

UNDERSTANDING THE ROLE OF WOMEN HOME-BASED WORKERS IN VALUE CHAINS OF LARGE CARDAMOM AND ALLO IN NEPAL



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The World Bank

Women In Informal Employment: Globalizing and Organizing (WIEGO)

SABAH Nepal

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TABLE OF CONTENTS

Abbreviations	1
Foreword	2
I. Executive Summary	4
II Background	7
III. Study Objectives	9
IV. Methodology	9
V. Large Cardamom	10
a. Literature review	10
b. Women in large cardamom value chains	12
c. Findings from the field	14
VI. Allo	24
a. Literature review	24
b. Women in allo value chains	30
c. Findings from the field	32
VII. Recommendations for Future Action	42
VIII. Conclusion	46
IX. References	47
X. Annexures	49

ABBREVIATIONS

ANSAB	Asia Network for Sustainable Agriculture and Bioresources
BFI s	Bank and Financial Institutions
CDC	Cardamom Development Centre
FHAN	Federation of Handicraft Associations of Nepal
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
FNCSI	Federation of Nepal Cottage and Small Industries
GIZ	Gesellschaft für Internationale Zusammenarbeit
HBW	Home-based Worker
HNSA	HomeNet South Asia
HS Code	Harmonized System Code
ICIMOD	International Centre for Integrated Mountain Development
IFAD	International Fund for Agricultural Development
KHAU	Kanchenjunga Himalica Agriculture Udyog
MAP	Medicinal and Aromatic Plants
MEDEP	Micro Enterprise Development Programme
NFA	Nepal Foresters' Associations
NITEC	Nepal Innovation Technology and Entrepreneurship Center
NNSEP	Nepal National Sector Export Policy for Large Cardamom 2017-2022
NTFP	Non-Timber Forest Produce
PAF	Poverty Alleviation Fund
SWOT	Strength, Weakness, Opportunity, Threat
TEPC	Trade and Export Promotion Centre
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization

“No Woman Left Behind”

When the United Nations' Secretary General established the High-Level Panel on Women's Economic Empowerment, in 2016, the Panel declared that “No Woman Left Behind” would be its first guiding principle.

Among the nations of South Asia, economic growth is on the rise. But the participation of women in these economies continues to languish. Evidence suggests that these countries have some of the lowest rates of Female Labour Force Participation in the world and, regionally, women account for only 25.5 % of the labour force. What's more troubling is that even this meagre percentage has been on the decline in the past few years. Women, in this region, are often constrained by social norms, lack of work opportunities, the absence of safe workplaces, and the undue burden of care work- making it a challenge to participate in their respective economies.

Yet, millions of women in this region, including those who belong to rural communities, make robust contributions to their nation's economy by reimagining work and work spaces. In Nepal, where this study was undertaken, women take up home-based work and it is a vital source of employment. In 2008, the Nepal Labour Force Survey estimated that there are over 920,000 home-based workers in the country. These workers take up employment in a variety of value chains, ranging from carpet-making to garments, agriculture and traditional handicrafts.

In Nepal's Eastern Hills, as this study details, women home-based workers take the lead in large cardamom fields - nurturing and harvesting a prized cash crop. In the neighbouring Khandbari district, the women of the Kulung Rai tribe have not just preserved their centuries-old tradition of allo-making, but also craft contemporary fashion products, made from allo, for national and international markets.

A closer look at the data, collected during the course of this study, indicates that despite playing critical roles in the large cardamom and allo value chains, women home-based workers are invisible and disadvantaged. In the large cardamom value chain, the work put in by the women, in the farming and processing stages, are crucial to the end product. And yet, women rarely manage to interact with traders nor do they have the bargaining power to command fair prices in a highly-fluctuating market. Additionally, the lack of skills and inability to access credit keeps them from adding value to the product and hampers any efforts to move up the value chain.

With allo, women are an integral part of each step in the supply chain. However, their incomes do not commensurate with the drudgery involved in crafting each product. This drudgery, that takes a physical toll on women workers, is a direct result of the absence of women-friendly technologies in the industry. Livelihoods are further affected because allo's marketability has not been fully explored. Moreover, international markets remain out of reach for producers. Through this study, HomeNet South Asia Trust examines the roles and contributions of women home-based workers in the value chains.

In March 2017, the Final Report of the United Nations' High-Level Panel on Women's Economic Empowerment highlighted “Changing Business Culture and Practice” as one of the seven drivers of women's economic empowerment. Under this, the report clearly stated that, in order to, achieve this change it is important to map value chains to ensure ethical sourcing as well as workers' rights. The report lays special emphasis on recognising women home-based

FOREWORD

workers who are often overrepresented at the bottom of the value chain pyramid and are especially vulnerable. And that acknowledging home-based workers as critical actors in value chains is not just “the right thing to do” but can also reap gains on the business front.

In keeping with this, this study elaborates the bottlenecks that women workers face and makes clear, targeted recommendations to improve the scope of these products while uplifting the working conditions and improving the livelihoods of workers involved. Both these value chains and the women home-based workers involved in them will, we think, benefit from the Government formulating and strengthening policies that are focussed on them. The Government will foremost need to interact and undertake consultative processes with women home-based workers’ groups and organisations. Subsequently, they will have to partner with an alliance of institutions, to create a robust system of data collection to ensure an in-depth and dynamic analysis of these value chains. The World Bank can also extend its support to projects and programmes that study the economic loss borne by women home-based workers due to sub-optimal working conditions. And it can invest in research that brings about innovation in these supply chains.

Finally, HomeNet South Asia Trust would like to thank the World Bank for recognising the roles and contributions of women home-based workers in two of Nepal’s critical agricultural value chains. The valuable support it has lent to the study will, we hope, pave the way for the formulation of concrete measures that will enable women home-based workers to rise above the challenges they face and claim their rightful place in a world where no woman is left behind.

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This study attempts to understand the role of women home-based workers (HBWs) in the large cardamom and allo value chains in Nepal, and to recommend ways in which their work can become more beneficial for them not only through better returns but also through improved working conditions. Both value chains can not only enhance incomes for women and their families, but also have the potential to alleviate poverty in the communities to which these women belong. The study bases its findings and recommendations on a review of existing literature, a data survey in selected geographies in Nepal, and conversations with value chain actors and experts.

Nepal is the world's largest producer of large cardamom, a commodity that has an established and lucrative international market. About 98 per cent of Nepal's production is exported. Even though it is heavily dependent on Indian traders to export its production and, thus, has little role in price determination, most actors along the value chain make attractive returns. It is the most important cash crop for farmers involved in large cardamom production, who are otherwise engaged mainly in subsistence farming.

Allo grows abundantly in the Himalayas of Nepal, and has been traditionally processed by certain ethnic communities for its fibre that is woven into cloth to create products for their daily use. It is relatively unknown outside of these communities and its use by others is fairly recent. The

growing international demand for natural fibre products in general and allo-based products in particular opens opportunities to raise the incomes of participants in this value chain. This is of importance for enhancing the livelihoods of communities involved in these processes, as their skills and experience in processing allo has the potential to address the disadvantages they suffer from being remote and marginalised.

The value chains of both large cardamom and allo are dominated by women HBWs: in the former they are concentrated in farming and processing the produce, while in allo they virtually run all the processes. In the absence of men, who migrate in large numbers abroad for jobs, women's role in the value chain and their dependence on these commodities for cash income is crucial. However, the drudgery and hard work involved is detrimental to their health, efficiency and the quality of the final product. Poor institutional development – there are hardly any women-based or women-oriented local institutions in the value chain – adversely affects their ability to command returns commensurate with their inputs. Notably, the trader associations and their federations in the large cardamom sector are entirely dominated by men, while in allo, such institutions do not even exist.

Various interventions have been implemented to try and improve these value chains. However, significant data gaps, the almost complete lack of any women-centric, gender-specific

analysis of the two value chains and a general absence of recognition of the substantive contribution women HBWs could make to the economy and society as the most prominent participants in the value chains, affects the design of such initiatives. For instance, much needs to be done to mechanise manual processes that women are engaged to save their time and alleviate the back-breaking labour involved. While the government has recently focussed on large cardamom by publishing a five-year policy paper, a wider promotional and conducive policy regime that focuses on women working in the various stages of the allo and cardamom processes is necessary to promote an environment where women HBWs can contribute their best.

There is an urgent need for a larger study across a few districts based on a much larger sample size, which explores the setting up of a robust data collection system, especially for allo, and tracks gender indicators. To set-up the data gathering system, it would help if the study could identify key partners with the expertise, willing to ally with specialised government institutions to help create the data system. Another immediate need is for a study to estimate the economic loss from the poor work conditions faced by women HBWs in these value chains. The results of this study would be particularly relevant and timely to convince local governments that will soon be facing elections to focus on women HBWs in these value chains.

EXECUTIVE SUMMARY

Table 1: Issues and Recommendations - Women HBWs in the Allo and Large Cardamom Value Chains

Issues/Challenges	Recommendation	Expected Timeline
Lack of data sets including gender-disaggregated data	Set-up a robust system for regular data collection with a focus on information related to women HBWs	Medium
	Forge an alliance between government and other institutions with expertise and interest in women HBWs	Short
	Support regular analysis on women HBW issues based on quantitative and qualitative data; for this engage a wider set of interested agencies including women cells in chambers of commerce and industry, especially the chamber of small and cottage industry, women entrepreneur groups, and donor and civil society organisations working in the sectors	Long
The absence of governmental policies to support women HBWs	Conduct a study to estimate the economic loss due to sub-optimal working conditions of women HBWs in the value chains	Short
	Conduct a larger study, similar to the current one, across a few key districts for a clearer picture of the issues facing women HBWs in the country	Short
	Formulate a set of women-friendly policies for the consideration of the government	Short-to-medium
	Use the outputs of these studies and policies for discussions with relevant government agencies at the centre and in the districts, leading to appropriate policy formulation	Short-to-medium
Traditional, drudgery prone processes	Use government and non-government channels to promote the testing and the use of women-friendly technologies that will automate manual processes: <ul style="list-style-type: none"> • Study best practices in these areas; • Identify key areas for intervention; • Engage relevant agencies to identify and test appropriate technologies; and • Identify and promote institutional and other arrangements to scale-up promising technologies. 	Short Short Short-to-medium Medium
The lack of women's institutions	Invest in establishing and strengthening women's collectives, worker groups and their federations both for aggregation and skill building	Medium-to-long
	Encourage the development of these institutions by advocating for appropriate government policies, such as concessions in tax, transport duties, and bank loans	Short-to-medium
Limited interaction of women with markets	Promote the setting up and strengthening of women's institutions	Medium-to-long

Issues/Challenges	Recommendation	Expected Timeline
	Advocate for women-friendly market policies such as relief in domestic and export tax, transport duties, and bank loan rates	Short-to-medium
	Build women's capacity on processing, marketing and trading	Short-to-medium
Weak brand identity of Nepal in international markets	Promote a focus on allo and cardamom for value up-gradation and market positioning:	
	<ul style="list-style-type: none"> Advocate for allo to be declared the 'national fibre,' which will help provide the required environment for research, production and marketing 	Short-to-medium
	<ul style="list-style-type: none"> Build an alliance between Nepal, Bhutan and India to promote varietal research, disease management, mechanisation and marketing in large cardamom 	Medium
	<ul style="list-style-type: none"> Track and strengthen the execution of Nepal's National Policy for Cardamom Exports especially for sanitary, phytosanitary and other export related certification 	Medium

BACKGROUND

Nepal is one of the least developed economies in the world with a per capita gross national income in 2016 estimated at USD 730¹. The unstable political climate since the overthrow of the monarchy, in 2008, has slowed progress on economic indicators and the damaging earthquake in 2015 proved to be a major setback for the country.

