coffee plantation has already been done.

HELVETAS Swiss Intercooperation Nepal has been actively contributing to the improvement of the living conditions and status of smallholder farmers. It has been working in Nepal for 60 years. The Coffee Promotion Project (CoPP) implemented by HELVETAS facilitates the development of the coffee sector to improved livelihood of small farmers and disadvantaged groups through strengthening of the coffee sub sector in the mid Hills of Western and Central Development Region. It strengthens the stakeholders' capacity for production, processing and marketing of quality coffee for domestic as well as international markets.

Other INGOs

There are some international NGOs active in coffee, for e.g. Good Neighbours International, ICCO Cooperation, Lutheran World Relief and Beautiful Coffee Nepal who provide supports and cooperation in area of institutional development, infrastructures for processing, marketing/trading and sharing of knowledge among producer's groups/cooperatives.



2.4. Governance

Currently coffee sub sector has limited policies and investment strategies. Absence of these element threats to the enabling environment and enablers. Impact of such position, proper actions and investment choices could not be shaped out. Existing governance/institutional setting is weak and ineffective. There should be separate autonomous full-fledged government body which is not annexed with other sector or sub sector. The sound governance could support in sprouting to the vibrant sub sector. This further facilitate on designing policies that could tackles to emerging challenges of investment on production, processing and trade as well as infrastructural development. There must be a program that will work closely value chain actors with an objective of enabling smallholder farmers and vulnerable groups to participate in entrepreneur form and their asset building. The governance also incorporates to the macroeconomic, trade, and investment policies that will assist to shape to correct underinvestment, change policy and market distortions within the coffee sub sector. Production and Technology Policies must be focused that strive to facilitate of participation of smallholder farmers (producer groups) including female farmers, wage earners in coffee productivity growth and sustainable resource mobilization. The need of social protection policies plans is pivotal to increase poor people's access to safety nets, food assistance, and cash transfers to reduce their vulnerability of risks of climate change, natural disaster and other adverse situations. Effective governance policy and investment agenda offers the design, implementation, and dissemination of public goods tools and analyses that examine and inform strategic sub sector development priority to smallholder farmers, their cooperatives and estates.

2.5. Policy Landscapes

Coffee is pro smallholder and high value crop, its development depends on the effective provision of diverse types of services such as agricultural research and extension, finance and insurance, land use planning, diseases control, irrigation and food safety regulations and rural infrastructure like rural roads, electrification, irrigation, processing and storage. Efforts to improve these stated service (public goods, Sen, 1989) and infrastructure facility are vital to the development and sustainability of the coffee sub sector. These efforts have so far recorded as limited in realization; there are continuing knowledge gaps on which policy could best fit the coffee sub sector development. In view of geographical and subsector potential, the value chain analysis and upgrading strategy is in a unique position to excel coffee sub sector. In past, several policy strategies have been framed; this section of the report provides critical reviews to the selected existing policy strategies and plans.

NTIS, 2016

Government has the Nepal Trade and Integration Strategy that has paid specific attention on trading of 19 potential products. However, the coffee sub sector is in other category products, which is not in focused.



PDNA, 2015

Post Disaster Need Assessment is the key document for post-earthquake recover and reconstruction efforts. PDNA should have paid specific attention in the coffee sub sector since hinterland of the central hill districts have severely impacted from the earthquake of April 2015. PDNA could have put specific attention on the coffee sub sector which is absence in the PDNA.

ADS (Agriculture Development Strategy), 2014

The ADS is the latest policy strategy of the agricultural sector. It has provided wide strategic direction of wider area of the sectors' development. The ADS has put limited emphasis and investment framework to the coffee sub sector. Since coffee is strategic crop which substantially impact to the poverty reduction endeavor and employment generation.

Irrigation Policy, 2003

Irrigation policy is only favor of the expanding irrigation facility to cereal crops. The policy has not adequately put priority to the other important crops like coffee. Since coffee has much comparative advantage than other crops.

Organic Policy

Organic policy has provided overall direction for the organic practices covers to all crops in agricultural sector. However, its publicity, direction and principle has not yet reached out to the smallholders.

Agriculture Perspective Plan, 1994/95- 2015

The APP (1994/95-2014/15) was landmark policy strategy for agriculture sector. It was comprehensive document that had enclosed to all components that pushed for agricultural development. The APP had given proper attention for accelerating agricultural development and growth by increasing productivity, transforming the subsistence based agriculture into sustainable production by identifying and strengthening to production pockets areas and emphasized involvement of private sectors in the development of agriculture. The APP prioritized to high value crops. Different crops were focused for different ecological zones of terai, mid hill and high hills. High hill identified for apple, mid hills for citrus crops; unfortunately, coffee was not placed as a high value crop for the mid hill region though it carries unlimited potentiality of economical, demographic and social fronts. The large sum of land resources of mid hills could be utilized for the sustainable coffee production. The APP had realized to paradigm shift from subsistence oriented farming to competitive farming within principle of ecological resources and beneficial agricultural policies. Regrettably, the APP failed to recognize to coffee as one the high value crops, ensuring to agricultural policies strategies could reinforce for the promotion of coffee as high value and exportable commodity.

Periodic Plans, 1997-2002 and 2002-2007



NPC (2002), the Ninth (1997-2002) and the Tenth (2002-2007) placed to increase production and productivity of high value crops as key instrument poverty reduction, protection and promotion of agricultural biodiversity and environment. Ninth plan highlighted cultivation of coffee to fulfill the long-term strategic plan of APP (NPC, 1997). The 10th plan targeted to increase the production of coffee but convincing emphasis had not been provided for the export of coffee. The 10th had focused on production support on coffee and started to give 50 percent subsidy on the sampling of coffee to the farmers. However, the 9th and 10th plans had not paved for large scale farming of coffee considering its scale of economical importance and specialty in the mid hill regions. In line with the Agriculture Perspective Plan (1994/95-2014/15), the 9th plan initiated the Pocket Package Approach (PPA) for the different agricultural commodities, nevertheless, the PPA failed to cover coffee. Sadly, these plans satisfactorily did not recognize the importance of organic agriculture.

Three Year Interim Plan, 2013-2015 and 2007-2010

The Three Year Interim Plan of 2007-2010 focused to transforming subsistence based farming into commercial by conserving, protecting and employing to agricultural biodiversity. Further the plan emphasized to development and dissemination of environmentally friendly technologies. This interim plan gave significance importance of the organic production of high value crops. Economical, social and environment role of coffee, this plan included to coffee, among other 22 valuable commodities, as a priority commodity and fixed target of 685 Mt from the base year of 360 Mt. The interim plan focused to mid hill areas as expanding coffee production farming.

National Agriculture Policy, 2006

In 2006, the Government adapted to national agricultural policy as a main strategic record that provided rich direction to development of the agriculture sector. Comparative advantage of agricultural commodities and potential of geographical resources are key to make agricultural products more competitive in the regional and international markets and to conserve and promote the natural resources, agro-biodiversity and environment were key elements of the NAP (MoAC, 2006). Further, the NAP cleverly ordered the areas having specific potentiality for high value crops for the sustainable return. In the context of the coffee is grown organically, the policy has spotlighted significantly for fostering coffee as high value crops in the mid hill regions. Though, coffee has not received adequate attention in comparison with other high value agricultural crops.

Coffee Policy, 2004

In year of 2004, MoAC/GoN introduced coffee policy; the policy recognized key the role of private sectors, NGOs, cooperatives and organizations in production, processing and marketing in a sustainable. The policy created much space to the coffee in comparative advantage; whereas existing agricultural policy strategy were failed to stress coffee production. The coffee policy focused to substitute import and stimulate export of coffee by expanding area of plantation; this initiative could contribute to conserve environment with in mid hills area. The



policy focused on application of the state of art technology in production and processing of coffee by functional participation of government and private sectors. The policy has also put significance to develop required human resources in the production and encouraging the application of modern equipment for the processing. This policy underlined to innovative idea by coordinate with foreign consulates residing in Nepal in order to promote coffee export. Still, the policy does not realize to the development and demonstration of pilot area of organic coffee, which has overriding importance for sustainable organic coffee production in the country.

Agriculture Biodiversity, 2007

The policy put main thrust on protecting, promoting and sustainable use of agricultural biodiversity in the agricultural sector. The policy therefore has placed for the promotion of organic production due to its externality for biodiversity conservation that could contribute specialty coffee production in international markets.

Agri Business Promotion, 2007

The ABP commits to contribute towards the promotion and development of the high value crops by developing commercial pocket areas. Though the government agencies like Department of Agriculture, District Agricultural Development Office and Agriculture Service Center support to enhance areas of high value crops potential; though the policy could not provide adequate attention in establishing special production area to coffee. Further the policy has limited provision to its production and productivity to support of the development of micro necessary infrastructures. The ABP further recognizes stresses on the demand of extension knowledge for promoting agri-business to increase knowledge and skills of primary actors, processors and BDS (business development services) sustainable production of the high value crops. Moreover, the policy put emphasizes in promotion and development of organic production zone to support and to increase the volume of organic production of high value agriculture commodities including coffee. The policy stands favorable to the organic coffee production. The ABP encourages to develop organic certification that provides adequate foundation and to meet the international standard of the organic products.

National Technical Standard for Organic Agriculture System (NTSOAS), 2008

In 2008, the GON has introduced to National Technical Standard for Organic Agriculture System (NTSOS). The NTSOS is guideline policy document for excellence organic cultivation. The NTSOAS internalizes to values of IFOAM (International Forum of Organic Agricultural Management). Sustainable Land Use for organic production; bans to use agrochemicals or fertilizer during production, processing and storage; this practice safeguard smallholder farmer rights that facilitate to fetch fair prices from products and to develop foundation for organic certification system



3. Overview of major coffee producing countries

In this section, a brief overview of some of the major coffee producing countries is highlighted as what caused them to be successful amidst the challenges in production, marketing and quality aspects. These information, albeit in short, provide valuable insights for considering upon the issues while developing value chain development strategies.

Brazil

Brazil is the largest coffee producer country in the world. The successful outcome of Brazilian coffee business is mainly due to the blend of varieties of new approaches not only in production methods but also in quality improvements. Brazil produces all types' coffee as according to the suit of the market demand both in volume and quality to satisfy the operation from the micro roaster to big multinationals.

Average Brazilian yields of Arabica coffee grew from 10-12 bags per hectare to 18-20 bags/hectare. The reasons attributed for this change has been ascribed to the irrigation, high-density plating techniques, advanced soil fertilization and disease –resistant varieties. Furthermore, Brazil aims to increase Arabica coffee yields to 30 bags/hectare by improving the irrigation technologies.

For cherry picking, about 20 percent picking is done by mechanization, and this is found to be very efficient -four to five fold efficient- in relation hand picking. Handheld cherry picking machines are available for US\$ 500 per unit and these machines are compatible with coffee planted on steep mountains as well. The cost on logistics, processing and transportation has been reduced by bulk handling. the role of research and development institutions is noteworthy that have worked in tandem with different research institutions by building a consortium and all research work is done as per the needs and feedback of the clients- coffee growers, the industry and consumers. Domestic consumption of coffee has been increasing at 5% while the world consumption has increased by 2%.

Hawaii

Coffee reached in Hawaii via Brazil in 1825 and the variety is all Arabica. Although coffee is grown across the island, but Kona is an established name for Hawaiian coffee and this region has a typical comparative advantage because unlike other regions for other mainstream crops like sugarcane. Hawaii coffee has a reputation for Specialty coffee. Although coffee is grown at elevations of 100 to 1000 meters, the relatively high latitudes result in lower temperatures at low elevations but high quality production.

As according to the production statistics in 2010, 3.2 million kilograms of green coffee was produced from 3,237 hectares of land, which corresponds to about 988.5 kgs. Of green coffee per hectare. Most of the coffee farms in Hawaii are considered to be small, family owned having



a land acreage less than 2 hectares. Normally, farmers produce the cherry and sell them to the de-pulping mills and the mills then sell green coffee and a smaller part as roasted.