In Nepal, home-based workers (HBWs) produce goods or services for the market from within or around their own homes. Although they remain largely invisible, they are engaged in many branches of industry and represent a significant share of employment in some countries, particularly among women in South Asia. They are part of domestic and global supply chains. In 2008, the Labour Force Survey of Nepal estimated that there were approximately 920,000 HBWs in the country, the majority being women. These women HBWs make significant contributions to agricultural supply chains, including those pertaining to large cardamom and allo.

Nepal is the world's leading producer of large cardamom. The supply chain of this spice usually begins in the hills of eastern Nepal where home-based farmers (predominately women) tend and harvest the crop before it reaches the local bazaars, and then on to the processing units of Birtamod, where thousands of women work to sort, grade and prepare the spice for export. From the godowns of Birtamod the produce crosses over to India. According to data from the Trade and Export Promotion Center (Government of Nepal), in 2016-17, Nepal exported large cardamom, valued at NPR 3.8 billion (approximately USD 37.5 million).

Allo or Himalayan Nettle grows naturally across Nepal. The processing and weaving of allo has been a traditional activity in several indigenous and ethnic communities like the Rais, Gurungs, Sherpas, Magars, Kulung Rais, and Tamangs.



Allo products have been used by these communities in their daily life and for rituals during celebrations. Since 1999, the Micro Enterprise Development Programme (MEDEP) has worked towards strengthening and developing the allo value chain.

Despite being the subject of many studies in the recent past, data on both value chains remains limited, particularly for allo. For allo, this study had to depend entirely on data from previous studies, which typically focussed on small areas at a point in time, and did not cover large areas over longer periods. Statistics for allo harvesting; bark, thread and cloth production; and sales of allo-based products are not part of the agriculture production sets, handicrafts data or trade information. In the case of large cardamom, while district-wise production data exists and is accessible online from 2009-10 on (although not all in one place),² export data, whether aggregated or disaggregated is not easy to locate.³ Nepal's foreign trade statistics, published both by TEPC and Nepal Trade statistics, a World Bank service,⁴ provide some data on large cardamom trade. Yet, there is insufficient information on the movement of cardamom from the

¹<https://data.worldbank.org/country/nepal>

farming areas, through local collection centres, to the wholesale markets. Moreover, due to the absence of a unique HS (Harmonised System) code⁵ at the six-digit level (as it shares its HS code with green cardamom), global trade in large cardamom is difficult to trace. None of the published data includes women-specific information.

Studies that have been undertaken point to the critical role of women in both value chains, but a detailed, gender-specific analysis that examines their roles and incomes from either value chains is missing. This has hampered any discussion or specific recommendations to improve the income opportunities and working conditions for women HBWs in these supply chains.

In this scenario, this study is an attempt to improve our understanding of the condition of women HBWs in these two value chains, with the aim of recommending ways to improve it. The study covers small but important areas of production, processing and marketing for both allo and large cardamom. The study was proposed and led by **HomeNet South Asia Trust (HNSA)** with support from **SABAH Nepal**. Both organisations are deeply committed to supporting women HBWs and their enterprises. HomeNet South Asia Trust (HNSA) is a regional network of HBW organisations across eight countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. Founded in 2000, HNSA is

South Asia's first and only network for HBWs.

HNSA's goal is to build regional solidarity among HBWs and their representative organisations. It provides a platform for learning and sharing amongst them. It advocates for policies that include HBWs in national statistics and government programmes, and ensure workers' rights. By strengthening their collective voice, it works to ensure the visibility of HBWs, and to create better economic opportunities, while also securing their social security and developing the capacities of grassroot organisations. In the years since its inception, HNSA has emerged as a leading voice for HBWs in the region.

Established in 2008 with funding from the SAARC Development Fund and handholding and technical support from HNSA and Self-Employed Women's Association (SEWA), **SABAH Nepal** is a community-based, social business organisation that works towards strengthening the livelihoods of financially deprived and marginalised HBWs in Nepal. By enhancing and utilising their inherent skills to build their enterprise and by connecting them to markets and thus sources of income, SABAH Nepal helps improve their economic opportunities and also conserves Nepal's heritage and skills. It aims to empower these artisans and producers at each stage in the value-added supply chains.

² Production statistics by the Ministry of Agriculture and Livestock Development list annual data for total cardamom production from 2010 onwards in its annual publications. However, for many other crops comprehensive and much older trend data is easily available in one place. Similarly the Economic Survey of Nepal provides two to three years of production data in each of its annual issues. http://moad.gov.np/public/uploads/1142453195-STATISTIC%20AGRICULTURE%20BOOK_2016.pdf

³ Given the global status of Nepal as the top producer and exporter of large cardamom, the absence of comprehensive data is very intriguing. Trade and Export Promotion Centre statistics are available at <http://www.tepc.gov.np/>

⁴ Nepal trade statistics available at <https://wits.worldbank.org/CountryProfile/en/NPL>

⁵ The Harmonized System (HS) of tariff nomenclature is an internationally standardised system of names and numbers to classify traded products. The cardamom HS code is 090831.

STUDY OBJECTIVES

Overall, the report focuses on the role of women in the supply chain, the working conditions of HBWs, and the bottlenecks they face. Specifically, it aims to:

- a. map the supply chains of large cardamom and allo fibre from raw material to the finished product, and into the local and export markets;
- b. identify the roles of women and men HBWs and their working conditions in the supply chains; and
- c. identify bottlenecks in the supply chains and solutions which can help women home-based workers expand their economic gains.

METHODOLOGY

A desk review of the literature on the allo and cardamom value chains and conversations with SABAH Nepal informed the design of the primary data collection over the area covered by this study. The literature review was guided by the study objectives (listed in III) and drew its findings and conclusions from these. Notably, the review found that assessments of the role of women in the two value chains were severely limited in the literature. In fact, there was an almost complete absence of gender-specific studies.

Study area identification: Project interventions and research on the two products, large cardamom and allo; have been focussed on Taplejung and Sankhuwasabha districts, as these are important growing and processing areas for cardamom and allo, respectively. In Taplejung, SABAH Nepal supports the processing of cardamom into products such as tea powder. Its community facilitation centre (CFC) for allo processors in Sankhuwasabha buys products and sells them through its outlets. It has in-depth experience and knowledge about these areas and the communities that reside there and has been working to organise women HBWs involved in these value chains to improve their incomes and working conditions.

Primary data collection: At the start of the study, SABAH Nepal conducted a detailed stakeholder mapping for both



allo and cardamom. Primary data was collected by HNSA with support from SABAH Nepal through structured interviews with participants in the value chains, including producers, collectors, processors, traders, sellers and, their groups if any. The study also documented the views of supporting government, trade, industry, non-government, experts and donor agencies. The tally of those interviewed is as follows:

- Cardamom respondents: 39 farmers, 1 farmer group, 4 traders, 3 processors, and 10 experts including support institutions.
- Allo respondents: 36 collector-processors, 4 traders and shop owners, 2 trader/marketing groups, and 14 experts including support institutions;

a. Literature Review

Of the several publications reviewed, only one study (Sony et.al. 2016) focused on women working with large cardamom from the perspective of the gendered risk of poverty. Most of the studies did not specifically mention the wide prevalence of women in the large cardamom value chain (unlike the studies on allo), only referring to their predominance in agriculture. "In Nepal's agricultural sector, around 90 per cent of the farmers are women" (Government of Nepal, 2017, Nepal National Sector Export Policy for Large Cardamom 2017-21 or NNSEP). In the 72-page Government of Nepal report (2015), there is a lone mention of women when describing an improved drying technology: "Double drum dryer... involves minimum drudgery so that it can easily be operated by the single women." Similarly, even though women are the major stakeholders in this value chain, their absence is glaring in the Timsina and Pandey (2012) study that states one of its "specific objectives...(is) to identify the existing status of value chain stakeholders". Women are mentioned as being predominantly (60%) involved in harvesting operations, and almost at the end of the study in relation to large cardamom providing them employment.

Indicating the lack of gender-focussed and women-specific research in the cardamom value chain, Sony et.al state, "...there is a research gap in gender relations, pertaining to the division of labour of men and women in cardamom farming ... Additionally, the issue of women's engagement in cardamom farming for income and its impact in their livelihoods, particularly in relation to different ethnic groups,... (needs to be) nuanced". As noted earlier, "Global trade of large cardamom is difficult to trace due to the absence of a unique HS code at the six-digit level." Data from India and Pakistan, the two major importing countries that record large cardamom under their national tariff line codes, sheds some light on the trends in world

trade in this commodity (Government of Nepal, 2017, NNSEP).

Some of the key relevant highlights from the literature review are:

1. *Nepal is the largest producer and exporter of large cardamom in the world.*

Nepal's annual production ranges between 5000-6000 MT spread across 41 of its 75 districts (Sony and Upreti, 2017), and about 98 per cent of the product is exported (Bhattarai, 2016; Government of Nepal, 2015). India is the major export destination; over 90 per cent of Nepalese production finds its way there (Sony and Upreti, 2017). Notably, global production, including Nepal's output, has been declining in recent years, due to crop disease largely attributable to the changing climate.

2. *Large cardamom is a lucrative value chain and an attractive livelihood option for the poor.*

Large cardamom is an expensive spice and involves substantial returns for the actors at each stage in the value chain, from the farm gate to the consumer. Dried large cardamom capsules are used as a spice in various dish preparations, food essences, perfumes, and medicines. It is recognised as a "Major commercial crop of Nepal with increasing international demand" (Chaudhary and Vista, 2015). "Although the market is relatively small and concentrated in India and Pakistan...it is a major cash crop for more than 67,000 farmers in (Nepal's) hilly regions and 40 wholesalers in Birtamod, the regional trading hub" (Government of Nepal 2017, NNSEP; Singh and Pothula, 2013; Sony and Upreti, 2017). "More than 95% of the production of large cardamom comes from individual farmers in all districts of Nepal". Apart from being high-value and low-volume in nature, "It is... cultivated in marginal and degraded slopes..." (Timsina and Pandey, 2012). "Cardamom production is effective in the eastern mid-hills creating employment for rural people..."

V LARGE CARDAMOM

Cultivating large cardamom for export can help alleviate poverty...” (Sony, et. al., 2016).

3. Women are important but unacknowledged actors in the value chain.

Several studies have documented the roles of the players in the value chain (Singh and Pothula, 2013; Sony and Upreti, 2017; Government of Nepal, 2015).

- Actors include: farmers, collectors, processors, traders at the local and district levels, wholesalers, and exporters. The value chain is supported by government institutions under the ministries of agriculture development, trade and industry; and the Cardamom Development Centre; farmer cooperatives; and business entities like chambers of commerce and industry and federation of entrepreneurs. Most studies reviewed did not specifically mention women as value chain actors and the role they play.
- Processes: Various farming operations precede harvesting, which is followed by several processing steps such as, “...curing, tail-cutting, and grading. Curing is carried out by the farmers, and the remaining steps are done by wholesalers...” (Singh and Pothula, 2013). Exporters take care of transportation of the produce. “... it is mostly women who work in the processing centres to carry out the value addition work of the commodity”, cleaning, cutting and grading large cardamom (Sony, et. al., 2016).