In terms of disease and pests, coffee berry borer has been noticed in 2010 and stringent quarantine system has been in place for preventing the disease and pests from imported coffee materials. In regards to certification, organic certification is in practice and although it is not certified as fair Trade, coffee trade has been claimed as done fairly. The price of coffee is around \$ 8 but can go up to \$20 as per the quality rating.

India

The history of coffee in India dates back to 17th century and with the beginning of British rule, systematic coffee growing has begun mainly in the southern India against all difficulties of weather, pests, diseases. Arabica is grown under shade with diversified intercropping such as pepper, cardamom, cloves, vanilla, areca nut as well as fruits such as jackfruit, oranges and banana. About 95,000 mt of Arabica green coffee was produced in 2010-11 which represents 35% of the total coffee production and about 65% is exported. Coffee cultivation in India is largely done by smallholders representing 99% with less than 10 ha of land. Productivity of Arabic coffee is 575 kg/ha. After the liberalization of coffee sub-sector in 1996, coffee is traded either through auction or farm gate purchases by registered exporters, brokers. Farmers sell dry cherry or parchment to the exporters or traders.

In regards to quality maintenance, farmers follow the strict follow-up as per the processing and quality specification provided by the Coffee Board, India- a regulatory authority under the Ministry of Commerce. Coffee Board in India has been active in research and development, extension and promotion and quality control. The Board conducts periodic training to aware the coffee entrepreneurs, producers and other on quality production, brewing and standards. India has developed 12 Arabica cultivars which are resistant to various pests and diseases like leaf rust but of good quality and yield.

India currently faces the labor shortages to perform various coffee related tasks and in view of this, Coffee Board is conducting various trials to mitigate the problems by installing appropriate technologies, for instance, mechanical drying. High quality coffee beans are exported in the prescribed manner which is compatible to organic production.

The development of café culture with innovative marketing techniques have sprung giving rise to domestic consumption from 55,000 mt in 1995 to 110,000 in 2011. Coffee Board has been doing research on introducing mechanization in harvesting and has initiated a post-graduate diploma course covering almost all aspects of coffee which helps making the holistic value chain activities thriving. Value addition has been encouraged through subsidy on roasting and grinding equipment.

Indonesia



Although coffee is not original to Indonesia, for over the couple of centuries, Indonesia has been an influential coffee producer and world market player. Lying entirely within the tropics, Coffee entered in the island country in the end of 16th century with the Dutch colonial regime. Coffee is one of the major highly profitable commercial commodities of the country with which it derives the foreign exchange. More than 95% of the coffee producers in Indonesia are smallholders having less than a hectare of land. Major coffee growing islands are java, Nusantara, Sumatra, Timor and Sulawesi. The coffee industry of Indonesia has witnessed many ups and downs over the century but the industry was hard hit after the World War II as farmers turned to other crops leaving coffee behind with its position 1/8th of the pre-war period. However, new enthusiasm emerged in coffee during the 1970s and it continues today with 1.3 million hectares of land under the management of smallholders representing 95.5%. Smallholders- not the government or private companies- are the real investors in this industry. Many Indonesian coffees have been known as Specialty coffee.

Although coffee production is a mainstay for many farm households in Indonesia, the price received by the farmers is around 19-22% of the total price sold in the consuming countries; this has been attributed to the little bargaining power of the farmers.

The unique feature of the Indonesian Arabica coffee is that the same variety of coffee can produce beans of different characters in different parts of the island and this indicates a taste according to region of origin. Main region for this is due to difference in soil type and climatic conditions. The Indonesian Coffee and Cocoa Research Institute with government support contributes to find good planting materials, developing best agricultural and handling practices and promoting coffee at the global level.

Colombia

Coffee is one of the major export commodities of Colombian economy with high macroeconomic policy and coffee issues and those associated with it hold political influence at national level, so it is a strategic crop in Colombia. Colombia is one of the founding members of International coffee organization and an integral part of International Coffee Agreement. Until 2000 Colombia before superseded by Vietnam, was the second largest coffee producer country.

Due to its high importance for the national economy, Colombia emphasized to implement extensive program involving the renewal and planting of improved varieties at the end of 1980s. This resulted into a bumper crop. With the liberalization of international coffee market in 1989, coffee farmers lobbied for greater expenditures on restructuring Colombian coffee agriculture. As a result significant resources have been devoted to a number of initiatives as follows:

- guarantee purchases of national harvests and stabilization of coffee revenues
- finance research and extension



- make national investments in companies that support the sector and other social infrastructures, e.g. road, schools, aqueducts
- restructure debt
- promote national and international consumption of Colombian coffee

Nonetheless, the sector has faced some serious problems in recent years such as recovering its production level (11 million bags in 2008 to 7.5-8 million bags); bad weather conditions, climate change, increase in coffee berry borer infestation and new attacks of coffee leaf rust. To mitigate this, replanting is an institutional agenda and with current relatively high price and growing demand for Arabica coffee, the country hope to be back in the former position.

Ethiopia

Ethiopia is homeland of coffee. As the birthplace of coffee Arabica, Ethiopia is still a major producing country of high-value coffee. It has accounted, on average, for about 5 percent of gross domestic product (GDP), 10 percent of total agricultural production as in 2011, the country produced around 5

percent of world production and 39 percent of the total production of coffee in Sub-Saharan Africa (ICO, 2012). This has been due to lucrative coffee prices in the international market, coupled with improved infrastructure and market information system in the country in recent years. Ethiopia's coffee production is the fastest growing in the world, with an estimated annual average growth rate of 12 percent in relation to other major coffee producing countries such as Brazil (7%), Vietnam (5%) and Colombia (3%). establishment of the Ethiopian commodity exchange market

In 2001, the Ethiopian government modified its coffee marketing regulations, permitting coffee grower cooperatives to sell directly to export markets. Prior to that time, all coffee had to be sold through the national exchange, a requirement that resulted in mixing high- and low-quality beans, yielding a uniformly low price. Ethiopian Coffee Cooperatives: Sustainable Development Knowledge Platform (Source:

<https://sustainabledevelopment.un.org/index.php?page=view&type=99&nr=31&menu=1449>

The following are the benefits of the project:

- Improved economic benefits for small producers, who grow 94% of all Ethiopian coffee beans;
- Promotion of fair-trade and organic coffee through coffee union encourages environmentally-sound production techniques;
- Many cooperatives have used their earnings to invest in local infrastructure projects such as roads, power lines, healthcare facilities, and schools.

Vietnam



Coffee was first introduced in Vietnam in 1857 by the French. However, its production was latent until 1970s. Today Vietnam stands as second largest countries in the world for coffee production after Brazil by producing about 21.67 million bags in 2011-12. Some 500,000 hectares of land are planted with coffee. Robusta is the major coffee variety having a share of about 93% of national production and Vietnam claims as having niche in Robusta. The unprecedented increase in coffee production started in the early 1990s. Major reasons for such a rise in coffee production in Vietnam have been ascribed to the major role played by the government in providing farmers with subsidized land and preferential loans for seedlings, fertilizer, intensive irrigation and technical support on agronomic practices. Interest rate for loans to coffee farmers was as low as 1%. In addition, the other factors contributing to come to this stage of coffee production are due to the low production cost and high productivity and cheap labour cost. All these efforts and conditions, set for more entrepreneurial activity in Vietnam. Despite these successes, Vietnam is grappling with low quality as major challenges, such as harvesting and mixing of ripe and unripe cherries, plant disease and pests.

SOME GLOBAL CHALLENGES OF COFFEE

Pests and disease

Insects, pests and diseases are constant threat to coffee production. The occurrence of pests and diseases are common to all producing countries- the difference is only in time and scale. Infestation of white stem borer, coffee leaf rust and coffee stem borer is some of the major threats for coffee production. Coffee berry borer has been prevalent in most of the producing countries except in Nepal and china (Jaramilio, p36).

Climate change

Climate change is one of the unprecedented threats to agriculture. Recent studies on coffee indicate that climate change and its forecasted impact will have huge impact on the livelihoods and poverty in the producing countries. Climate change will disrupt the complex agro-ecosystem of production with a shift in current production areas. There will be major challenges of pests and diseases as coffee is sensitive to these problems thus resulting into reduction in production, quality and price. One of the doable and a likely solution to this problem is introduction of shade trees as these can mitigate by creating a buffer to the micro climatic extremes. Also, shade trees can provide required moisture for the coffee plants. Positive effects of shade trees have been already demonstrated (p37).



Price volatility

The history of global coffee trade goes back to early 17th century when Italians introduced it in their country and with the establishment of first coffee market in 1640 in Amsterdam. Later on coffee trade spread throughout the Europe and America. Organized coffee market began with the establishments of New York Coffee Exchange and London Exchange in the late 19th century with the advancement of transport, communication and other technologies that facilitated the commodity trade more easily than before. However, coffee trade has witnessed a fluctuation in coffee world price mainly due to fluctuation in production caused by weather, national policies, quota and other restrictions imposed on it. The fundamental reason for coffee price fluctuation lies in the production economics- supply and demand. The record low coffee reached in 2002-04 whose impact was tremendous even in the macro economy of many Latin American countries, let alone the producer community.

Lessons for Nepal

Since Nepal being a later comer in coffee production in relation to major coffee producing countries, Nepal can learn some important lessons from these country cases without reinventing the wheel. Although the above overview of the countries may present the typical country cases on the bases of their own particular conditions such as geo-physical, climate, economy, international trade relations, development, culture and agrarian relations, Nepal can critically look into these issues for replicability or application by contextualizing them. In the following, some of the lessons are drawn and these lessons are attempted to relate with the broader value chain development issues.

- a) For higher production and productivity gain, emphasize on irrigation and shade.
- b) adopt proven practices to mitigate the insects, disease and pest control
- c) explore mechanization of harvesting, where possible, in view of the shortages of labor in agriculture for some years onward
- d) improve post harvesting losses by having appropriate processing techniques, equipment and handling procedures
- e) explore and pilot disease resistant varieties
- f) create consortium of research and development organizations
- g) strengthen the technical, managerial, standards implementation and extension capacity of the regulator authority such as NTCDB
- h) provision of sufficient budget for increasing the plantation, harvesting, post-harvest management and quality improvement
- i) devise financial support and loan policy gearing to support coffee value chain
- j) strengthen the capacity of the farmers' associations and cooperatives on various aspects of value chain activities
- k) develop quality standards and food safety parameters to safeguard the interest of the consumers



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- l) promote domestic market by encouraging local entrepreneurship and café culture
- m) organize international coffee buyers visit in the producing areas

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4. SWOT Analysis

This section of the report provides SWOT (strength, weakness, opportunity and threat) analysis. This analysis made up by consultation with primary actors and stakeholders. Number of strengths, weaknesses, opportunities and threats to the various actors along the coffee value chain are provided in Table:

Table-2: SWOT Analysis

<p>Strengths</p> <p>Production:</p> <ul style="list-style-type: none"> • Favorable natural conditions for specialty coffee along the mid-hills • Farmers are trained on production technology, mainly organic • Development of resource persons, technical human resources • Availability of proven technologies or innovation <p>Processing:</p> <ul style="list-style-type: none"> • Wider use of wet process technology • Pulper operator and producer are linked to vertical chain • DCCU based green coffee bean preparation centres established <p>Marketing:</p> <ul style="list-style-type: none"> • Reputation of Nepali coffee and high demand • Growing market linkages – domestic and international level • Producer cooperatives being actively engaged in marketing (mainly fair trade- ensuring market price and premium) • strengthened capacity in market diversification <p>Institutional development</p> <ul style="list-style-type: none"> • Producer groups, primary cooperatives and district coffee cooperatives in place for managing the primary level value chain actions • National level apex bodies are in place for advocacy on behalf of producers <p>Policy:</p> <ul style="list-style-type: none"> • Supportive government policies in place (ADS, Trade Policy, NTIS, 2016, Coffee Policy, 	<p>Weakness</p> <p>Production:</p> <ul style="list-style-type: none"> • limited availability and access to improved planting materials • low production leading to supply constraint • low productivity (225 kg/ha/season) • insufficient infrastructure e.g. irrigation, shade • low level of farmers' motivation • insufficient outreach and follow up due to insufficient numbers of technical human resources <p>Processing:</p> <ul style="list-style-type: none"> • insufficient processing centres for FC • timely delivery of fresh cherry from farm to pulping centre • inconsistent quality and limited capacity to monitor and enforce quality standards • inadequate proper processing centres with necessary equipment causing higher process, water, storage facilities • process wastage <p>Marketing:</p> <ul style="list-style-type: none"> • Unexplored local market • limited and undiversified buyer-dependence over few • unfair competition based on raising the price- creating distortion • weak market segmentation • no product diversification for export market
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organic agriculture policy,	<ul style="list-style-type: none">insufficient market information channels and system of information disseminationlack of knowledge on public and private standards in regulating international food markets <p>Policy:</p> <ul style="list-style-type: none">insufficient planning processes- plans, programs and activities not based on strategic objectivesinsufficient review of policies relevant for coffeelack of coffee insurance (throughout the chain) for risk aversion and encourage VC actorslimited research and development, insufficient funding for relevant authorities e.g. NARCinsufficient provision for appropriate financial products for investment, pre-financing
<p>Opportunities</p> <p>Production:</p> <ul style="list-style-type: none">huge amount of land suitable in the mid-hills for organic and specialty coffee production (~1.19 m ha)sources of water for irrigation available in much of mid-hillsproven technologies for drip irrigationIntercroppingOn-going national level initiatives to increase coffee production <p>Processing:</p> <ul style="list-style-type: none">growing use of wet processing leading to higher quality DPeasy availability of the process equipment <p>Marketing</p> <ul style="list-style-type: none">sustained demand of coffee in international	<p>Threats</p> <p>Production:</p> <ul style="list-style-type: none">higher incidence of pests and diseases (e.g. WSB, rust)other competing cropsclimate change- causing to shift in altitudelack of farm management, entrepreneurshipHigher cost of production- shortages of labour, input, ..lack of support infrastructures e.g. irrigation, roads to mitigate production problemseroding trust between producers and buyers <p>Processing</p> <ul style="list-style-type: none">erratic delivery of FC (unscheduling)inferior quality of processing equipment and lack of other required support structuresnon-compliance of processing standards, <p>Marketing:</p>



<p>markets</p> <ul style="list-style-type: none"> growing popularity of Nepali coffee, especially organic Increasing consumption of coffee at domestic Growing segments of the specialty coffee especially organic, fair trade etc. potentiality of increasing alternative uses of coffee by-products from coffee husks, leave, branches and trees <p><i>Institutional development</i></p> <ul style="list-style-type: none"> strengthen membership base of cooperatives in view of large number of producers yet to be members <p><i>Policy</i></p> <ul style="list-style-type: none"> position Nepal's coffee as specialty through policy measures increase public funding for coffee aligning with strategic plan preparation of national standards for organic green coffee utilize national and international forum to promote and publicize Nepali coffee encourage to utilize fallow, community forest land for coffee production 	<ul style="list-style-type: none"> unscrupulous cross boarder supply of coffee fluctuating world coffee prices and unstable exchange rate non-compliance of standards (public, private, international, SPS, TBT, IPR) ever increasing domestic coffee price over dependence to some (fixed buyer) export destination <p><i>Institutional development</i></p> <ul style="list-style-type: none"> unsustainable operation of coffee cooperatives/associations distrust among producers <p><i>Policy</i></p> <ul style="list-style-type: none"> policy choices and formulation by way of uniformed or less informed manner
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4.1. Appraisal to the Coffee Value Chain

Analyzing to the sub sector and upgrading strategy reviews several facets of the existing coffee value chain. The following eight elements have identified while appraise the sub sector; these are:

SN	Situation of Coffee Value Chain
1	Support for a policy, regulatory, and institutional framework development that enables coffee value chain and its upgrading strategy to become sustainable
2	Create opportunities for private sectors engagement including through the formation of public-private partnerships
3	Provision of access to finance for actors along the value chain
4	Provision of rural infrastructure that reduces postharvest losses, transport costs, and shortens



	transport time, while increasing overall rural accessibility
6	Provision of access to timely information to improve bargaining power
7	Support for innovations and technology for developing competitive value chains
8	Inclusion of women, poor, and/or marginal groups into value chains,
9	Design the governance that sustains coffee value chain

These 8 factors require to be addressed in the context of coffee value chain and ensure to the upgrading strategy.

Overall, existing coffee value chain has demonstrated the stronger potential and different factors require to be incorporated while farming to coffee sub sector upgrading that aims to increase benefits for actors. Despite the lack of an explicit value chain approach in the coffee sub sector; however, there are several technical and financial support from various sources has contributed in varying degrees to enhance coffee value chain and has yielded benefits to all value chain actors.

The primary contribution of such support has been offered for producers and processors. Access to reliable inputs, improved technology, and higher yielding varieties are in most cases led to an increase in production and net benefits for smallholder farmers. More recent initiative from government, COPP of the HELVETAS Swiss Intercooperation and other partners etc. have been placed greater emphasis on establishing linkage of farmers to the markets. While these activities contribute to increased incomes, in few instances income increases through coordination of higher levels in the chain that resulted in value-addition activities or the development of value chains with links to high-value markets. Thus, the potential benefits of a value chain approach have yet to be fully realized.

Governance-enabling policies, regulations, and institutions: governance environment is yet to be established for value chain development through policies, regulations, and supporting institutions. However, supports from government, COPP/HELVETAS Swiss Interoperation and other partners contributing progress in strengthening enabling policies, regulations, and institutions. However, such assistances are often patchy or scattered and not specifically directed toward the key limitations for value chain development.

Public-private partnerships and Private Sector Participation: In reality, the development should focus toward greater degree of private sector involvement in coffee sub sector. This enhance to sustainability of value chain and competitiveness development. To facilitate increased private sector engagement, greater clarity is needed between the evolving and expected roles of the public and private sectors. Public-private partnerships require significant input to identify opportunities and implementation actions. At present, there has been little involvement of



private sector in terms meaningful investment on primary production, and processing.

Access to Financial Products: Access to various financial products including insurance is some other key elements for all value chain actors needed. Most financial means has been targeted at farmers, using a variety of approaches like grants targeting to production and institutional (cooperatives) activities. Estates, traders and processors; those have been tried to access financial products from mainstream financial institution have often experiences with challenges.

Rural Infrastructure Development. Road and market infrastructure etc. are crucial, as these offer critical linkages for influences and transactions between value chain actors and stakeholder aside from the other rural economy. They directly or indirectly facilitate value chain development. Roads, processing centers etc. are essentials for value chains; they must connect nursery farms and coffee plantation area that could have a huge competitive improvement for strategic markets. Equally, the locations of markets, processing establishments and storage facilities are critical for sustainability of value chain and upgrading endeavors.

Innovation and Technology: Coffee value chain truly requires continuation of innovation and technology responses to become and remain competitiveness. Existing initiatives are limited to technological inputs, particularly for increasing fresh cherry production. Innovation and a culture within value chain that assist the creation of new ideas has yet to be consistently mainstreamed.

Market Access: Analyzing to the market demands is necessary to enjoy advantage of market opportunities. Existing supports mechanisms have been yet to assist market access through knowledge and skill development to impart technical skills. These knowledge and skills often do not go far enough in providing the specific market information required for value chains. Experienced showed from other countries, improving market access through lease or contract farming have emerged—primarily by linking producers with processors.

Information Services: Availability of one-stop market information, like prices, input markets, buyers are essential for an efficient value chain. Smallholder farmers, cooperatives, producers to respond to changes in market prices and improves their selling power with traders and processors. In reality, the market information is not available to primary producer in a timely and is based project driven, such trend could not enhance to the sustainability of the value chain.

Organizations and Linkages: Effective smallholder farmer organizations like cooperative, association, self-help groups and their linkages could reduce transaction costs within value chain nodes. From international experience shows, most projects successfully supported the formation and development of farmer organizations for establishing or strengthening networks, and improving connections between markets and actors. Technical and administrative



assistances are other key aspects of value chain sustainability and regular enhance upgrading activities, production, processing, grading/ standardizations, direct marketing, and value chain finance are not completely addressed.

Value Chain Finance³: Coffee so far in Nepal pro smallholder crop. The coffee has yet to be mainstreamed crop. In coffee value chain, there are different opportunities requiring various types of financing or none at all, and there is a range of actors that can deliver this financing, value chain finance can be provided by various entities from within or outside the chain. For example, it can provide by value chain participants themselves, by banks or microfinance institutions, or by a combination of forces through strategic alliances. Value chain finance is very unique mode of financing procedure that includes a wide range of products. While firms may self-finance at times, producers also receive trader credit in the form of in-kind loans from input providers, and seasonal loans from buyers. Buyers use credit not only to secure future products; in out- grower schemes they ensure that products meet standards by monitoring the farmer, providing inputs and credit effectively in the process. To manage risk, value chain participants take advantage of their business relationships to screen borrowers for their ability and willingness to pay. They also use relationships as a modified form of collateral, for informal or contractual commitments to deliver future products.

Financial institutions also offer short-term or seasonal loans for working capital and longer-term investment loans, lines of credit, overdrafts, letters of credit and insurance products. For sustainability of value chain, there must be value chain financing scheme that all range of actor could enjoy opportunity to access finance for scale of their choice value chain activities.

4.2. Strategy of Coffee Value Chain Sustainability

This report provides insights of the coffee value chain and its upgrading strategy to Nepal. Coffee is strategic crop which provides earning up to multiple years if the farming practice manage properly. Inter cropping with other crops to coffee and marketing strategies are essential. In order to identify the most feasible revenue raising diversification options for actors along the chain is yet to established, the value chain and upgrading strategy, the underlying technologies and production patterns while taking into account of policy strategies and institutional environment are crucial. The change in the role of private and public sectors, the trade trends including a discussion on price stability, and finally other emerging issues of the sectors are also influencing factor to the sub sector. The following observation and

³Value chain finance is *financing provided to or by a value chain actor in order to increase value-chain growth and competitiveness*



recommendation are supported by the study:

Market Structure and Smallholder Farmers

The structure of coffee value chain is important determinants for development, poverty reduction and employment creation. Due to significant spatial fragmentations between production and markets, the lack of solidarity among and between the local actors within the system, and other constraints such as poor access credit and information, inadequate infrastructure and storage facilities, attempts at any form of vertical coordination have not returned much benefit to the smallholders. Smallholder farmers, cooperatives rely on designed policies that hardly drive making local markets work for small producers. This demands creating strong, accountable and transparent regulatory bodies. Consensus building mechanisms are a means to dealing effectively with issues between different actors and stakeholders.

Supply Management and Market regulation

Problems of highly volatile prices need to be adequately addressed through more robust coffee policies and programs. The governmental agencies must play a role in this process by introducing rules and regulations that are transparent and are able to protect small producers against devastating conditions such as price and pest risks as there are currently no private institution that is able to perform such a service. Broader trade policies must be formulated and enforced such to avoid actions such smuggling and informal trade which are damaging to markets and trade revenues.

Diversification Strategies

The appropriate diversification strategy can be implemented after an in depth feasibility study. This feasibility study must evaluate all costs and benefits of the strategy in a case by case manner as well as design market access strategies for the new products. These schemes will require cooperation within cooperatives, estate, and smallholder farmers with in districts. Diversification approaches need be formulated in a way to match with smallholder farmers' needs, capacities, and land use systems and be able to reach the most vulnerable groups. To successfully diversify, nursery farms, smallholder farmers, pulping operators, and cooperatives need better functioning, input markets and the credit sourcing should be separated from team and coffee schemes to avoid policy or program traps.

Information and Market Access

The dissemination information of market, production, processing and others information such as price signals and new technology should be facilitated with the assistance of local governments and private sectors entities. Price enabled when statistics on the market are collected and disseminated in a timely manner. Farmers with better access to the source of technical information have more knowledge on technology application. Farmers with information about the market have a better chance to obtain a higher price for their efforts in quality enhancement and advocated good practices.



Primary Cooperatives and Smallholder Farmers' Organization

Most of the smallholder farmers' organization (FOs/cooperatives, self-help group) implicate in coffee production and lack of organized collectively marketing for what they produced. This is an area where capacity building programs will play a major role, whether through government sponsored extension programs or through International Organization or projects base. Farmers, whom are usually the main actor targeted to benefit from an upgrading strategy, lack of the organization and the means to participate in the process. If smallholder farmers' organizations are well organized, they can not only act collectively to have a voice in the policies that concern them, but they are also upgrade production, processing, marketing and acquire enough credibility to engage in sustainable marketing and access to credit.

Smallholder Farmers and Coffee Supply

The supply of fresh cherry "coffee" is one of the weakest points in the value chain. The low production per farmer that impact on increasing number of transactions between the farmer, pulping and processors as a value chain actor. Actor of value chain have to collect the proper amount of coffee to be sold. Because of the patchy parcel of land, a constraint placed by the country's environment, the productivity of coffee must be enhanced by increasing the productivity per unit, or increase to hectares planted in coffee. Other serious challenges to the coffee supply limited water resources or moisture and orchard management; increasing cereal production that competes to land and other natural resource.

Adding value to the process could be quickly achieved through the implementation of Sustainable Agricultural Practices (SAP) or Good Agricultural Practices (GAP). This is an effective tool to increase productivity in the short term, both at the level of crop productivity and at post harvesting. These practices, which are becoming popular among Arabica coffee producing countries such as Brazil, Ethiopia, India, Uganda, Ecuador, Mexico, etc., could increase the product and its quality. With the practicing of SAP or GAP; Nepalese coffee could be marketed as high quality coffee. Implementing a fast track approach to increase the productivity and quality coffees could help meet international buyers' increasing interest on Nepali coffee.

National initiatives can help in increase the productivity and availability of Nepalese coffee for export in the international markets. Ministry of Commerce and Supply (MOCS) through the Enhanced Integrated Framework Program (EIF), is currently providing support for agriculture focusing on increasing productivity and improving quality. This program could be leveraged with a national effort to upgrade processing methods of coffee so that they meet quality standards and best practices. In addition, the Ministry of Agriculture Development and Irrigation should support irrigation and SAP/GAP for future interventions.

Prices of fresh cherry in rural markets are relatively high at approximately ^{[[[SER]]]}NRs 70/kg for year 2015. However, it is ^{[[[SER]]]}not clear whether these coffees are later exported to ^{[[[SER]]]}international



markets, left for domestic consumption, or both.

Food Security and Coffee Production

By creating quality standards for specialty coffee could diminish the impact of food insecurity. Coffee plantation accepted specialty coffee standards stimulate rural economies in coffee producing hilly districts and smallholder farmers develop sustainable livelihoods because of the increased incomes due to improved coffee quality and high production. Moreover, coffee farmers who benefit from increased income based upon improved coffee quality and production gains are also able to increase production of staple crops, which increases food availability and bring down food prices in local markets. Value added products such as Specialty Coffees could be an excellent source of cash income for a number of reasons like: (i) there is a growing domestic demand for the coffee, making it easily convertible into cash. (ii) coffee production is low-tech agriculture that is well within the capacity of the smallholder farmer to understand and initiate SAP. (iii) coffee does not require outside labor beyond the capacity of the family unit to orchard and moisture management, harvest, pulp, and dry. (iv) with proper training the small holder farmer can often produce a high quality, value-added product. Finally, (v) the coffee plant, which produces an annual crop, does not have an especially high demand for soil nutrients and has adapted well to hill soil conditions.

Food security is a foundation for building social and economic development. According to the World Health Organization, The World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”. Commonly, the concept of food security is defined as including both physical and economic access to food that meets people's dietary needs as well as their food preferences. Food security is based on three pillars: (i) Food access (ii) Food availability and (iii) Food use. Improved agriculture provides sustenance, income and livelihoods for smallholder farmers’. Prompted by rising food prices, droughts, economic instability smallholder farmers are unable to access food, or food may not be available. Coffee, as a perennial crop is not only a source of sustainable income, but also provides a long term opportunity for smallholder farmers to remain in their lands enabling environment for a more sustainable development. In addition, farmers produce other staple crops and horticulture and livestock alongside their main coffee crop, which improves their nutritional food basket and their incomes.

Women in Coffee Value Chain

According to several studies and field interactions, women provide about 65 percent of the total labor required for agricultural activities in general. They perform an estimated 80 per cent of the livestock work, and they are largely responsible for the production of food crops on rain fed land for family consumption. Primary Coffee Cooperative has played an important role in the production of coffee through reformation of coffee farms where women members are in majority. Such organization is also producing seeds, seedlings to distribute to its members. The coffee



nursery sells each seedling at NRs 16.00 for its associates. In addition to providing coffee beans, the nurseries are become an important income generation activity while at the same time providing a service for this community. The role of women in this association is fundamental. They select the trees to be reproduced, select beans based on appearance and plant them for up to six months in the nurseries before they are sold to the community. They have become the tree providers.

Partnership with Local Cooperatives and Other Organizations

Working with different actors and stakeholders is extremely important, as they will become the local forces and long term sustainability entities of value chain and upgrading aspect. For instance, the Ministry of Commerce and Supply's EIF, a multi-donor program, which could help Nepal become active players in the international trading system is willing to be an investment partner with other programs in coffee value chain. In addition, the EU has also shown interest, which is investing close to EURO 1 million additional for value chains, could partner with local organization and government bodies to maximize the return for investment in the areas of production and value add. Amongst these partners, there is the urgent need for the creation of a coordination unit or central coffee body, led by the Ministry of Agricultural and Development, which combines the efforts of different programs and international organizations working to promote the coffee sub sector, so that these efforts are effective and leverage each other. Some of the potential partners are receiving resources from international organizations and could be a partner to develop joint programs. For instance, CoPP/HELVETAS Swiss Intercooperation, Good Neighbor International and Beautiful Coffee is currently working to provide institutional development, micro infrastructure, skill/capacity development could become an important partner for a fast track approach to establish SAP in coffee plantations area. Furthermore, some private sector, exporters or processors such offer an opportunity to develop Public Private Partnership (PPP) in the coffee sector. CoPP/HELVETAS one of the largest and successful program is willing to work jointly with the program to establish the SAP in the country.



3. UPGRADING STRATEGY

3.1. Introduction

This Value Chain Upgrading Strategy largely complements the Strategic Plan (2016-2021) of the NTCDB. Current upgrading strategy targets to the entire coffee sub sectors' competitiveness. It does firmly believe to the understanding and assembling of experience on how far coffee sub sector has come in the past, and where it wishes to go to in the future. Upgrading means improvement and introducing to start of art knowledge/technology to address issues and problems in the occurrence areas of the sub sector. It further advocates realizing the efficiencies in primary and supportive areas of the sub sector.

As a matter of principle, the upgrade strategy should consider the weakest link within a chain and should provide a directional way out and possible measures to overcome and provide leverage for effective operation. So, in addition to linear value chain actions, some critical elements which are directly or indirectly connected to maneuvering the chain are discussed as follows:

1. Overcoming supply side constraints

Demand for Nepalese coffee in national and international market is encouraging particularly for its specialness attached to various factors including Nepal's pristine environment. All the coffee planted in Nepal is Arabica as the climate and soil in the mid and high hills of Nepal are very suitable for the Arabica bean. Areas under cultivation and total production of coffee is in an increasing trend, however, given the potential areas for cultivation and the favorable market demand for Nepali coffee, there appears to be a huge gap in supply of coffee to meet these demands and tap into the opportunities. Therefore, priority actions for overcoming the supply side constraints is to increase production and quality by increasing the area under cultivation. Similarly, it has been observed that the productivity of coffee harvest is low in Nepal compared to other producer countries. Measures that are appropriate to overcome the production and productivity improvement helps to upgrade the current value chain activities (backward linkages).

2. Overcoming quality and food safety shortcoming

Coffee production in Nepal is new, is mostly being cultivated by conventional methods, and is yet to gain a momentum to come to a commercial production stage. As a result, improved cultivation and post-harvest handling is rather weak. Wet processing of coffee is adopted widely and the coffee bean produced from wet process is around 95%. However, inefficient harvesting (in some instances mix of ripe and unripe cherries) result in the coffee having non-uniform color. Furthermore, due to lack of equipment to test the moisture, mould and other quality degrading elements, required quality and food safety issues may remain poor and unaddressed. While Nepal has a high potential for coffee export in future, it must adopt regulatory requirements in response to consumer concerns about food safety and quality and to comply with the public and



private standards (business to business).

3. Two species are traded in real economic importance

Coffee Arabica, referred to the trade as Arabica and accounting for 60 -70 % of world production and coffee Robusta traded in the trade and make up 30-40 % of the world production. Many differing view as to what constitutes “quality”. Quality of parcel of coffee comes from a combination of the botanical variety, climatic condition/environment, land use planning, orchard management, other care taken during growing, harvesting, storage, trading preparation and transport. Healthy seed for seedlings, nursery management, plantation, growing, harvesting, pulping, green beans processing, storage, trading preparation and transport are key variables that could influence entire value chain system of coffee in different market segments. Green beans should be of compatible shape or style, aspect, color and size. Roasted beans or roast must give an impression of being reasonably even. Regarding moisture content and drying, there is no exact standard for ideal moisture content⁴. Not all coffee is the same and circumstances differ from country to country. In general, 11 percent if probably a good target for most coffee. Coffee above 12.5 percent moisture should never shipped (ITC, 2011: Pg. 195). Coffee is graded by size using rotating or shaking screens, replaceable metal sheet that have round holes that retain bean over a certain size and allow smaller beans to pass- Arabica graded AA that indicates a bold bean can be describe as bold, medium and small beans. Immediate screen size 16.5 are important in some producing countries but disregarded others. Nearly all coffee for export is graded to exclude the largest and smallest beans, as well as broken beans and other foreign particles. The standard coffee round dimensions are provided in (ibid, pg. 197):

Screen number	10	12	13	14	15	16	17	18	19	20
ISO dimensions (mm)	4.00	4.75	5.00	5.60	6.00	6.30	6.70	7.10	7.5	8.00

It is not so easy or possible to achieve a 100 per cent accurate screen, however, the quality should not be compromised.

4. Overcoming production and processing inefficiency

Production inefficiency can be dealt with improving the yield rate- measured in terms of land area and per individual tree. proper management by adopting adequate shading, correct and timely manuring, moisture management, the productivity level can go as high as in the case of other high performing coffee producing countries (as is the case in Nicaragua- 1,800 kg per ha).

⁴ ITC, 2011. Coffee Exporter Guide, 3rd Edition.



This helps in reducing the cost of production as well.

On the other hand, processing inefficiency have been frequently reported at both de-pulping and green bean processing level due to faulty machines or lack of other infrastructures around the processing centres. Technical losses can be minimized with the proper de-pulping machines as well as by having rather even sizes of the fresh cherries. Due to the lack of proper green bean sorting screens, it requires more time and energy for manual sorting thus leading to higher production costs.

5. Market and marketing strategies

For some years, there are no reported problems of exporting coffee but rather unmet demand for green coffee beans are reported for both domestic consumption and export. The exporters require to obtain Certificate of Origin, Organic certification if claimed as such and quarantine certificate. Major export destination for Nepali coffee are European Union countries, the USA, South Korea, Japan and to some extent Australia. International market demands for high quality specialty organic coffee. so in this regard, niche in organic and specialty coffee provide an opportunity for Nepal to target. Although the share of Nepali coffee in the international market is still small, but diversification of specialty coffee market destination is essential to avoid for any market and price uncertainty as can be seen in some years. for this Nepal can target China and Russia where demand is growing. Actions to improve brand, packaging and image are essential in the forthcoming years. Similarly, participation in the international trade fairs mainly the organic fairs and Fair Trade exhibitions to popularize and expand export market. Also, organic and fair Trade can have comparative advantage in order to fetch better prices and premium. Arranging a visit to Nepal for major coffee buyers can build good market relations. Furthermore, it is essential for the producers and cooperatives to expand domestic demand.