4. Though women are disadvantaged in the value chain, cash earning potential is higher in cardamom than the other livelihood alternatives available to them.

“Women in the large cardamom sector face low wages and repetitive, labour-intensive tasks, especially at the processing stage”. Though they participate fully in the value chain, “...not all women’s tasks are economically productive...As their tasks are usually more tedious and time-consuming, this leads to time

poverty and lost opportunities for women...” (Government of Nepal, 2017, NNSEP 2017-22). However, “...though women are not a part of the market...their participation in large cardamom cash crop farming has helped them earn some share compared to alternative work such as tailoring or even selling other products such as oranges or broom grass... Engagement in cash crop farming has empowered women financially and socially ...For marginalized communities (including landless Dalits) the impact is even more pronounced.....” (Sony, et. al., 2016). Sony and Upreti (2017) found that women whose income had declined due to a decrease in cardamom production in recent years reluctantly took up jobs as maids.

5. The cardamom value chain actors in India have higher margins than those in Nepal.

Even though Nepal is the largest producer and exporter of large cardamom, its value chain actors work on much lower margins than those in India (Table 2).

“Indian intermediaries capture the biggest share of earnings because they control most of the trade, particularly logistics. Despite

notable export prospects, this monopolistic situation hinders export development because Nepali exporters have limited leeway and thus distribution of the benefits throughout the sector is limited” (Government of Nepal, 2017, NNSEP). It is interesting to note that farmer margins are higher than those for traders and wholesalers and quite close to exporters (Table 2). This is an unusual scenario when compared to most agriculture value chains globally and needs deeper exploration.

Table 2: Price and Margins of Cured Cardamom Capsules (USD)

	Farmer	Local trader	Wholesaler	Exporter
Nepal				
Price/kg of cured capsule	2.47	2.66	2.85	3.17
Margin	0.15	0.11	0.02	0.19
India	Farmer	Aggregator	Wholesaler	Retailer
Price/kg of cured capsule	12.16	13.38	16.26	20.33
Margin		1.22	2.71	4.07

Note: Nepal data is from the Ministry of Agriculture and Cooperatives, 2008
 Indian data is from SFAC (Small Farmers’ Agribusiness Consortium) 2012
 Source: Singh and Pothula, 2013

6. International prices are determined by traders in India with Nepali actors having almost no role to play.

“Indian intermediaries ...control most of the trade, particularly logistics” (Government of Nepal, 2017, NNSEP). This is because Nepal has no mechanism to determine prices. “Due to non-existence of any central marketing facility or an auction market in the country...the price of the commodity is dictated by the terminal markets in India” (Timsina and Pandey, 2012). This leads to the “inability of Nepali traders to react swiftly” as they have no direct trading links with the final buyers (Government of Nepal, 2017, NNSEP) and, farmers in Nepal, “are compelled to sell their products at prices set by local wholesalers” (Singh and Pothula, 2013).

7. Upgrading traditional crop and business practices are critical to sustain the value chain and improve returns.

Some of the main issues affecting the large cardamom market are the prevalence of crop disease and Nepali traders having to export to Indian traders without much say in prices. The studies we reviewed suggest several measures to tackle issues in the Nepali large cardamom value chain, again none specifically aimed at helping women actors.

- The use of traditional practices across the cardamom value chain restricts any rapid improvement in productivity and quality. There is an urgent need to widely establish better plant varieties, production protocols, drying techniques and grading methods. (Government of Nepal, 2017, NNSEP; Singh and Pothula, 2013). The farmers themselves listed these as the top priorities to help improve and standardise the quality of Nepali output, and thus increase their earnings (Bhattarai, 2016).
- The Nepali trade and business ecosystem is ridden with challenges that impact its ability to generate better returns (Government of Nepal, 2017, NNSEP; Bhattarai, 2016). Some

of these are:

- o The lack of appropriate lab-testing facility for sanitary and phytosanitary certification necessary for exports;
- o Insufficient knowledge about export documentation among Nepali traders;
- o Limited transportation facilities to transport large cardamom from Nepal to India; and
- o Weak direct links with Pakistani importers.

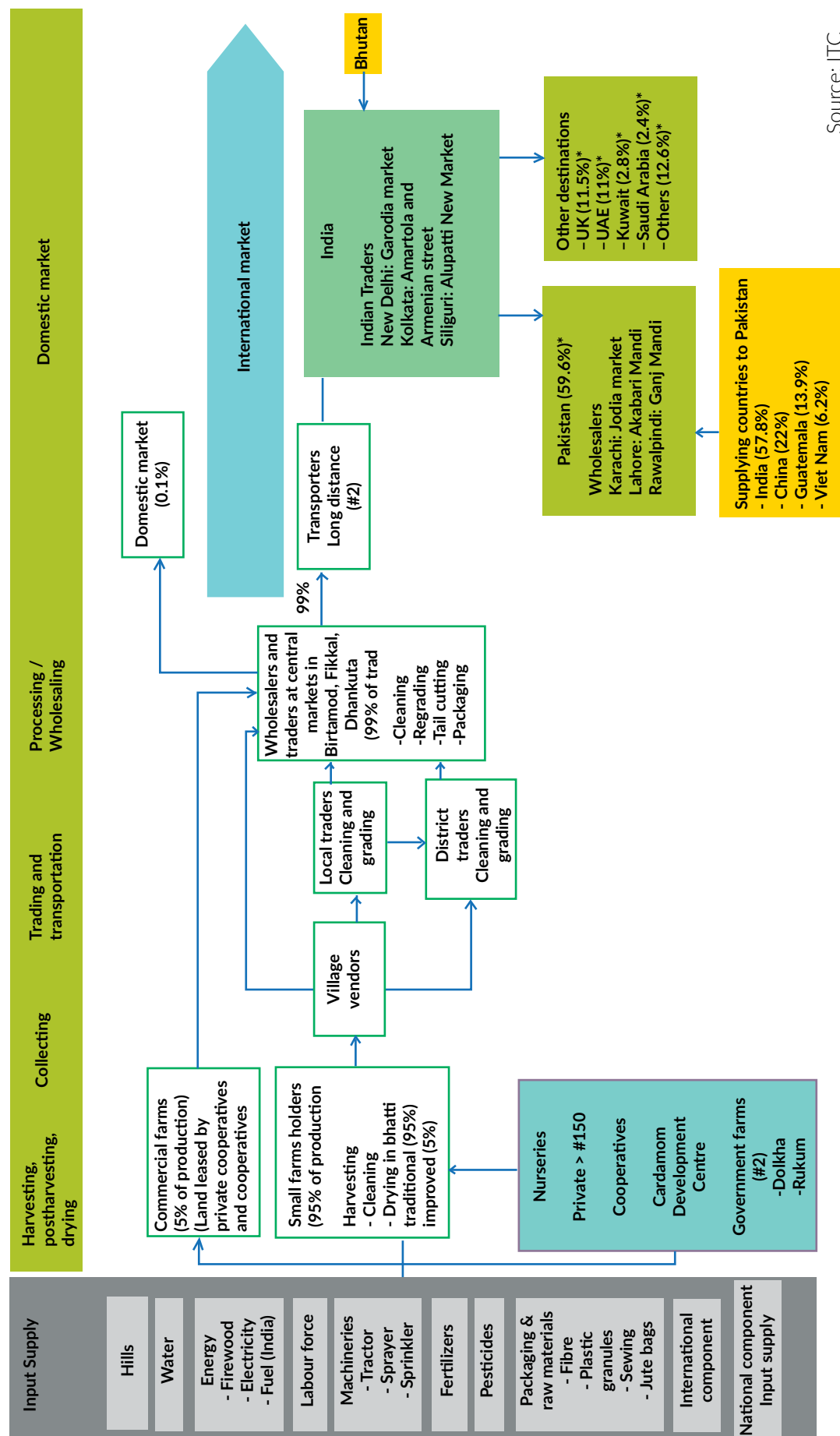
- In a well-entrenched, well-established pods markets, product development beyond cardamom pods to “derived products such as cardamom seeds, grinds, oils, (and oleoresins) or natural dyes could help develop new market opportunities” for Nepal (Government of Nepal, 2017, NNSEP).

b. Women in the Cardamom Value Chain

Around 90 per cent of the farmers in Nepal are women (Government of Nepal, 2017, NNSEP). Family members, both men and women, grow, harvest and dry cardamom, spending anywhere from 30 to 60 man days over four months (June to September) every year. All this is home-based work. Cardamom is grown on marginalised and degraded lands by farmers, whose major share of cash income comes from this crop. Soon after harvesting, cardamom is dried and packed into sacks either to be stored till the price reaches an attractive level or to be sold to local traders. Local traders, who are mostly men, collect and take the produce to the bigger market hubs from where it reaches Birtamod, the main point for final processing, which involves drying, cutting of cardamom tails, grading, sorting and packaging for export. Here, a large number of women are involved in processing, which usually takes place at the factory premises of the traders. Female traders are rare throughout the chain, as they are largely involved in the farming and processing functions.

LARGE CARDAMOM

Source: Nepal National Sector Export Policy: Large Cardamom, 2017-21, GoN and ITC (Pg 33)



Source: ITC

c. Findings from the Field

Survey area: Taplejung District

- **Hamlets:** Bajogara, Sattaldada, Dadagau, Panthabari, Chautara, Lakuridada, Tapetak, all around Phunling Bazaar, which is Taplejung's main market. Each hamlet has a few households, typically involved in similar trades (like livestock rearing or vegetable farming). Hamlets like Sattaldada and parts of Bajogara are closer to Phunling Bazaar, which gives them access to the main road, basic healthcare facilities and the market. In these areas, access to phone connections and even phone internet is good. However, as you climb down the hills to Dadagau, Panthabari and other hamlets, and farther away from Phunling, access to basic amenities becomes scarce. From these remote hamlets, reaching Phunling Bazaar and the nearest road involves a trek of 30 minutes to an hour. After the harvest, the farmers have to travel to Phunling to connect with traders, and to buy their farming inputs. The only technology that villagers have access to in these areas is the radio.
Phrumbu: High up in the hills, Phrumbu is a 90-minute drive from Phunling Bazaar, on badly paved roads. However, many households here have easy access to a road, although it is fairly basic. Farmers in Phrumbu are exclusively involved in large cardamom farming, and produce more output than the neighbouring hamlets around Phunling Bazaar.

• Market/Trade hubs

Phunling Bazaar: As the Taplejung District headquarters, this main bazaar area is home to basic hotels, government offices, and several shops. It has good electricity and phone connectivity.
Phidim: The district headquarters of the Panchthar District, Phidim is a three-hour drive from Taplejung. It is well-connected to roads and

other basic amenities.

Birtamod: The main cardamom-trading market, Birtamod is a busy, well-equipped town close to the Nepal-India border.

- **Offices:** Municipality, Environment Conservation and Development Forum, District Office of Small and Cottage industries, District Agriculture Office, and the District Chapter of the Federation of Nepalese Chambers of Commerce and Industry

The study team also met experts from Trade and Export Promotion Centre, FNCCI and ICIMOD in Kathmandu for information on the area surveyed.