Regular Provision of barista trainings targeting youths and cupping can be another strategy for two reasons: i. supply of trained human resources for existing café; and, ii. making themselves entrepreneurs. Cupping involves the application of sensory characteristics to describe the flavor profile of coffee. Its practice in supporting marketing goals is best appreciated when together, growers and roaster buyers join to calibrate the flavor profile of a coffee so that there is complete understanding of the product attributes by both buyer and seller. To advance this capacity among growers, members of the specialty coffee roaster community have liberally volunteered as cupper trainers in many settings. installing cupping labs at a regional level and training cuppers at these regional labs will constitute a major step forward in bringing buyers closer to the producers of the coffee and will enable washing stations to set and negotiate realistic prices based on coffee quality, the most important determinant of price in the specialty



coffee market.

6. Policy and advocacy

In order to guide coffee value chain development strategies, national policies have a crucial role upon which promotional programs are operationalized. Current Coffee Policy 2004 provides a guideline for the development of coffee sub-sector; however, creation of coffee basket fund, implementation of coffee logo and standard, revitalization of coffee sub-sector working group, regular update and maintenance of coffee related production, import and export data needs revision for better program planning and informing the policy. Furthermore, policies on e-commerce, coffee insurance, SPS and TBT regulations, Intellectual property rights (IPR) issues needs national policy and these needs to be informed to value chain actors so that the actors could implement as required.

7. Sustainability requirements

As coffee is an internationally traded commodity and Nepal's coffee is also connected to global value chain system, albeit, its market influence and presence is still very low. Consumers across the world are more aware about sustainability and ethical issues than ever before. Consumers are increasingly demanding to know as how products in the market are produced and how the issues on environment, fair trade and fair labour conditions are considered. Sustainability is not a trend rather a new awareness, a value and a global theme which all actors in the chain need to confront.

3.2. Production and Improving Coffee Quality

International practices

While working on value chain upgrading strategy drawing some of the internationally practices would be relevant to refer here. Gereffi et.al state that one of the most critical factors in upgrading is frequently overlooked; that is, improving actors' skill, knowledge and their capabilities within the given chain. In competitive era, upgrading strategy (ies) regularly seeks to application of the start of art knowledge/technology(ies), new skills into an operational knowledge of new equipment or understanding how to handle new products. In upgrading context, institutions are weakened and resources are limited, so even establishing basic education/skills levels to support upgrading is challenging (ibid, 2011). This work thus put serious attention on coffee sub sector value chain development, assembling of experience, lessons and reflections from best practice elsewhere to make coffee sub sector more competitive and proposals for enhancing human capital to facilitate upgrading in the coffee sub sector is pivotal. Kaplinsky and Morris (2001) further emphasizes on upgrading that denotes to the acquisition of technological capabilities and market linkages that enable firms to improve their competitiveness

Table-1: Adapted Upgrading Logic

Domains	Deliberations
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<i>Process upgrading</i>	Increasing the efficiency of internal processes (cultivation including supply of saplings) such that these are significantly better than those of rivals, both within individual links in the chain, and between the links in the chain
<i>Product upgrading</i>	Introducing new products or improving old products faster than their competitors (pre harvesting, post harvest management, fresh cherry sorting, puling and parchment processing). This involves changing new product development processes both within individual links in the value chain and in the relationship between different chain links
<i>Functional upgrading</i>	Increasing value added by changing the mix of activities conducted within the firm or moving the locus of activities to different links in the value chain. Gibbon (2003) argues that difficulties with this classification include that of distinguishing product and process upgrading in specific instances especially for agricultural products, where for example the introduction of organic, fair trade, specialty processes generates a new category of product
Source: Gereffi, 2011, 2005; Humphrey, 2005; Gibbon, 2003; Kaplinsky and Morris, 2001; Porter 1989 and Authors	

and move into higher-value activities. Kaplinsky and Readman (2001) feature that there is a hierarchy or a trajectory that is important for any SMEs. These features have been already operationalized in Ethiopia, Vietnam, Indonesia and Nicaragua. It is one which begins with process upgrading, then moves to product upgrading, to functional upgrading and last of all, to chain upgrading. Humphrey (2003) proposes three main strategic options for combating a lock-in: market diversification, excellence in production and effective use of knowledge acquired from within the value chain.

After analyzing the VC constraints of the sub sector and lessons drawn from international experiences; the upgrading interventions are prepared and presented in the ACTION MATRIX below:

Action matrix for coffee value chain upgrade strategies:

A. Production and productivity improvement

Outcome: Increased volume of coffee production and improved supply side constraints

SN	Issue/Constraint	Suggested actions	Modality	Indicators	Major actor responsible	Period
1	Coffee plantation	Identify coffee	NTCDB takes	areas for	NTCDB,	2017-2018



EU funded Project:
Trade and Private Sector Development
 Ministry of Industry, Commerce & Supplies
 Singhadurbar, Kathmandu



	area identification and area extended with new plantation	plantation area in all coffee producing districts in collaboration with DADO and DCCU, PCC in participatory manner	<i>lead and ensures identification of area and extension activity is planned annually</i>	coffee plantation identified Area extended by at least 10% annually	DADO, CTDS, CCCU, NCPA, DCCU, PCC	
		Inform coffee producers about potential coffee plantation areas	<i>DADO and DCCU plan for the activity</i>	No. of information sharing programs	DADO, DCCU, PCC, NTCDB	
2	input supply system (seed, shade tree seedlings, organic fertilizers, and basic technical supports (agriculture extension services)	Identify and establish a system to ensure quality seed, shade and organic fertilizers in collaboration with DADO, DCCU and PCC	<i>Develop PCCs as resource centre for input and services</i> <i>Establish coffee and shade seedling nursery in each PCCs; institutionalize the system</i>	No. of resource centres developed No of coffee nursery established	DADO, DCCU, PCC, NTCDB	
	Orchard and plant protection and management	Ensure shade trees or alternative provision are in place before plantation Regular weeding, pruning, manuring are done	<i>PCCs plan for shade trees and orchard management system in its annual plan and effectively monitors for its members</i>	no of shade tree distributed record of orchard management maintained No of feedback/training provided	DADO, DCCU, PCC, NTCDB	
4	Moisture management	Shade and mulching are done effectively In dry areas, make provisions for	<i>DCCU receives technical and financial</i>	No. of support received	DADO, DCCU, PCC, NTCDB,	



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		irrigation system (surface or water harvest)	support from DADO, DDC, VDC and irrigation office Relevant organizations make budgetary provisions for irrigation for coffee	Budget provided to coffee cooperative for irrigation	VDC, DDC and line organization	
5	Training (nursery management, orchard, shed and moisture management)	NTCDB in collaboration with DADO organize the said trainings and campaigns annually for coffee producers through DCCUs and PCCs	NTCDB and DADO prepare periodic plans and provision budget for training to the new and old farmers	No of relevant and need based trainings provided	DADO, DCCU, PCC, NTCDB	
6	Pest and diseases control	Conduct pest and disease control campaigns in affected areas and replace with new plants	NTCDB and DADO in collaboration with DCCU conduct campaigns annually by making provisions for program and budget	No of campaigns conducted	DADO, DCCU, PCC, NTCDB	

B.Processing (fresh cherry and green coffee bean)

Period

Outcome: High quality dry parchment and green bean produced

SN	Constraints/issue	Suggested actions	Modality	Indicators	Major actor responsible	
1	Need assessment of new pulping centres	Identify the need based number of pulping centres in each coffee producing areas in collaboration	NTCDB plans for needs assessment annually and CoC is	Need assessment done and CoC developed and communicated	NTCDB, DADO, CTDS, CCCU, NCPA, DCCU, PCC	2018-2019

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		with DADO and DCCU	<i>implemented</i>			
		Prepare a checklist and code of conduct (CoC) for pulping centres				
2	Establish new pulping centres	<p>Establish pulping centres in each potential areas under the management of PCCs</p> <p>Ensure pulping centres have proper infrastructure, machine and equipment (building, drying yard, potable water, de-pulper, moisture meter, weighing equipment, storage facility, and operating guideline as per the CoC)</p>	<p><i>NTCDB and DADO Provision for regular program and budget for pulping centres establishment on cost sharing basis</i></p> <p><i>Regular monitoring of the pulping centres</i></p>	<p>No of new pulping centres established</p> <p>No of old pulping centres improved as per the Standard</p>	NTCDB, DADO, CTDS, CCCU, NCPA, DCCU, PCC	2018-22
3	Quality management	<p>Establish key quality parameters for cherry (size, ripeness, unwanted materials) and its timely delivery</p> <p>establish key quality parameters for dry parchment</p>	<p><i>Implement quality parameters for both FC and DP in all PCCs and DCCUs and monitor for its effectiveness</i></p> <p><i>Establish a system for quality based payment, sanctions for non-compliance and withdrawal of</i></p>	<p>quality parameters are developed and implemented</p> <p>Quality based payment system instituted</p>	NTCDB, DADO, CTDS, CCCU, NCPA, DCCU, PCC, traders	2018-22



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			<i>product</i>			
4	Storage and transportation	Ensure prescribed level of drying (>12% moisture) and stored as per the Standard	<i>support for proper drying yard and moisture meter in all pulping centres</i>	No of proper infrastructures established	NTCDB, DADO, CTDS, CCCU, NCPA, DCCU, PCC, traders	2018-22
5	Reduce product losses during green bean preparation	Explore appropriate machine, machine supplier and delivery system of proper de-husking machine for product losses prevention	<i>Install high quality, efficient and appropriate (size, capacity and throughput) machine in all GB processing centres</i>	No of improved machines in place	NTCDB, DADO, CTDS, CCCU, NCPA, DCCU, PCC, traders	2018-22
6	Reduce human resources cost in hand sorting of green bean	Explore for proper screen to sieve the different sizes of green bean. This reduces around 4 times the cost on manual sorting	<i>Import proper screen and install for reduction of manual sorting costs</i>	no of proper screening machine established Reduction in cost of manual labour	NTCDB, DADO, CTDS, CCCU, NCPA, DCCU, PCC, traders	2018-22
7	Capacity development of FC and GB Processing centres/operators	NTCDB in collaboration with DADO organize the said trainings and campaigns annually for coffee processors through DCCUs and PCCs	<i>Make periodic plans and prepare budget for training ensure training adds value to processing knowledge</i>	No of trainings conducted	NTCDB, DADO, CTDS, CCCU, NCPA, DCCU, PCC,	2018-22
9	National standard of green coffee bean	Implement national standard of coffee (considering the fact it will come into effect in 2017)	<i>Inform and train the relevant key actors on implementing the standard</i>	No of awareness workshop conducted	NTCDB, DADO, CTDS, CCCU, NCPA, DCCU, PCC	2018-22



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			<i>establish</i> <i>Monitoring and supervision system to ensure the effective implementation of Standard by the chain actors</i>	No of result based monitoring done		
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Marketing

Outcome: Nepali coffee is promoted in domestic and international market with high recognition and image

S N	Constraint/issue	Suggested action	Modality	Indicators	Major actor responsible	Period
1	Market access: Lack of information on standard requirements, grading, packaging, branding and SPS compliance including maximum residue levels (MRLs)	Conduct regular training/workshops for producers, processors, traders and extension workers on market access and contemporary trade related issues e.g. SPS, TBT, IPR	NTCDB plans for this sort of activity in its regular annual plan	No of training/workshop organized	NTCDB, CTDS, NCPA, PCC, DADO, CCCU, DCCU,	2018-2022
2	International market promotion and branding program	→ Promote image of “Himalayan Specialty Coffee” through logo and brand promotion → Export destination diversification through the Nepalese mission → participation in international expo	NTCDB plans for these activities in its regular annual plan of activities	No of traders received logo No of new export destination identified No of	NTCDB, MoAD, MoC, TEPC, CTDS, CCCU, NCPA, DCCU, PCC, traders	2018-2022



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		and trade fair for coffee (organic, fair trade) → organize international buyers visit in coffee producing areas		international expo attended No of visits organized		
3	Domestic market promotion campaign	→ promote coffee in touristic areas, with reasonable price, product diversification, brewing technology (e.g. espresso) → conduct national coffee exhibitions → promote coffee tourism linking with home stay → register all café owner and barista in NTCDB and regularly mobilize their expertise and services	NTCDB plans for these activities in its regular annual plan of activities	No of Promotion program organized No of exhibitions organized Cafés registered and updated	NTCDB, MoAD, Ministry of Tourism, café and traders	
3	conduct cupping taste	→ conduct at least two regional cupping taste activity in collaboration with cafés, producer and roasters → disseminate the findings about the coffee from different locations and for improvement in quality	NTCDB in collaboration with traders, producers organize annual cup tasting program	No of cup tasting conducted	NTCDB, café, traders, development partners, DCCU, DADO, CTDS	2018-2022
4	Unfair competition among the new born traders thus distorting ongoing market mechanism	Register all the traders in NTCDB Cooperatives trade through registered traders	NTCDB holds regular interaction among the traders and DCCU to avoid	No of interactions held	NTCDB, DCCU, NCPA, DADO	2018-2022



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			unfair competition			
5	pre finance arrangement	Traders provide pre-finance for the purchase of DP from PCCs/producers facilitate in linking with bank or financial institutions for loan facility	NTCDB/su pport organizations facilitate to arrange the pre-finance NTCDB/D ADO link DCCU with district based bank and finance institutions , develop an MoU	No of pre-finance arrangement made DCCUs sign MoU with financial institutions	NTCDB, DADO, I/NGOs, Traders	2018-2022
6	Strengthen cooperatives for marketing mainly for organic and fair trade	Establish connection for DCCUs with international fair trade organizations Training to the Cooperatives on fair trade principle, market mechanism and aspects international trade	Explore fair trade buyers, coordinate with DCCUs Provision of regular training through annual program	No of fair trade buyers identified and connected No of trainings provided	NTCDB, MoAD, MoC, TEPC, development partners, I/NGOs	2018-2022
7	Market governance	Promote governance with all nodes of value chain actors through business to business interactions for increasing relationships and trust among them	DCCUs/traders conduct regular interactions in a formal and programm	No of interactions held with governance perspective	NTCDB, CCCU, NCPA, DADO, development partners, I/NGOs, PCCs	2018-2022



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			ed manner			
8	Use of logo	Prepare logo guidelines in line with the National Coffee Standard Provide logo to all exporters complying with the guidelines and standard	Encourage traders to use Nepal coffee logo	Exported coffee use Nepal coffee logo Sanctions against non-compliance recorded	NTCDB, MoAD, MoC, TEPC, traders	2018-2022
11	Establish contacts, with international coffee traders, association and relevant institutions	Establish contacts with fair trade organization, Specialty coffee associations, ICO and coffee traders associations regularly	New international buyers contacted through trade fairs, ICO, Nepalese mission abroad	No of international buyers contacted, recorded and connection established	NTCDB, MoAD, MoC, TEPC, Traders, DCCUs	2018-2022

Institutional development

Outcome: well coordinated and enabling institutions

S N	issue/Constraint	Intervention activity and modality	Indicators	Major actor responsible	Period
1	Revise coffee policy	Conduct participatory analysis to identify constraining and enabling policy areas for further improvement	Policy analysis done and effective revisions made	NTCDB, MoAD, CTDS	2018
2	coffee sub-sector working group	revitalize the coffee sub-sector working group under the leadership of NTCDB and make it a platform for exchanging and acting upon coffee issues	Group formed and regular meetings held, decisions executed	NTCDB, MoAD, Development partners, CCCU, NCPA, private sectors	2018-2022
3	Coffee Information System (production,	set up Management Information System in NTCDB to update production,	MIS established and	NTCDB, MoAD, MOC, TEPC,	2018-2022



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	technology, market, rules, regulation)	processing, marketing, institutions involved, export and import data management	operationalize d	I/NGOs, development partners	
4	capacity development of producer groups and cooperatives	Make producers and their cooperatives capable in technological aspects of production, processing, management and sustained operation	Provision of regular training, exposure and access to relevant information system	NTCDB, MoAD, DoA, MoC, DADO, development partners, I/NGOs	2018-2022
5	Coordination and linkages with organizations working in coffee	<i>This activity can be covered through the establishment and operationalization of the CSWG.</i>			
6	Planning, implementation, monitoring and evaluation of coffee activities	Coordinated planning system established for DCCUs, DADOs, development partners working in coffee sub-sector	Establish coordination unit in NTCDB NTCDB coordinates with MoAD for national program and budget Regular monitoring and reporting for the progress	coordination unit established and planning occurs accordingly	2018-2022

Policy and enabling environment

Outcome: enabling and sub-sector favorable policy

S N	Issue/Constraint	Suggested activity	Modality	Indicators	Major actor responsible	Period
1	Regular budgetary	NTCDB internalizes	NTCDB and	Regular	MoAD,	2018-2022

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	provision for extension of plantation, processing and market promotion	the Strategic plan and prepares program and budget as regular annual program	MoAD internalize the Strategic plan and work accordingly	programs instituted	NTCDB, DoA, CTDS, Development partners	
2	Allocation of VDC regular fund for coffee promotion	PCCs and DCCUs lobby for the fund and attend VDC planning processes to obtain the fund	Proposals indicating the cost and benefits regularly submitted and lobbied	VDCs allocated fund for coffee activities	NTCDB, DADO, DDC, VDC, PCCs, DCCU, producers, I/NGOs	2018-2022
4	Support in organic certification	Government support for full package of organic certification needs to include for the ICS, its administration and agency fees on gradual cost sharing basis	Prepare organic certification support guideline in collaboration with DoA, NTCDB and relevant development partners	Guideline prepared Support system established and provided	NTCDB, MoAD, DoA, CTDS, DCCUs, development partners	2018-2022
5	Support for export promotion	Implement export support as per the coffee export strategy of the MoC Review export related policy constraints (customs, duties, quarantine) and initiate to revise through proper manner	implement the strategy in collaboration with relevant agencies Make regular and programmed Consultation with private sectors	Coffee export strategy prepared and implemented policy review process initiated and revised	NTCDB, MoAD, MoC, TEPC, Traders	2018-2022
6	Coffee insurance policy	formulate and implement the coffee insurance scheme to minimize the risks of plant mortality	NTCDB take lead to initiate the task in collaboration with MoAD	Coffee insurance policy prepared and implement	NTCDB, MoAD, DCCU, NCPA, CCCU,	2018-2022



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				ed		
7	Research and development activities	Inform relevant research and policy institutions of government (e.g. NARC, PPD, DoA) about the current problems and research need in coffee –production, diseases, pests, processing, variety, geo-suitability, climate change economics	Incorporate coffee related scientific research through NARC Prioritize in annual budget and program for research Proven research finding brought into implementation	No of research done on identified areas Increased budget and program of research Dissemination and implementation occurred	NTCDB, NARC, MoAD, DoA, CTDS, producers, development partners	2018-2022
8	Financial packages for coffee value chain development	Like other agricultural produces, products-formulate loan policy and develop financial support for coffee	Initiate dialogue with Nepal Rastra Bank and related financial institutions to develop financing policy for coffee Develop policy and tools and mechanism for implementation	Process initiated for policy formulation Policy and mechanism developed and implemented	NTCDB, MoAD, NRB, CCCU, NCPA, traders	2018-2022

Role of enablers

The role of enablers mainly the policy making institutions and support systems which lie outside



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the actual core value chain activity but they serve as major movers of chain in many ways. In lack of or in insufficiency of the enabling policy, institutions and practices value chain action can be weak and the desired outcome of the value chain can hardly be achieved. Therefore, in the table below we provide overall proposed actions that the enablers can act upon.

Enablers	Activities	Current support Mechanism	Way forward
Ministry of Agriculture and Development (MoAD)	<ul style="list-style-type: none"> Reducing poverty through increased agricultural production and productivity Making Nepalese agricultural products competitive in the regional and world markets by developing the foundation of commercial and competitive agricultural systems Conserving the natural resources, environment and ecological diversity and utilize them for sustainable agricultural development 	<ul style="list-style-type: none"> Plans and policy formulation Negotiate budgetary provision with Ministry of Finance and National Planning Commission 	Bring dedicated plans, policy and resources for coffee value chain development and set effective institutions
Project for Agriculture Commercialization and Trade (PACT)	MOADs' Central Project financed by the World Bank, activities are: <ul style="list-style-type: none"> Support farmer groups and their cooperatives for profitable market-oriented production; improving access to markets with 	<ul style="list-style-type: none"> Provide grants including coffee Capacity development Studies 	Support long term value chain development



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Enablers	Activities	Current support Mechanism	Way forward
	application of technology and information services and critical public infrastructure and linkages to agribusiness • Strengthen industry-wide partnerships along the value chain • Reduce existing obstacles to agriculture trade thereby increasing the ability of farmers and agribusiness to respond to sanitary and phytosanitary (SPS) and food-quality standards to meet domestic and international market requirements		
Department of Agriculture (DoA)	Support and help achieve food security and poverty alleviation by the transformation of agriculture through diversification and commercialization	• Support to policies and plans implementation and monitoring	DOA should set implementation framework and capacity development plans for extension services for coffee.
Ministry of Federal Affairs and Local Development	Support local micro infrastructure development	• Based on the reliable and impressive proposal funding is allocated to the specific sector	Among 15 % of local budget is allocated to agricultural development program, part of the budget should be allocated to the coffee sub sector within coffee producing districts.



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Enablers	Activities	Current support Mechanism	Way forward
Tea and Coffee Development Section, Kirtipur, Kathmandu	Under the DOA, the section is national program implementing sections related tea and coffee	<ul style="list-style-type: none"> Implement central level programs on tea and coffee 	<ul style="list-style-type: none"> Engage in development of district and location specific coffee extension services and knowledge dissemination Demand side programs/activities should be development and implemented
District Agricultural Development Offices (DADO)	DADO implementing government bodies at local level. It implements, supports and deliver government program to people.	<ul style="list-style-type: none"> Technical backstopping Seed grants Knowledge disseminations and kinds 	<ul style="list-style-type: none"> Specific coffee related package and pocket approach must be implemented through regular program and budget.
National Tea and Coffee Development Board (NTCDB)	Assisting to formulate and implement tea and coffee policies Disseminate technology and knowledge. Facilitate private sectors' participate and investment	<ul style="list-style-type: none"> Technical, financial and regulatory activities for coffee 	<ul style="list-style-type: none"> coordinate the activities being done by various agencies and harmonize them
Agri-Commodity Export Promotion Program, Harihar Bhawan, Lalitpur	Grant support to purchase equipment	Provide funding to the selected commodities	Should have specific program to address the demand for coffee related support
Nepal Agriculture Research Council (NARC)	Conducting scientific researches	<ul style="list-style-type: none"> Scientific Research on agri and environment 	Prioritize Coffee related research and dissemination of knowledge and facilitate in implementation
Nepal Agricultural Research and Development Fund	Encourage these organizations to compete for partial or complete funding for project activities, which are designed to	<ul style="list-style-type: none"> Promote a more demand-driven and pluralistic approach to increasing agricultural production, through encouraging the development of institutional and organizational partnerships together with the empowerment of 	Promote Coffee related research and knowledge



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Enablers	Activities	Current support Mechanism	Way forward
	promote the overall development of the agricultural sector	end-users	

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4. QUANTITATIVE ANALYSIS

4.1. Introduction

Coffee value chain is largely controlled by primary coffee co-operative unions (PCC) that majority of smallholder farmers are members of PCC. These unions have managed to institute strong institutional linkages for input supply and thus for further processing and marketing. Smallholder farmers and PCC as producer organizations (PCCU) have horizontal relationships with the co-operative unions where they deliver their fresh cherries and parchments as well as green beans. In addition, some of the unions are also involved in primary processing, the strong linkages are often extended to the wet and hull processors of the raw dry coffee beans. Vertical linkages can be seen in the form of channels where coffee is delivered up the chain by trader, other than co-operative unions. This is particularly important for smallholder farmers as impoverished people who have limited resources and so cannot afford to choose the wrong market or sector.