Survey Period:

June 21 to July 4, 2018

Survey conducted by:

HNSA with support from the SABAH Nepal team

Respondent profile

39 farmers: 33 females and 6 males

1 farmers' group representative: male

4 traders: 1 female and 3 male

3 processors: all female

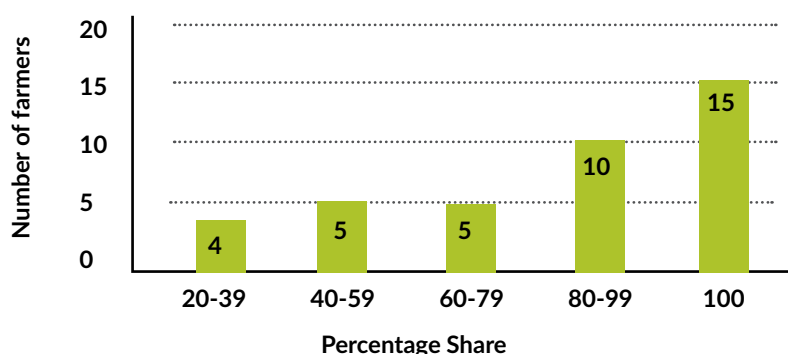
10 experts (government, trade and multilateral support institution): 1 female and 9 males

Findings

1. Cardamom is a major source of cash income for farmers involved in its production: In the surveyed area, farmers are largely involved in dairy farming, livestock rearing and vegetable growing apart from growing cardamom. Over 75 per

cent of the 39 farmers interviewed reported that large cardamom accounted for more than 60 per cent of their cash income; for 38 per cent, cardamom was the sole cash-earning product (Figure 1).

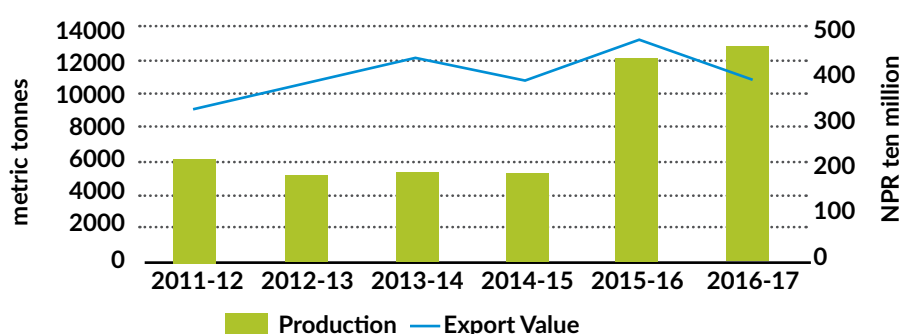
Figure 1: Share of Cash Income from Large Cardamom



2. Farmer incomes are vulnerable to the volatility of international markets, crop disease and rising input prices: International commodity markets are volatile and prices fluctuate as supply and demand change. Rising demand in the past increased price which led to increase in cardamom production (Fig. 2). This increased supply puts downward pressure on price if demand is not rising at the same pace and reduced total export value of cardamom between 2015-16 and 2016-17, evident from Fig. 2. As prices fall improving productivity, efficiency or expansion in land under cultivation can help reduce the impact of the fall on farmers. Rising input costs and crop losses due to disease exacerbate the adversity faced by farmers.

The majority of the respondents reported that the total income from cardamom this season was the same as in the last. Of the six farmers that reported a higher income this season, five attributed the rise to an increase in the land under farming and one to the use of new seedlings. The main reasons cited for the stagnant or declining income were: lower market prices for large cardamom; plant disease leading to crop loss; higher input prices; and expenditure on larger quantities of inputs. Other common reasons were lower productivity; new seedlings yet to yield peak production (four respondents); and a reduction in the area under production (one respondent).

Figure 2. Large Cardamom Production and Value of Exports in Nepal, 2011-17



Source: Economic Survey of Nepal, various issues

3. Women are involved in all the farming operations but their engagement with the markets is minimal; in processing, they function almost like wage labourers: Women have always contributed significantly to the large cardamom value chain, but with the increasing migration of men, their role has become even more important. Still, they are not involved in the buying of inputs or sale of crop. During our data collection they struggled to estimate the costs involved, and were unsure about prices; men, on the other hand, were clear and confident in sharing information on costs and prices. Once cardamom is harvested, it is the men that keep track of prices and markets, deal with traders, and transport cardamom for sale

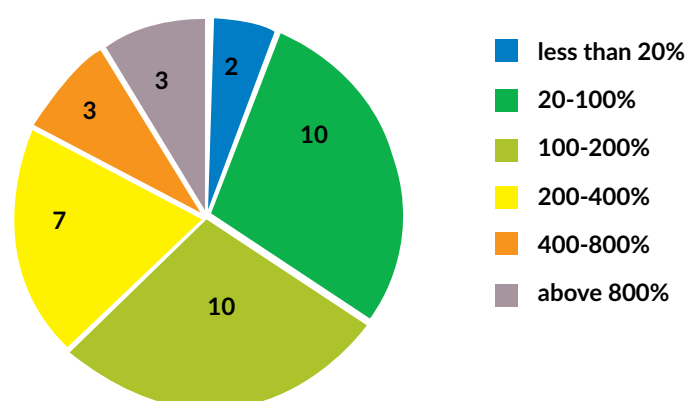
to selected markets. Women have less time as they are responsible for their home chores and live in a socio-cultural milieu where moving around is not easy. Further, women have little say in the post-production processes of trading and processing. Even though they do the final processing, they have little control over what they receive as payment and function largely as daily wage labourers. Daily wages are nowhere commensurate with the value they add to the produce at this stage. For instance, though this may be premature, as the initiative has just started, even the women respondents processing for Kanchenjunga Himalica Agriculture Udyog did not see any opportunity to move up in the value chain as it exists currently.

4. Even though farmers feel they do not get good prices, most of them reported profits between 20 and 400 per cent: Lately, cardamom prices have declined reducing farmer margins in general. Most of the farmers attributed the falling prices to the fact that the quality of their produce was below par and shrinking demand in recent years (Figure 3). Still, they are able to sell all of their produce and margins are still high enough for most of them to continue cultivating cardamom. Of the 35 farmers who shared information on costs and sales, six reported profits over 400 per cent and two made profits below 20 per

cent. Profit for the remaining 27 farmers was in the range of 20 to 400 per cent (Figure 3). Declining prices have cut into profit margins, which had risen rapidly with rising international prices.

The reasons cited by the farmers for the wide range in profit margins include varying productivity of land, proximity to markets which impacts transport costs, cost of inputs, and proximity of irrigation facilities – irrigation costs are low if water sources are close to the cultivated area, otherwise the installation of water pipes increases cost.

Figure 3: Farmer Profits from Large Cardamom Cultivation



Pie segments indicate number of farmers reporting a profit.
Total number of responding farmers = 35

5. Farmers are unable to command better prices locally:

Farmers are aware that a better quality of cardamom would command higher prices outside their local markets. They also know that they would need bigger pods dried at the right temperature, more efficient tail-cutting and sufficient marketable surplus for them to be able to receive higher prices. However, even if one of these conditions is not met, they are forced to sell to local traders who do not pay extra for processed cardamom and are in all probability charging farmers high interest rates on the loans they have advanced to them. Moreover, prices in the non-local markets have to be high enough to cover the transportation and tax costs of moving output outside the local area. Notably, this study did not find any significant difference between the cardamom prices received by Nepali and Indian farmers, as suggested by the studies covered in the literature review. The data published on the website of the Spices Board of India indicates that similar prices prevail in both countries.⁶

For farmers to be able to command better prices the top priority would be to address their heavy dependence on traders for finance

and the low quality of cardamom production. In the absence of easy formal financing,⁷ which requires collateral and entails an onerous bureaucratic process, cooperatives are being experimented with to provide finance. However, these initiatives are still nascent, and the demand for finance is far higher than they can service with their deposits.⁸

Low prices are also the result of lower-grade variety of cardamom grown in this area, and the prevalence of crop diseases without much support from government or specialised agencies.⁹ Modern dryers are rare and have been made available only under specific NGO projects. Further, weak skills in tail-cutting, among farmers in Taplejung, results in low output while, in Birtamod, workers are more efficient, managing to process 4-5 times more cardamom in the same time as the local farmers. However, this might be easily overcome with training and experience. What might be more difficult to surmount is the challenge of achieving a minimum marketable surplus that is needed to convince local traders to pay a higher price for better-quality produce or to be able to make the trip to the Birtamod market cost-effective.

6. Disease, water and finances are the big constraints, which farmers believe can be overcome with technical and policy support: Of all the constraints listed by responding farmers, plant disease stood at the top:

77 per cent of the responding farmers mentioned disease as their major constraint. The second constraint listed was irrigation, as indicated by 46 per cent of the farmers: expenses on water and some of the proven

technologies like the modern dryer can be met if the farmers have easier and affordable access to finance. Other constraints were the need to improve the quality of the seeds and seedlings, enhancing skills and expanding their knowledge base, for which farmers expected help from the government or specialised institutions. Labour costs, which had risen a few years ago when cardamom price soared, have not come down, thus adding to

⁶ <http://www.indianspices.com/marketing/price/domestic/daily-price?v=archive&category=large>

⁷ "I borrow from the trader and do not like to approach the bank because of the bureaucratic process and the lack of collateral," said Ambika Sigdel of Bajogara.

⁸ Sarita Limbu of Chautara and Tulsa Karki of Phrumbu reported they were turned away because the cooperative had already loaned out all its funds.

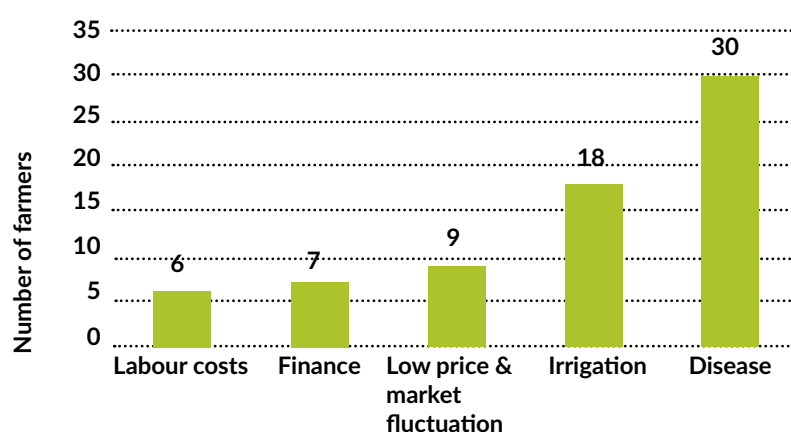
⁹ Narendra Maden Limbu of Bajogara suggested that, "Technical resource persons are needed who can help ensure better crops with their expertise".

input costs. Interestingly, though not surprisingly, markets seemed to be the least of the problems cited by the respondents, even though about a quarter of them felt constrained by low prices and market fluctuations. It is easy to sell any amount of cardamom produced; prices may not always be what is expected but, as mentioned earlier, are high enough for farmers to continue cardamom farming.

During discussions on overcoming these constraints, interestingly, 87 per cent of those citing plant

disease as a major constraint felt it was surmountable within two to five years; about 13 per cent felt more than five years would be needed to better manage plant disease. The general opinion was that within two to five years, water and finance issues could be resolved with technical and policy support. About low prices, market fluctuations and labour costs, farmers either had no idea or felt these would take more than five years to normalise.