Analyzing costs and margins enables a value chain activity as what is in term of financial and economic condition that every actor is benefiting or loosing. Actual costs and margins should be considered when a coffee value chain actor aims to find out whether a value chain is a good source of income for him/her and whether a value chain is feasible for them. Historic costs and margins, on the other hand, assist to find out what the financial trends have been in the value chain and whether the chain has potential to scale up or upgrade in the future.

Quantitative analysis of cost and margin inquiry to coffee sub sector value chain can be useful for each actors because they are treated as active entrepreneurs rather than subsidized actor.

Quantitative analysis also provides key input for decision making process and allocation of resources (public/private) for the sustainability and scaling up of the coffee sub sector. The following section of the report provides a simple financial analysis of nursery, fresh cherry production, pulping and green bean processing in quantitative terms.



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Table 1: List of Coffee Entrepreneurs

SN	Name	Address	Brand	Contact Person	Mobile	Tel/Fac	Email
1	Highland Coffee Promotion Company Limited	Sano Bharyang, Kathmandu	Himcafe, Necco	Krishna Prasad Ghimire	9851023451	6635688	hepcl@info.com.np
2	Royal Everest coffee Mill	Lokanthali, Bhaktpur	Everest Coffee	Shanta Lama		4413959, 4410925	late@mos.com.np
3	Nepal Organic Coffee products	Madan Pokhara, Palpa	NOCP's Himalayan Arabica Coffee Morning Fresh	Dhakeshwar Ghimire	9851091677 (9841210677)		nocp1989@hotmail.com
4	Beans Coffee Pvt. Ltd	Kupondole Lalitpur	Mustang Coffee, Trekers Easy Dripping Coffee	Phul Kumar Lama	9851027466		lamapk@hotmail.com
5	Himalaya Coffee Products	Lalitpur, Harissiddhi	Himalaya Coffee	Kiran Tamrakar	9841241725	5531836	himalaya-coffee@hotmail.com
6	Plantek Coffee Estate Pvt. Ltd.	Nuwakot	Jalpa Gold (Espresso brand, Jalpa Gold Mount Everest Supreme	Ujjwol Rana	4416327 9851026297	4416327	unicornttrade@wlink.com.np
7	Nepal Mountain Coffee Product (Shut down)	Bagdole, Lalitpur	Nepal Mountain Coffee	Purna Bahadur Thapa	9841329735	5538656	
8	Buddha Organic Coffee Industries Pvt. Ltd		Buddha Organic Coffee	Dinesh Kandel		01-4280599	buddha.organic@yahoo.com
9	Coffee Cooperation Union Ltd. Lalitpur	Thapagaun, Lalitpur	Lalitpur Organic Coffee Jureli Coffee	Bal Bdr KC	,9841028799 (Bal KC) 9751028966 (Sashi)		
10	Organic Coffee Cooperative	Kusma Parbat	Dhaulagiri Coffee	Bhawani Pd. Sharma	9857633046	067-690599	organiccoffeeparbat@gmail.com
11	Alpine Coffee Fstate		Katmandu Coffee				
12	Lekali Coffee Estate		Lakali Single Estate, Premiun				

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13	Annapurna Organic Coffee Industry		Mareng,3 Arghakhanchi	Sabitra Lamsal			
14	Pathavalya Deurali ,Gharelu Coffee Uddyog	Laknath,Kaski	Machhapuchhre Flying Bird Natural Coffee	Arjun Lamsal	9846046028	061-692775	
15	District Cooperative Union Gulmi	Gulmi Coffee	Gulmi Coffee	Hari Gautam		079-520320	gulmi-coffee@yahoo.com
16	Gazzab-Co Tea Industry	New Baneshwor KTM	Danda-pakha Organic Coffee	Shivaraj Ghimire		01-6913123	gazzabkotea@gmail.com
17	Nepal Tea and Coffee Promotion Center	Thamel,Kathmandu	Tealaya Rare andOrganic Coffee			01-4216268	sakhejung@gmail.com
18	Camel Coffee (Nepal) P.ltd (Kaldi Coffee, Japan)			Usha Giri			
19	Greenland organic Farm Pvt.Ltd	New Baneshwor KTM	Himalayan Arabica	Raj Kumar Banjara	9851023082	01-4780919	info@himalayanArabica.com
20	Great Himalayan Organic Coffee Estate	Rasuwa		Santa Lama			
21	Machhapuchhre Organic Coffee Uddyog	Malepatan Pokhara	Machhapuchhre organic Coffee Himalayan Drip Coffee	Shovakhar Adhikari	9846151315	061-524141, 061-465346	
22	Himalayan Java	Kathmandu	Himalayan Java			01-4422519	info@himalayanjava.com
23	Himalayan Ontop Organic Coffee Estate	Nalang, Dhading		Din Nath Regmi			
24	Nepal Everest Coffee Mill Pvt Ltd		Everest Coffee	Surya Lama	9851137618		
25	Everest Land Coffee Industry Pvt.Ltd		Everest Land Coffee	Santa Bir Tamang	9851023130		
26	Himalayan Espresso Pvt Ltd			Biseswor Tandukar	9851090392		

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27	Shivapur Tea and Coffee Industries Pvt.Ltd	Taame, Nuwakot	Nuwa Coffee	Bandi nima Sherpa	9841490533		
28	Dhaulagiri Organic products	Kusma, Parbat	Parbat Coffee, Myagdi Coffee Baglung Coffee	Samikshya Sharma	9857626199	067-420001	dhaulagiriorganic@gmail.com

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Table 2: List of District Coffee Producers' Associations

S.N	Name	Chair Person	Contact
1	DCPA Parbat	Bhawani Prasad Sharma	9857630046
2	DCPA Baglung	Dillip Poudel	9857622082
3	DCPA Pyuthan	Prem Bahadur Sahi	9748502272
4	DCPA Syangja	Fadi Narayan Aryal	9856050050
5	DCPA Palpa	Rebanata Bdr. Bista	9847114182
6	DCPA Kaski	Biswo Bandhu Pokhrel	9846208014
7	DCPA Kavre	Homraj Giri	9841117061
8	DCPA Tanahun	Bishnu Dhakal	065-692975
9	DCPA Arghakhanchi	Bhuwan Adhikari	9857029900
10	DCPA Gulmi	Nilakhantha Gautam	9847186933
11	DCPA Lalitpur	Bishnu Prasad Adhikari	9843101815
12	DCPA Lamjung	Swotantra Hamal	9846353700
13	DCPA Makwanpur	Dhan Bdr. Pulami	9811186443
14	DCPA Sindhupalchowk	9841250685
15	DCPA Nuwakot	Rajan Dahal

Table 3: List District Coffee Cooperatives Union

S.N	Name	Chairperson	Contact
1	DCCU Parbat	Bhawani Prasad Sharma	9857630046
2	DCCU Syangja	Fadi Narayan Aryal	9856050050
3	DCCU Palpa	Ram Prasad Ghimire	9844792166
4	DCCU Kaski	Ananda Poudel	9846184415
5	DCCU Kavre	Homraj Giri	9841117061
6	DCCU Tanahun	Shiva B0hara	9846235677
7	DCCU Gulmi	Nilakantha Gautam	9847186933
8	DCCU Lalitpur	Bal Bdr KC	9841028799
9	DCCU Lamjung	Bishwo Pd. Adhikari	9841921088
10	DCCU Sindhupalchowk	Sudarsan Bolakhe	9841250685
11	DCCU Gorkha	Dilli Ram Regmi	9846491531



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Table 4: List of Coffee Equipment Suppliers

SN	Name of Vender	Address	Contact Detail	Name of Person
1	Global Trading Complex Pvt. Ltd Global Machinery and Trading Pvt. Ltd	Soalteemode Kathmandu	4288781	Govind Sharma
			4283358	985102022
			4288179	9801025022
			2021146	
2	Total machinery and Chemical (H) P.Ltd	Teku Rd, Kathmandu	9851059471	Narayan Parajuli
			9801059471	total_tic71@yahoo.com
			01-4215032	pandeyfrnepal@yahoo.com

Table 5: Status of Coffee Cooperative

S.N	District	PCC	DCCU	Organic certification	Member to CCUL
1	Syangja	7	Yes	Yes	2
2	Parbat	15	Yes	No	3
3	Kaski	12	Yes	No	0
4	Gulmi	11	Yes	Yes (control Union)	3
5	Palpa	7	Yes	Yes, NOCP and HCPCL	1
6	Kavre	9	Yes	NO	1
7	Nuwakot	10	Yes	NO	0
8	Gorakha	13	Yes	NO	11
9	Lamjung	9	Yes	Yes (USDA))	8
10	Tanahun	9	Yes	NO	10
11	Sindhu	8	Yes	Yes (control Union)	1
12	Myagdi	1		NO	1
13	Lalitpur	8	Yes	Yes (NASAA)	4
14	Dhading	1		NO	1
	Total	120			46

Table 6: List of Visited Persons

SN	Name of Persons	Date	Office/Position	Contact No.
1	Amar R Sharma	29-Apr-16	Senior, Agri Promotion Officer, DOA	9845085855



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SN	Name of Persons	Date	Office/Position	Contact No.
	Ghimire			
2	Bed P Paudyal	11-May-16	Namuna Coffee CoOP Ltd, Sano Patali, Sindhupalchowk	9741012943
3	Bhgawati Neupane	Chaitra 5, 2072	Coffee Farmer, Kaski	9843002950
4	Bhoj Raj Gyewali	Chaitra 5, 2072	Barahi Coffee Cooperative Ltd, Gulmi	9847458485
5	Bhola Paudyal	29-Apr-16	Agri Market Research Center	
6	Bijaya Lama	14-Apr-16	Shree Upallo Tinau Coffee Production Cooperative	
7	Chandra Mani Sigdel	12-May-16	Annapurna Coffee Cooperative, Inchaowk-4, Sindhupalchowk	-
8	Dhakeshowr Ghimire	11-Apr-16	Nepal Organic Coffee	9841210677
9	Dr Hari Babu Tiwari	2-Jun-16	Dy. Director General, DOA	01-5510124
10	Dr Yubak D DC	29-Apr-16	DOA, 9851128129	
11	Gaurab Luitel		NTCDB	
12	Gokarna Acharya	29-Apr-16	Agri Information and communication Centre, Harihar Bhawan	9841218997
13	Govinda Ku Lama	Chaitra 5, 2072	Pulper Operation, Palpa	
14	Gyan B Asthani Magar	13-May-16	Coffee Cooperative Limited, Panchkhal	9860024433
15	Harish Bdr Chand		Himalayan Java, Tamel	9841395915
16	Hom R Giri	13-May-16	District Coffee Cooperative, Kavre Palanchowk	9851039729
17	Indra Paudyal	Chaitra 6, 2072	Coffee Farmer, Rano Pat; Lamjung	
18	Januka Paudyal	11-May-16	Namuna Coffee CoOP Ltd, Sano Patali, Sindhupalchowk	-
19	Kedar Dhungana	14-Apr-16	Prasidhi Coffee Estate Pvt Ltd, Nuwakot	
20	Khadga B Shahi	15-Mar-16	Coffee Farmer, Tanahu	-
21	Krishna M Sigdel	12-May-16	Annapurna Coffee Cooperative, Inchaowk-4, Sindhupalchowk	-
22	Lok B Lama	13-May-16	MEDEP, Chautara	9741258873
23	Mandu Thapa	11-May-16	District Cooperative Association, Chautara	9841883352
24	Mani Pathak	Chaitra 6, 2072	Sindhupalchowk	
25	Meena Tamng	13-May-16	MEDEP, Chautara	9741023283
26	Nilkanta Gautam	Chaita, 16, 2072	Coffee Cooperative Association, Gulmi	9857064904
27	Nirdosh Lama	13-May-16	Jaisithok Organic Coffee Producer Cooperative	9851142792
28	Nisha Nepali	11-May-16	Namuna Coffee CoOP Ltd, Sano Patali, Sindhupalchowk	-
29	Parushu Ram Acharya	5-May-16	Board Member/NTCDB	9851103603
30	Phul Kumar Lama	Chaitra 5, 2072	Mt. Everest Organic Coffee, Kuleshowr	9851027466