Figure 4: Constraints Facing Large Cardamom Farmers



7. If offered better prices, over 40 per cent of the farmers would like to move up the value chain in the next 1-3 years:

About 60 per cent of the farmers indicated that they wanted to continue to farm large cardamom, and had no plans to add other related activities that might give better returns. Of the rest, one respondent, Lila Devi Dahal who is part-owner of Himalica, wanted to process cardamom into masala, make tea products, and package and sell these. All the others wanted to sell their produce after the sorting and/or the tail-cutting stages. Farmers did complain that even after sorting and/or tail-cutting, traders do not offer them higher prices, citing low volumes as the reason. Moreover, to improve their efficiency in tail-cutting, farmers would require training and more experience. The desire of many farmers to move

up the value chain indicates that the data on margins may not reflect the current reality, certainly not in the study area. Farmers would like to expand their activities because they see margins improving just by moving from production to processing. Even if they continue producing cardamom, they would like to process and package their product before selling it, to be able to access the higher margins associated with these functions. Farmers reported a lack of skills as the major constraint to their moving up the value chain; the other constraints mentioned were lack of knowledge and capital. Unless these constraints are removed and traders are ready to buy lower volumes of tail-cut or graded cardamom at higher prices, there is no incentive for farmers to shift into activities that move them up the value chain.

8. Farmers wish for better drying, water use, and farming technologies:

Large Cardamom farmers mainly need labour, water, fertilisers and pesticides to manage diseases, drying mechanisms, transport and finance. Most of these are available through their local markets and the traders they sell to. The traders are known to advance loans to farmers in return for the exclusive rights to their produce at the time of sales. Traders also provide storage facilities for cardamom, if the farmer wants to wait till prices reach the desired level.

Though there is no problem in the availability of inputs – Chandra Kumari Limbu of Phrumbu even reported that, “better quality inputs are now available” – it was the unanimous view that input costs have risen. Farmers are particularly troubled by high labour costs: these had risen with high cardamom prices, but have not come down in recent years with falling cardamom prices. The cost of borrowing from traders, too, does not seem to be in favour of farmers; traders have the upper hand and can cover price risks, which in all likelihood they pass on to the farmers. This issue, however, needs deeper exploration for better understanding. Farmers who need credit have little negotiating power with traders, as they have no other option to easily access funds. The advantage is that they can store their produce in the trader’s facility, and can sell anytime they are comfortable with the price.

Discussions on how to tackle these drawbacks in the next five years drew several ideas from farmers. Among the suggestions, technology for drying was on top as a way to reduce time, and improve quality and price. Better irrigation management, soil testing and farming techniques featured next. Improving processing and skills to produce a better quality product for the market is well recognised as important. Some farmers felt that



input prices could not be reduced, hence, only higher cardamom prices could raise their incomes. About 15 per cent felt that price regulation would also help.

Women’s involvement in processing is largely limited to tail-cutting:

Much of the tail-cutting happens at Birtamod, the wholesale market and export point. Women are mostly involved in this activity which is tedious, time-consuming and poorly paid. Enterprises processing cardamom into higher value- added products like spice-powder, cardamom fibre and cardamom oil are small in numbers. Himalica, which produces cardamom spice powder, employs women for production and marketing, while at Chandan Fibre, women make yarn, weave and create cardamom-fibre products. Though these women employees may not be making a lot more than the daily-wage tail-cutters, both offer women farmers a chance to move up the value chain. Notably, eight of the 13 investors in Himalica are women farmers. Chandan Fibre is owned by Ms. Maya Gurung, and it reports an annual profit of around 140 per cent currently. These are promising initiatives for women, but their progress will depend on finding stable and sustained markets.

Kanchenjunga Himalica Agricultural Udyog (KHAU)

Started about a year ago, the Kanchenjunga Himalica Agricultural Udyog (KHAU) is owned by 13 farmers, eight of whom are women. It is a by-product of the Himalica Project, supported by ICIMOD and SABAH Nepal, but farmers involved in the micro-enterprise also contributed NPR 10,000 each to the initial investment of about NPR 900,000 and produce large cardamom based products.

KHAU employs five women, and this year (2018) they produced around 90 kg of cardamom spice mix and tea. Each worker produced 20 kg of product in three days and the enterprise reported a turnover of approximately NPR 5,50,000 (approx. USD 5,300). For the mix, they sourced 200 kg of large cardamom from local farmers from the Sattaldada Farmers Group.

For now, the company operates on an order-to-order basis. But in the coming years, it is looking to generate more stable employment for its workers, while also generating more income opportunities in a district where jobs are hard to come by. With support from ICIMOD and SABAH their capacity for production and packaging has been strengthened, but marketing is still a weak area which needs further support and investment. Yet, they are optimistic about future growth and are planning for advanced training in packaging. Women's involvement in processing is largely limited to tail-cutting: Much of the tail-cutting happens at Birtamod, the wholesale market and export point. Women are mostly involved in this activity which is tedious, time-consuming and poorly paid. Enterprises processing cardamom into higher value-added products like spice-powder, cardamom fibre and cardamom oil are small in numbers. Himalica, which produces cardamom spice powder, employs women for production and marketing, while at Chandan Fibre, women make yarn, weave and create cardamom-fibre products. Though these women employees may not be making a lot more than the daily-wage tail-cutters, both offer women farmers a chance to move up the value chain. Notably, eight of the 13 investors in Himalica are women farmers. Chandan Fibre is owned by Ms. Maya Gurung, and it reports an annual profit of around 140 per cent currently. These are promising initiatives for women, but their progress will depend on finding stable and sustained markets.

9. Traders are at the top of the value chain with the largest profit margins: In the volatile cardamom market, traders claim to bear the risk of price fluctuations, but they can

partially offset these risks through the loans they advance to farmers. Even though prices have declined in recent years, they are still high enough to render substantial profits for traders, after covering the costs of storage, drying, transportation and credit to farmers. Of the four traders interviewed, two shared information on their annual sales and costs, and reported profits above 700 per cent. As traders, their key challenges are cash flow, access to credit and price fluctuations. There are very few women among the traders and the one woman who was interviewed runs a grocery shop in the main market, Phunling Bazaar. She ventured into cardamom trading a few years ago, when farmers started asking her to take cardamom as payment for goods purchased from her shop.



V LARGE CARDAMOM

10. A better understanding of the cardamom value chain will require more complete information:

The lack of full and accurate data on cardamom volumes, from production to local traders, large traders and export, hampers a complete mapping of

this value chain. Anu Joshi of ICIMOD said that, "In a complete form the data about its value chain is not available. What is known is that from the farmers who grow the cardamom, it goes to the local traders, and then to Birtamod".

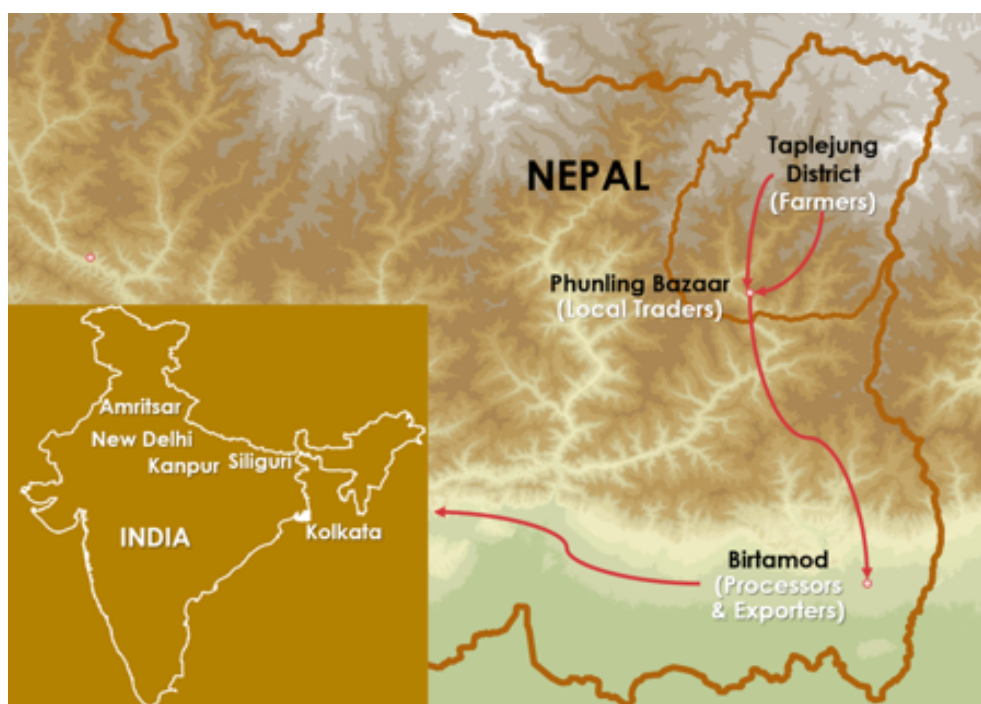
Table 3: SWOT Analysis for the Large Cardamom Value Chain With Focus on Women HBWs

Strengths	Weaknesses
<ul style="list-style-type: none"> Nepal is the world's largest producer and exporter of large cardamom. It is a high-value cash crop that enjoys a lucrative international market. Women HBWs dominate the farming and processing operations in large cardamom. The Nepal government has a national policy focused on the export of large cardamom. 	<ul style="list-style-type: none"> Poor export infrastructure – sanitary, phyto-sanitary and transport - hampers Nepal's ability to directly export its produce, resulting in little control over prices. The lack of trend data on production, processing, export and prices, and a gender-specific analysis of the value chain limits robust planning and design of interventions. Women are disadvantaged by returns or wages that are not commensurate with the value they add, their relative isolation from markets, and traditional practices that involve hard work and drudgery. The inability to prevent and manage crop disease leads to heavy losses for farmers. Farmers' dependence on traders for finance has led to a skewed distribution of profits in favour of traders. Farmers are vulnerable to volatility in international markets, with little hedging of risk or insurance. Low quality of cardamom produced resulting from poor processing.
Opportunities	Threats
<ul style="list-style-type: none"> Building good quality data sets to help design well-informed initiatives and track the sector's progress Setting up a system of regular knowledge sharing among India, Nepal and Bhutan, on varieties, production practices and disease management to improve production and reduce losses. Modern and scientific methods of farming, public investment in irrigation facilities, and mechanization of manual processes to improve production, productivity and quality of final produce. Formal financing, from Government-backed financial institutions, to reduce farmer's dependence on high cost loans from local traders. Capacity building and organizing, in processing for women home-based workers to add value to their product –spice powder, tea, fibre based products, etc. - and command better prices. Minimise farmer vulnerability through improved productivity, reduced crop losses, diversification of product, value addition, and exploring new markets. Build farmer capacity in harvesting and processing of cardamom to ensure premium quality. 	<ul style="list-style-type: none"> Climate change triggering crop disease leading to crop losses Market capture by "fake" cardamom from China and Vietnam

Following is the value chain for large cardamom as determined by this study. It highlights the various steps in the value chain and shares information on the role of the corresponding value chain actors:

Farmers	<p>Farmlands are mostly nurtured and harvested by women, home-based farmers. Women are supported by their husbands, sons and other members of their family. They also hire farm labour.</p> <p>The women are engaged in activities like planting, weeding, adding manure, watering, and harvesting. They do not interact with the market.</p> <p>In Taplejung, cardamom farming is the chief income generation activity for most farmers. There is no sense of individual income. All earnings are used to meet household expenses.</p>
Local Traders	<p>Local Traders are mostly men. In Taplejung, the local trade body, reports that there are only two women traders in the district.</p> <p>Local Traders offer easy, cash loans to farmers. They also offer storage facilities. They report profits of 15 - 20% but these figures are possibly under-reported</p>
Traders In Birtamod	<p>Birtamod, a town that's close to the Nepal-India border, is the main trading hub for large cardamom.</p> <p>Here, big traders, mostly men, buy large cardamom from across Nepal. In Birtamod too, traders report profits between 15 -20%.</p>
Processors	<p>Many big traders , in Birtamod, own processing units. Here workers are mainly women and one trader suggested that there are over 1,000 women processors in Birtamod.</p> <p>At the processing unit, women spend around 8 hours a day in activities like sorting, grading, and tail-cutting. They earn around NPR 350 a day, a little more than a daily wage labourer.</p>
International Traders	<p>The Birtamod traders largely sell to traders in India. Around 98% of the large cardamom produced in Nepal is exported to India. From Birtamod, the large cardamom travels to markets in New Delhi, Amritsar, Siliguri, Kanpur, and Kolkata.</p>

Below is a Geographical Representation of the Large Cardamom Value Chain





a. Literature Review



Allo or Himalayan Nettle, which grows naturally across Nepal, is a non-timber forest product, with significant potential to impact poverty (Shah, et.al. 2017). MEDEP has been supporting allo producers and processors since 1999 (UNDP, 2010) and has targeted it as one of the main commodities whose value chain requires strengthening “to support higher value addition and enhanced opportunities for income generation for the participants” (MEDEP, 2010).

Several indigenous communities like Rais, Gurungs, Sherpas, Magars, Kulung Rais and Tamangs in Nepal have traditionally processed allo, and used allo cloth and products for rituals, in celebrations and in their daily life. The products include ropes, clothes, bags for animal feed, and firewood (UNESCO, 2017; Adhikari et. al., 2018). Most of these communities are at the lower end of the economic scale with limited livelihood options.

Over the last two decades growing consciousness about natural fibres has led to increasing international demand for products based on these. Allo is now recognised as a top natural fibre from Nepal as its bark consists of fibres that are strong, smooth and light and also one of the longest natural fibres: “There is a high demand for clothes made from woven nettle in national and international markets, and they are a prime Nepalese souvenir product” (ICIMOD, 2015; Subedee et al, 2017). Carpets using allo fibre are also in demand, which Nepalese carpet

producers struggle to meet, because of the lack of sufficient quantities of good quality allo yarn (MEDEP, 2014). The growing demand has expanded the livelihood opportunities for communities who have traditionally collected and processed allo. “Economic importance has led to higher demand of ‘allo’ products. Hence, the residents of Darchula and Sankhuwasabha districts have started to harvest it extensively” (UNESCO, 2017).

The allo value chain has been the subject of several studies in recent years, but most of those reviewed focused on one allo-growing area. The exceptions are the studies by MEDEP (2010) which examined the country-wide potential of allo and by the NFA (2014) that analysed the carpet industry, most of which is concentrated in Kathmandu. Most of the other studies were conducted prior to 2014 (only three were more recent), so they lacked recent data, but also did not include trend data on most macro-indicators like allo collection, production of yarn and cloth, and exports. The studies were largely based on primary data from surveys, and discussions with value chain actors individually and collectively. The sample sizes were relatively small, with fewer than 100 respondents, probably because of the remoteness of the field sites which adds to the time and cost of the research.

It is notable that, while most studies mention the predominance of women in these value chains, few have attempted a gender-based analysis of the issues and challenges they face, or of the differences in the roles, challenges and futures facing men and women, the exceptions being Lamichhane (2016) and Adhikari, et. al. (2018). Our review thus indicates the need for research that is explicitly women-oriented and gender-focused, so that future strategies are aimed at enhancing the returns for women and moving them up the allo value chain effectively.

Some of the recurring themes related to allo in the studies we reviewed are:

1. Allo grows abundantly in the country, but much of its potential in creating employment and producing allo-based products remains untapped.

Broadly speaking, only a fraction of the available allo is harvested due to poor accessibility of the growing areas - farmers have to walk for several hours to reach these areas, primary processing of the raw material involves hard labour, and the returns are relatively low. A larger harvest would increase the quantities for processing, and hence employment in the process. However, there is little clarity on the magnitude of this increased harvesting potential. Several studies have tried to estimate the country's allo processing potential¹⁰ but none contain trend data on the actual annual harvesting of allo over a period of five years or more.

2. There is a predominance of women in the production chains, but mainly at the low-return levels.

Women participate extensively through all stages of the value chains for allo, from collection and processing of the raw material to making products from cloth, but their involvement is significantly larger at levels where returns are lower compared to trading.

Mostly, the women and ethnic minorities are involved in all the stages of collection and processing (Lamichhane 2016, UNESCO 2017, Gurung et al 2012, ICIMOD 2015). Allo collection and processing are well-integrated into women's routines (MEDEP, 2010). Most of the allo enterprises are run and managed by women or groups of women (Lamichhane 2016, NFA 2014). It is notable that, "Women's... involvement is significantly

higher in lower levels of the value chain such as harvesting, primary processing, yarn producing and weaving whereas men's involvement is significantly high in trading (village-level as well as in district-level trading). Lack of market information, low bargaining power and access to finance prevents women getting into trading business." (Lamichhane, 2016).

3. The use of traditional methods makes the task of processing allo bark into fibre laborious and tedious.

Most studies have documented the extreme hard labour involved in allo collection and primary processing, which involves walking long distances to the forest area to harvest the bark; washing, cooking, beating and drying the bark to extract fibre; and spinning the fibre into yarn. Traditional methods are applied throughout these processes, which are mostly carried out by women. Describing the hardships faced by allo fibre producers, MEDEP (2010) mentions the time-consuming processes and the lack of manpower and equipment. There is clearly an urgent need to update the technology and tools used in allo processing.

4. The value chains mapped with the processes, actors and functions do not focus specifically on women.

Almost all the studies on the value chain describe the steps and processes involved, along with the actors and functions, enablers, and supporting institutions within and outside the government.

- The value chain processes include harvesting and collection; primary processing involving washing, cooking, beating and drying of bark to get the soft raw material; spinning the yarn and weaving cloth from the yarn; producing

¹⁰ The comprehensive MEDEP study (2010) suggested a large potential as "50 of 70 districts in Nepal have allo growing naturally". Other studies have focussed on specific regions or districts - ANSAB (2010) on Parbat district, UNDP (2014) on the Rapti area, NFA (2014) on the Rolpa, Baglung, Nuwakot, Dolkha, and Sankhuwasabha districts, Lamichhane (2016) on the Myagdi district, and Adhikari et.al (2018) which studied Naugad.

allo-based products; and trading, and domestic and export sales. The seasonality of the plant means that allo is collected over a two-month period annually. There is some debate on the actual period of collection: MEDEP (2010) indicates that this is between October/November and January/February, while NFA (2014) mentions August to December.

- The actors and functions: Apart from the harvesters and collectors including community forest users' groups (CFUGs), processors, traders at the local, regional and national levels, entrepreneurs, trading and business groups, the value chain includes a whole set of enablers and supporting government and non-government institutions. These include district and range forest units, banks and financial institutions (BFIs), and community-based organisations at the village and block levels. At the district level the Cottage and Small Industries Development Board and district chambers of commerce and industry play a role along with the BFIs, non-government organisations, MEDEP, and private manufacturers (UNDP, 2014). At the national level, traders and exporters receive support from national-level institutions such as FNCCI, NCC, AEC, national financial institutions, customs, and so on. MEDEP is the specialised

government agency supporting allo-based enterprises. FHAN, FTG Nepal, HANDECEN and SABAH Nepal support design and product development and marketing of allo-based products. International and multilateral institutions encouraging Nepal's allo commercialisation journey through research, piloting and policy support, include ICIMOD, GIZ, and UNDP.

5. Value addition and profit margins

- Profit margins are high for weaving cloth and product-making: Several studies have estimated profit margins at the different steps in the value chains in various parts of the country. It is not surprising that the margins are higher for activities where greater value is added, compared to the stages of collection and primary processing into coarse fibre or thread. "The net (of the intermediate inputs) value added at different levels of operation shows that product-making and retailing stages capture the most value in the chain (61 per cent)" (MEDEP, 2010). In fact, all the other studies indicate that thread-making by itself is a loss-making activity, which is borne out by the fact that most collectors also process the allo till the thread-spinning or cloth-weaving stages, and it is rare to find people collecting allo for immediate sale.

Table 4: Profit Margins in the Allo Value Chain, Nepal

Research Study	Subedee et.al, 2018	UNDP, 2014	ANSAB, 2010	MEDEP, 2010
Area covered by the study	Far western Nepal#	Panchase*	Parbat	Parbat and Myagdi
Product	Profit margin (%)			
1 Dried bark	25	13	25	0
2 Coarse fibre		50	10	
3 Thread	-20	-40	-4	18
4 Woven cloth	64	106	45	23
5 Allo-based products				46

Notes: # Covers the area under the Kailash Sacred Landscape initiative.

* This study assumes the daily labour cost at NPR 400.

- Returns are commensurate with value additions: Lamichhane informs us that, "...money flow is not equally distributed among actors and is not based on how much of cost is adding to develop the product". MEDEP (2010) estimated a 4 per cent value addition and 0 per cent profit margin for collectors, 10 per cent

and 17.8 per cent for yarn-making, 25 per cent and 22.9 per cent for weaving, and 61 per cent and 46.3 per cent at the product-making stage. Most studies suggest that collectors benefit least (ICIMOD, 2015) and, broadly speaking, as one moves up the value chain, the profit margins tend to increase.

6. Information flow and access across the value chains are poor

While this is true of value chains in general, the more remote the actor – mainly the collector-processors – the greater their isolation from any information related to the value chain. For example, the policy for promoting MAPs and NTFPs in allo is not well-known, and market information is not easily available to the value chain actors (MEDEP, 2010). NFA (2014) states that there is a wide difference between the prices received by allo product producers and those prevailing in the national and international markets, some of which can be attributed to poor information access. Similarly, there is a range of prices that carpet producers pay for the allo yarn (MEDEP, 2014), which also seems partly due to the information asymmetry.

7. SWOT analyses highlight abundance of allo, potential to improve processing, and international competition from other natural fibres

Most of the studies reviewed (UNDP, 2014; MEDEP, 2010; Lamichhane, 2016; etc.) had conducted SWOT analyses to present strategies and recommendations that could enhance the income and employment benefits from the value chain, for collectors and primary-level processors. Some of the key findings of the SWOT analyses are:

- o Strengths: Allo grows naturally and abundantly in large parts

of Nepal. Allo-processing skills have existed traditionally among several communities, and there are local markets for allo products. There is increasing demand for natural fibre-based products in the international market (<http://www.himalayanwildfibers.com/>) which provide lucrative returns, and allo is seen to be a top Nepalese natural fibre.