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SN	Name of Persons	Date	Office/Position	Contact No.
31	Rahpati Chaudhari	Chaitra, 8, 2072	NTCDB	9804159327
32	Raja Ram Lamichane	14-Apr-16	Prasidhi Coffee Estate Pvt Ltd, Nuwakot	
33	Ram B Adhikari	20-May-16	M and E Head, Ministry of Agricultural Development	9841283003
34	Ramesh Shrestha	12-May-16	Erkhu, Chindhupalchowk, Family Organic Pvt. Ltd	9851158579
35	Ranjana Misra		Helveta Inter Cooperation	
36	Sanjya Dhimal	22-May-16	Ministry of Agricultural Development	9841313734
37	Sarad Pandya	Chaitra 2, 2072	Tea Coffee Development Program, Kritipur	9847110209
38	Shiva P Aryal	12-May-16	DADO, Chautara	9841320801
39	Shyam P Bhandari	Chaitra 5, 2072	Nepal Coffee Producer Association	9851063370
40	Sudha Khadka		Helvetas Inter Cooperation	
41	Sunita Subedi	Chaitra 6, 2072	Coffee Farmer, Lumle, Kaski	9814108096
42	Susan Shakya		Helvetas Inter Cooperation	
43	Tek Raj Giri	14-Apr-16	Manager, Coffee Cooperative Association, Nuwakot	
44	Top Bahadur	15-Mar-16	Coffee Farmer, Magdi	-
45	Yati Raj Timilsena	13-May-16	Entrepreneur, Coffee Processing Shops, Kavre	9851016994

Table 7: List of Primary Coffee Cooperatives

SN	Name of Coffee Cooperative	Address	Contact person	Member
	Palpa			364
1	Jyamire Namuna	Jyamire -7	Mukta Bahadur Saru	70
2	Shiddakalika	Barangdi-3		36
3	Kalika Devi	Madanpur-4		29
4	Astabhuja	Deurali-7		33
5	Lekali	Rupse-2		30
6	Himal	Baldanggadi, Satyawati		34
7	Maleng	Maleng		44
8	Chapani	Chhapani		31
9	Buddha	Boudhha Gumba-7		28
10	Nawa Kiran	Masyam-5		29
	Parbat			375
1	Total	Shivalaya	Bhawani Pd.Sharma	
2	Himalayan Organic	Tilahar, Thamjung	Chitra Bdr.Basnet	
3	Patheredunge	Ramja	Hem Lal Poudle	
4	Kalika	Beulibas	Dhan Bdr Thapa	
5	Janapriye	Kurgha	Tara Pd Sharma	



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SN	Name of Coffee Cooperative	Address	Contact person	Member
6	Sayapatri	Kurgaha	Khem	
7	Kalika Mahila	Deupur	Shanti Devi Sharma	
8	Gyanjyoti	Pangrang	Tikaram Kunwar	
9	Samajik Mahila	Thapathana	Kamala Devi Sharma	
10	Punreshwor	Pipaltari	Padam Pd Poudel	
11	Prtsagati	Pakuwa	Ganesh Bdr Chhetri	
12	Bhangara	Bhangara	Chandra Bdr Thapa	
13	Shivashankhar	Shankarpokhari	Shiva Pd Bhusal	
14	Nayanepal	Pakhapani	Gam Bdr Khatri	
15	Dipjyoti	Limithana	Salikram Timilsina	
	Syanja			463
1	Himali Coffee Estate	Tindobate-7		
2	Dandaswara	Bahakot		
3	Thapathok	Arjunchaupari		
4	Khalte	Arjunchaupari		
5	Deurali	Putalibazar		
6	Khilung Kalika	Khilung Deurall		
7	Suryodaya	Thumpokhara		
	Kaski			409
1	Seti Gandaki	Puranchour-7	Min Raj Poudle	29
2	Gunastariya	Deurali-2	Hari Raj Ghimire	28
3	Pachvaiya	Leknath Municipality	Tara Mani Ghimire	30
4	Baiyeli	Kristi	Biswo Bandhu Pokhrel	27
5	Bhirpakha	Bharam-3	Fadindra Nath Sharma	44
6	Sandikhola	Hasanpur-4	Annanda Subedi	37
7	Machhapuchhre	Dhikurpokhari-1	Kaladhar Bhugain	38
8	Lipayani	Hansapur-8	Dinanath Dahal	26
9	Chiplei	Leknath Municipality-10	Kul Chandra Adhikari	31
10	Nirmal Pokhari	Nirmal Pokhari	Kamal Mohan Poudle	61
11	Sitaldevi	Monja-7	Bhim Pd Acharya	29
12	Ayearjan	Kahu-3	Chitra nath Lamichanne	29
	Kavreplanchowk			446
1	Jaisithok	Jaishithok		57
2	Kalikadevi Krishak Jagaruk	Deupur Bhramayeni		26
3	Shailungeshwori	Pokharichouri-9		61
4	Kilpu	Kilpu		41
5	Palanchowk Bhagwati	Panchkhal		69



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SN	Name of Coffee Cooperative	Address	Contact person	Member
6	Dandapari	Milche		51
7	Sirutar	Foksingtar		46
8	Aandikhola	Nayagaun		45
9	Charmrangbesi	Chamrangbesi		50
	Sindhupalchowk			384
1	Kalidevi	Sangachowk-1		48
2	Pragatisil	Thokarpa-1 +Kalika		55
3	Namuna	Barabise-7		54
4	Sangachowk	Sangachowk-4		35
5	Suryakot	Bodegaun-8		48
6	Pokharadovan	Thum Pokhara		42
7	Annapurna	Iehowk		60
8	Nawasikhar	Sikharpur		42
	Nuwakot			452
1	Bardan	Kabilash-2		
2	Mendo Organic	Buungtan-2		
3	Trimurti	Samari-6		
4	Binayak	Kabilash-7		
5	Mountain View	Madanpur-4		
6	Ralu Alchet	Bungtan-4		
7	Prahyart	Sundardevi-2		
8	Subidha	Kabilash-4		
9	Phungphung Jharana	Madanpur-8		
10	Chakreswor Rautebesi	Balkumari-8		
	Gulmi			485
1	Ajammari	Arjal		170
2	Thanapati	Thanapati		29
3	Janahit	Jaisithok		37
4	Aanpchaur	Aanpchaur		39
5	Bangare Bhanjyang	Rimuwa		26
6	Adarsha	Digam	Khimlal Kandel	41
7	Langhali	Gwadi	Bojraj Regmi	27
8	Ruru	Ruru	Man Bhattarai	36
9	Hunga	Hunga		27
10	Baletaksar	Baletaksar		26
11	Bahadi	Bamgha		27
	Lalitpur			372
1	Sagarmatha	Chandanpur -9 ,Lalitpur		61
2	Uchha Pahadi	Gimdi-7,Lalitpur		43



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SN	Name of Coffee Cooperative	Address	Contact person	Member
3	Ratogurans Organic	Thuladurlung-7 ,Lalitpur		49
4	Durlung Jalbik	Thuladurlung-4 ,Lalitpur		42
5	Lekali Organic	Thuladurlung-6,Lalitpur		36
6	Arabica Organic	Asrang-8,Lalitpur		33
7	Gunastariya	Gimdi-1,Lalitpur		43
8	Madhya-Pahadi	Pyutar-1,Lalitpur		35
9	Silinge	Thuladurlung-4 ,Lalitpur		30
	Gokha			418
1	Himali Coffee Utpadak Agriculture	Kharibot	Koshraj Dhital	30
2	Pragatishil Coffee Utpadak	Chyangli	Thakur Amgain	30
3	Shreejana	Gaikhur	Govinda Barakoti	31
4	Namuna Coffee Utpadak	Dhunwakot	Bhojraj Pandey	43
5	Mirkot Coffee	Mirkot	Chandra Kala Neupane	25
6	Saraswoti Coffee	Ghairung	Netra Bdr Thapa	36
7	Bushikot Coffee	Deurali	Durga Khanal	40
8	Chhahari	Chhoprak	Shree Pd Pokhrel	25
9	Srinjalsil	Tanglingehowk	Mira Gurung	39
10	Chandi Sworna	Taklung	Man Bdr Thapa	40
11	Manakamana	Mankamana	Bhagawati Thapa	25
12	Himalayan Organic	Barpak	Chinu Ghale	29
13	Baguwa Coffee	Baguwa	Binod KC	25
	Lamjung			807
1	Marsyangdi	Khudi	Purna Bdr Bhandari	43
2	Prangarik	Praewa Danda	Ram Krishna Thapa	25
3	Kalika	Udipur	Rishi Maya Bohara	77
4	Hemro	Besishahar	Maya Devi Paudel	30
5	Yesobrama	Gaunshahar	Buddi Bikram Shai	44
6	Duradanda	Durandada	Guru Prasad Adhikari	60
7	Samajsewa	Tarku	Surya Kumar Gurung	28
8	Chandreshwar	Chandreshwer	Leknath Adhikari	25
9	Janahit	Chakratirtha/Bhalayakharka	Jagadish Bakhrel (475
	Tanahu			365
1	Pangarik Haravara	Chowk Chisapani	Shiva Bohora	52
2	Pragati	Purkot	Min Bdr Adhikari	65
3	Annapurna	Rupakot	Ram Krishna Adhikari	60
4	Bhanu	Bhanu	Purna Bdr Ranabhat	40
5	Chhimkeshwori	Chhimkeshwori	Gir Bdr Panta	35
6	Satiswanra	Satiswanra	Raj Kumar Shrestha	30



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SN	Name of Coffee Cooperative	Address	Contact person	Member
7	Melmilap	Risti	Bhageswar Gurung	30
8	Bandipur	Bandipur	Shreemaya Thapa	28
9	Mirlung	Mirlung	Bhim Bdr KC	25

Table-8: List of Coffee Producing Countries

SN	Name of Country	Mt
1	Brazil	2,594,100
2	Vietnam	1,650,000
3	Colombia	810,000
4	Indonesia	739,020
5	Ethiopia	384,000
6	India	349,980
7	Honduras	345,000
8	Uganda	285,300
9	Mexico	234,000
10	Guatemala	204,000
11	Peru	192,000
12	Nicaragua	130,500
13	Cote d'Ivoire	108,000
14	Costa Rica	89,520
15	Kenya	49,980
16	Tanzania	48,000
17	Papua New Guinea	48,000
18	El Salvador	45,720
19	Ecuador	42,000
20	Cameroon	34,200
21	Madagascar	31,200
22	Lao, People's Dem. Rep. of	31,200
23	Thailand	30,000
24	Venezuela	30,000
25	Dominican Republic	24,000
26	Haiti	21,000
27	Congo, Dem. Rep. of	20,100
28	Burundi	15,000
29	Rwanda	15,000



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SN	Name of Country	Mt
30	Togo	12,000
31	Philippines	12,000
32	Guinea	9,600
33	Yemen	7,200
34	Cuba	6,000
35	Panama	6,000
36	Bolivia	5,400

Source: <http://www.worldatlas.com/articles/top-coffee-producing-countries.html>