- o Weakness: The technologies applied in the value chain are time-consuming, tedious and inefficient. Quality control over the outputs is too weak to meet the quality consistency standards required for the international and high-end domestic markets. Lamichhane (2016) found, "...poorly organized collection and the rudimentary methods of fibre extraction, and spinning...leads to low quality of yarn". The linkages among the value chain actors are weak, and they have little access to information. "There is no institution that provides price information or product information in Myagdi" (Lamichhane, 2016).
- o Opportunities: The demand for carpets using allo fibre is high and currently grossly under serviced. Studies have suggested that it is important to introduce or upgrade technology to improve the efficiency of the processes to reduce the time and drudgery involved, and improve the quality of the yarn. Some technologies that are already being applied in other parts of the country (Adhikari, et. al., 2018) have reduced the

amount of fuel used for cooking the bark, experimented with safe substances to soften the bark, and improved the design of the spindle and loom for greater efficiency. Another effort “the Sustainable Technology in Nettle Growing (Sting) project...at Leicester’s De Montfort University...has succeeded in extracting a silky thread that is stronger and finer than from other plants such as hemp.” <https://www.theguardian.com/environment/2008/feb/28/ethicalliving.fashion>).

- o Threats: Allo faces competition in the natural fibre markets internationally from relatively cheaper fibres like hemp and jute (MEDEP, 2010), whose value chains are better established. Inadequate quality control over the allo value chain increases this risk (Adhikari, et. al., 2018).

8. Recommendations suggest strengthening across inputs, technology, market, finance, policy and institutional development

The existing literature offers several recommendations to upgrade the value chain, although, as mentioned elsewhere in this document, most of these do not target women specifically. The recommendations suggest that a comprehensive, systematic support mechanism is needed to plan and manage allo resources, and enhance the efficiency and ease of collection and processing. These measures would improve the livelihoods of poor women living in remote areas; harness allo’s potential as a unique natural fibre in national and international markets; create strong, transparent linkages among the value chain participants, and promote appropriate returns in line with the value added by different actors, through better regulation of trade, quality, prices, etc., and better flow of information. SABAHA Nepal helped set up a community-owned collection and processing centre to improve practices along the entire value chain, from harvesting

to boiling, fibre extraction, thread spinning and weaving design. This has reduced costs and time while improving efficiency and the quality of the thread and cloth produced. It has also increased incomes and skills (Adhikari, et. al. 2018).

Suggestions in the literature reviewed included:

- o Create an ecosystem that will enhance the benefits to women working in the value chains. For instance, introducing women-friendly technologies, reducing drudgery, setting up institutions for women collectors and primary processors, and improving linkages among the various actors would not only help women but also give a boost to the value chain. Similarly, women producers can benefit immensely from the product development and export marketing experience of those involved in the fair trade supply chain and thus making such connections would be useful (Lamichhane 2016). “The allo value chain development in Naugad demonstrated a successful model for women’s empowerment...An orchestrated effort targeting training, skills development, exposure visits, and women’s active participation (helped promote)... inclusive development of a value chain” (Adhikari, et. al., 2018).
- o Support the integration of collection and primary processing activities to yield the best returns. The discussion on profit margins has shown that allo enterprises could raise their returns if several functions of the collection and primary processing processes are pursued in tandem. “...Allo enterprises cannot be viable unless these three functions (harvesting, fibre-making and thread-making) are combined. The cloth-weaving enterprise could be organized separately sustainably, but when that operation is also combined with the other three, allo enterprises become an even more attractive option” (ANSAB, 2010).

- o Focus on improving the quality of the allo thread produced, to provide consistently high-quality thread for the international and local high-end markets, including exporters of carpets, clothing and other products. This will require improving the methods of producing the thread and the equipment used (Lamichhane, 2016), as well as building the capacities of the collectors and primary processors of allo, mostly women. Pyakurel and Poudel (2014) suggest two options, “(1) appropriate technology transfer for thread-making, and (2) outsourcing thread-making to spinning industries”. Inadequate quality control is a critical drawback to creating a sustained and lucrative market (Adhikari, et. al., 2018). The production of consistently high-quality thread would raise the returns for thread-makers, and help carpet manufacturers and exporters meet their international orders, which they are currently unable to service (MEDEP, 2014).
- o Promote allo as a distinctive fibre in the international natural fibre market which is currently dominated by hemp, jute and linen competitors (MEDEP 2010) and enhance the image of this region as supplier of quality allo thread (Pyakurel and Poudel, 2014).



b. Women in the Allo Value Chain

Allo grows abundantly during the months of August to December. It is harvested during the winter months, when the plant produces better quality fibre¹¹ and stings less, and people are free from their farming operations. Both men and women – the latter are predominant – from marginalised ethnic groups are involved in harvesting allo, but all subsequent operations in the value chain are handled by women, men showing up only at the trading and transportation stages. The harvested bark is peeled, dried and cooked, and then washed and beaten several times under running water. The dried bark may be bartered for thread, which is then bleached, washed and dried to prepare it for spinning into yarn. The yarn is spun with traditional tools – spindles or wheels – to produce thread.

At this point cash transactions start showing up in the value chain. Those producing thread may sell some and keep some for further processing. People who can avoid the tediousness of producing thread or do not have young family members to take on the hard work involved, buy thread from

neighbours or local market hubs. The thread is sold by weight. However, thicker thread is poorer in quality. The thread is woven on a conventional loom into other products, such as pure allo cloth, and cotton and wool blends. The cloth is either traded or used to produce traditional or new products, depending on the producers' access to the market.

The skills required to process allo bark into thread and other inputs, and to produce traditional items of use have been handed down over generations. In the value chain, most of the work is home-based, and even when contractors are involved, women may choose not to work in the contractor's facility, so that they can simultaneously carry on their household work, such as taking care of their children and the elderly, cooking, cleaning, and so on. As mentioned above, women dominate most of the production processes, and men contribute as traders and shop keepers

The finished products are sold locally and further away in domestic and international markets. While most of the production processes continue to be traditional, over time some external agencies have begun to introduce new designs, technology and support to improve skills and expand markets to help women in the allo-processing areas. Allo Samaj and Sana Hastakala that market allo-based products domestically and abroad provide feedback on market needs which allows women to integrate these into their product design. SABAH Nepal's support is deeper and wider and involves training, setting-up of common facility centres, and building women's institutions. These agencies are also investing in product innovation and mechanisation of certain processes in the value chain.



¹¹ <http://www.ansab.org/mis/allo-information-sheet/>

Source: Value chain designing of Allo of Panchase protected forest area, BARDAN, GoN, UNDP, 2014 (Pg 5)

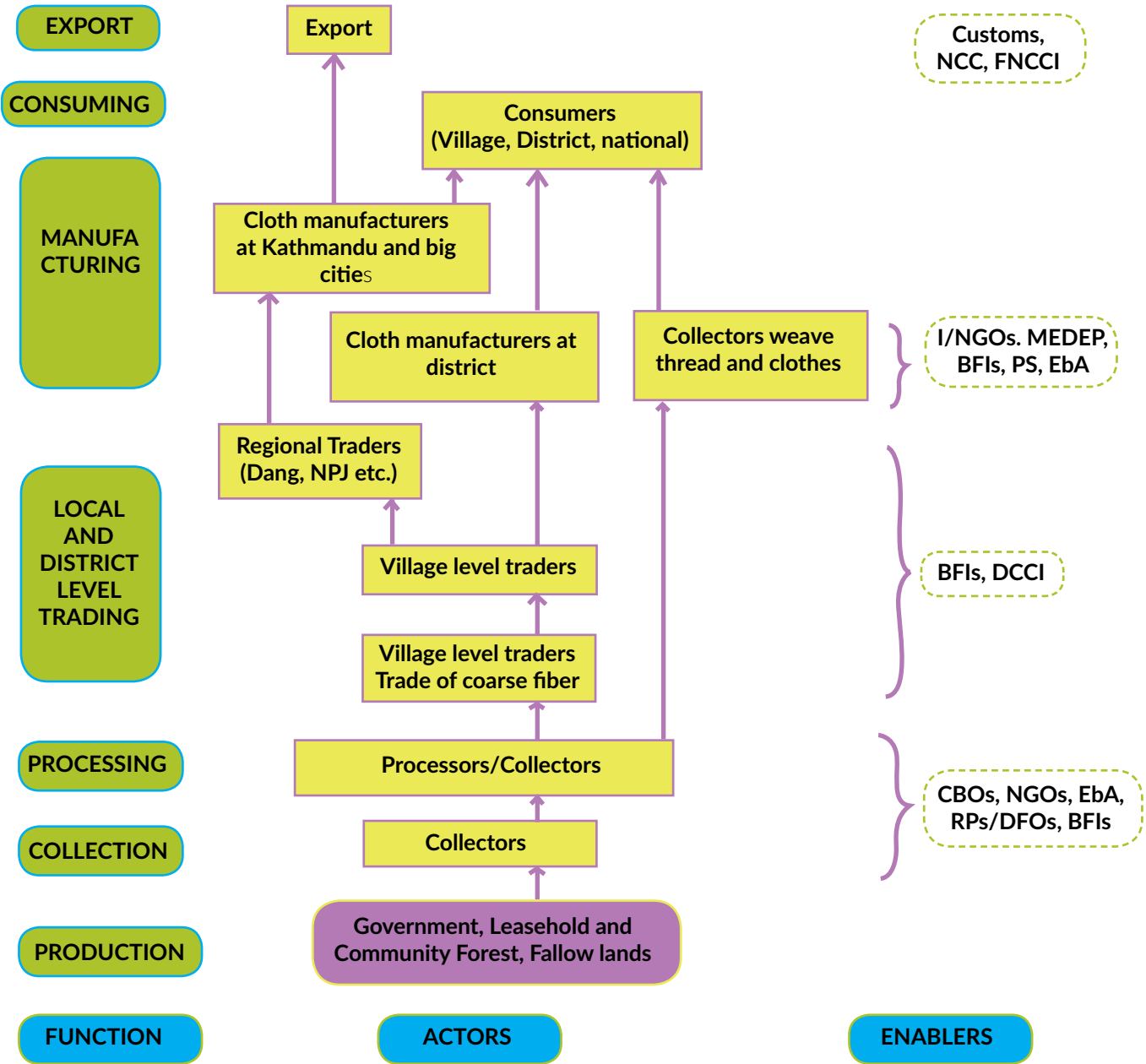


Figure: Value Chain Map Of Allo (as evident from other parts of Nepal)

c. Findings from the Field

Survey area: Sankhusuwaba District

- Villages and Towns – Malta, Khandbari: The closest road to Malta is a two-hour trek through tough mountain terrain. The village has no phone connectivity, and while the houses are connected to electricity supply, it is erratic and available only for a few hours daily. The closest medical facilities are at Khandbari. Malta residents make weekly trips to Khandbari to buy supplies and sell their products. Cable television is the residents' window to the world in general.
- Market hub –Khandbari: Khandbari town is the district's headquarters and the main market for the surrounding villages. It has motorable roads throughout and mobile phone connectivity. While it has electric connections, supply is erratic.
- Offices – Municipality, District Forest Office, District Office of Small and Cottage Industries Department, District Chapter of the Federation of Nepalese Chambers of Commerce and Industry (FNCCI), Federation of Handicraft Association of Nepal (FHAN). Our survey group met experts from ICIMOD, the

Federation of Nepal Cottage and Small Industries (FHAN), MEDEP, and the Poverty Alleviation Fund in Kathmandu for information on the area surveyed. IFAD and World Bank offices in Nepal responded by email.

Survey Period:

June 21 to July 4, 2018

Survey conducted by:

HNSA with support from SABAH Nepal team

Respondent profile

36 collector-processors: all female

4 traders: 2 females, 2 males

2 trade groups: 1 female, 2 males

16 experts (government, industry and multilateral support institutions): 4 females, 12 males



Findings

1. Allo is processed largely from home by women, and the activity is well integrated into their daily routine:

Women are pre-dominant actors across all the activities of the allo value chain – discussions with experts indicated an 80 to 100 per cent participation rate by women. When not working away from home, men are involved in collecting bark and transporting allo products to the market. Most of the men in the allo value chain work at selling allo products through shops.

Ms. Mala Thapa Magar is a big operator – she buys dried bark and processes it, sells the dried bark, thread, cloth and finished products – running this as an enterprise. But Mala is a rare actor in the value chain. Most women process the allo from their homes, because of their household responsibilities. As their home circumstances change, they vary their involvement in the allo process; for instance, those with new-born babies reduce their time spent on allo processing; pregnant and older women take on activities that involve less exertion like knitting allo; those with poor eyesight taken on jobs like spinning yarn into thread; and those with older children are able to produce and earn more, as the children take on some of the farming work and help out with allo processing. For this study, all the processors we interacted with were females, as there were no males processing allo.

2. Producing allo products for markets, especially those outside the local area, is a relatively new phenomenon:

The collection and processing of allo is largely home-based, and may involve all the family members. Family members help in the collection and drying of the bark, drawing out the fibre, and processing it to make yarn for spinning into thread. There is little functional specialisation in any of the processes till almost the weaving stage: none of the

respondents reported that they were only involved in collection or thread-making. Most of those involved in allo bark collection also process it as they have done traditionally, to make products for personal use. Some portion of the bark and fibre may be bartered for thread, which is woven into cloth, which is further made into products. Not all families or women collectors are involved in all the activities: 72 per cent of the respondents said they do not produce thread, they either barter it in exchange for dried bark or fibre, or buy it from local shops in Khandbari or from the SABAH Nepal outlet. Among the respondents who produced thread, only one said she bartered half her produce and one sold it all, but the others used all the thread for further processing themselves.

3. Cash transactions in the value chain start showing up at the thread stage and beyond:

From collection to bark drying and fibre making, much of the processing is done without any cash sales. Of the respondents, the 28 per cent who produce thread use some of it for further processing and sell the rest. Of all the people met, there was only one case of an enterprise based in Kathmandu, owned by Ms. Mala Thapa Magar, which buys and sells dried bark. This bark is processed in its Dang District facility while weaving and stitching is done in Lalitpur. The outfit produces thread, cloth and finished products.

4. Allo processing contributes the biggest share to the family's cash income:

The main occupation in the region is farming, much of which is subsistence in nature. Crops such as rice, millets and corn are grown widely mainly for self-consumption – only 2 out of the 36 interviewed were able to generate some marketable surplus. Of the respondents, 22 per cent of the farmers also grew large cardamom and vegetables,

including ginger, kept chickens, and reared cows for milk. Notably, 83 per cent of the respondents claimed that most of their annual cash income came from allo-related activities, with 64 per cent saying that these activities were responsible for all their cash earnings. Of the respondents, 17 per cent reported that more than half of their annual income came from farming or selling cow milk.

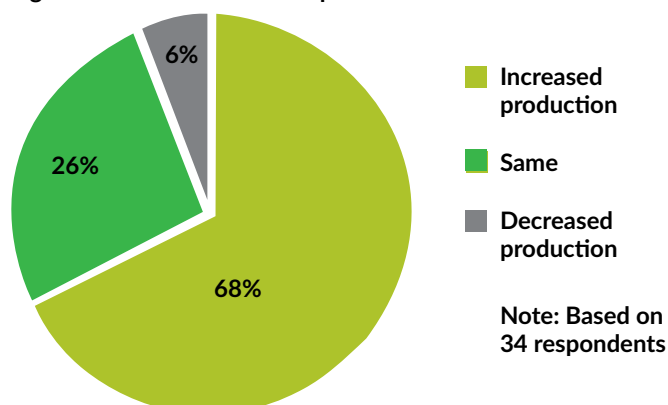
5. Allo processing is an attractive livelihood option for women HBWs belonging to communities that have traditionally worked with allo:

- Women belonging to ethnic or indigenous communities that have traditionally harvested and processed allo possess skills that give them an advantage in the diversification and expansion of allo-based product markets. Even with rising costs, more women seem to be entering the value chain, and those already in it are producing more, better and higher-value products. When production has fallen or remained the same, it is typically because household responsibilities or health conditions have held women back. Among the 34 respondents, 68 per cent (23) reported an increase in production over the last two years, about 40 per cent (9) of whom had been working in these activities for just about two years, some of them have moved from villages¹² near Khandbari, the district centre,

which is also the marketing hub for allo-based products in the area (Figure 5).

- With their strong skill base, women traditionally working in the value chain are able to learn new designs and work faster. Of the respondents, 12 women (35%) also reported increased efficiency, as they were able to produce more in the same amount of time; 13 (36%) respondents felt they had learnt new designs and improved the quality of their products, attracting higher prices and reducing their unsold stock. About 70 per cent of the respondents, who shared their views on the subject, reported adding higher-level allo-processing activities, producing new or better quality products or a combination of these in the last couple of years. Several respondents proudly stated that they were receiving more orders than they could fulfil; 24 of the 29 respondents were able to sell everything they produced.
- The women respondents were keen to learn new designs, skills and products to improve their returns from allo processing. Over 67 per cent of them wanted to move up the value chain. Only one worker who was studying to be a teacher planned to move out if she got a well-paying job; the rest wanted to continue with the activities they are currently engaged in, while trying to improve quality of their products.

Figure 5: Women HBWs' Output of Allo-based Products



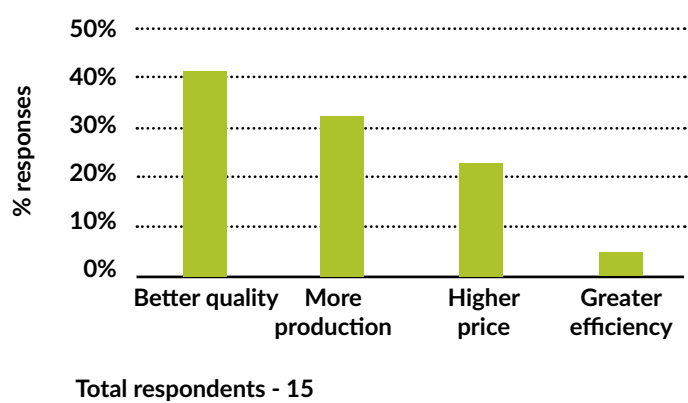
¹² People migrate from village to Khandbari for better educational opportunities and other facilities for their children.

6. New ways of working are attracting more women into the value chain: Conventionally, women would process allo mainly for familial use making clothes, ropes and other materials. All work was done from home, using skills inherited over generations, and their equipment, products, designs and working techniques were all geared towards this. A growing demand for natural-fibre products and interventions by organisations like SABAH Nepal, Sana Hastakala and Allo Samaj have made it possible to tap a profitable market outside the immediate community. These organisations have been able to connect the producing communities to markets, market information, and improved technologies. For instance, through its initiatives, SABAH Nepal is introducing an environment that encourages allo workers to create market-appropriate designs and products. SABAH Nepal has introduced the women to new skills, equipment and operational methods, and provides a working space for them in its centres. Organisations like Allo Samaj and Sana Hastakala¹³ work with several women HBW groups across different areas; Sana Hastakala is also experimenting with mechanising thread-making and weaving to improve quality and efficiency. Of the ten new entrants among

the 32 respondents, six prefer to work for an agency like SABAH Nepal that provides equipment, raw materials and a common working space, along with a crèche facility for children. Only one among these six preferred to work from her own space, as she manages a shop from where she processes the allo. Interestingly, among the remaining 26 who have been processing allo for several years, six want to work for SABAH Nepal but a majority 19 (73%) want to work on their own – the main reason cited is they are used to this way of work and have not experienced any other way.

7. While income from allo-processing has grown in recent years, some processors face limited availability and high cost of thread: With markets expanding both domestically and internationally, better quality products are benefitting from a steady demand and can attract higher prices. Orders have increased for high-quality products, which can be easily sold in the market. Of the respondents, nine have been processing allo for less than two years and could not comment on trends in their income. Of the remaining 25 who have been in the value chain for several years, 16 (64%) reported that the share of their total family income from allo-processing had increased.

Figure 6: Reasons for increased Income from Allo Processing



¹³ Currently, 39 women groups are associated with Allo Samaj and 67 with Sana Hastakala.

Those (9 or one-third of the respondents) reporting an unchanged or reduced income share from allo activities cited the inadequate supply of good quality allo thread¹⁴ and rising input cost as major factors. Traders and experts also recognise the issue of poor quality yarn that reduces their efficiency, wastes time and results in low-quality finished products. They recommend mechanisation of yarn-making. Notably, Allo Samaj has been experimenting with machines from India. Of the 27 respondents that experienced rising input costs, about 45 per cent (12) attributed this to higher prices for allo thread. Interestingly, the reported increase in the price of thread varied widely, from 14 per cent to 110 per cent, the average increase being 36 per cent. Cotton thread, oil and the smooth loom rope (or dori in local dialect) were also reported to have become costlier. All inputs are available locally from villages, traders in Khandbari market and the SABAH centres that experienced rising input costs, about 45 per cent (12) attributed this to higher prices for allo thread.

8. Better technologies to reduce the drudgery involved with traditional methods of allo processing can help unlock the full potential of this value chain: Customary practices and tools dominate allo harvesting and processing, which make these back-breaking tasks. Several responding processors and experts point to the tediousness of these processes as major constraints in the value chain: right from harvesting the plant – which can cause injuries due to its stinging hairs, long treks to harvest

allo often involving staying in the forest for two to four days, and the hard labour involved in peeling the bark, followed by several rounds of cooking, beating and washing it in running river water. Many women complained of aching eyes and body pain from the labour of thread-making and cloth-weaving. The traditional tools they use, like the cooking vessels, spindles and looms, need to be improved to ease their working conditions and reduce the work load, and manual processes should be automated wherever possible. The NITEC is doing pioneering work in developing machines for cooking, beating and washing allo.¹⁵ Improving the efficiency of these processes and quality of products can fetch higher prices: one of the main bottlenecks cited by Bashu Aryal, IFAD representative for Nepal, resulting in low returns to actors at the bottom of the value chain, is the lack of awareness of and access to improved technology.

9. The severe paucity of data on the value chain hampers planning for improvements: There is little secondary data on production and trade volumes; the role of women HBWs; markets and prices; and returns and margins along the value chain. Discussions with collector-processors, shopkeepers, craft-marketing agencies dealing in allo products, and experts yielded some impressions, but hardly any robust information on these areas. Experts were particularly concerned with this. Based on their experience in the region, the SABAH Nepal team roughly estimated the profit margins for the various collector-processor steps in the value chain (Table 5).

¹⁴ As mentioned earlier, thicker thread brings in more money for the seller as thread is sold by weight. However, it is the finer, better quality thread that is demanded by cloth producers as it brings them better return.

¹⁵ <https://www.youtube.com/watch?v=5LgEcdF933YNITEC> is Nepal Innovation Technology and Entrepreneurship Center, Pokhara University

Table 5: Margins in the Allo Value Chain

(From 25 kg green bark to 4 kg thread and 40 metres cotton-blended cloth)

		Labour		Total cost (NRs)	Market price value	Total market	Profit margin
	Volume	Workdays	Daily wage				
Green bark	25 kg	2.5	300	750			
Dried bark	12.5 kg	1	200	950			
Dried fibre/coarse fibre	6.25 kg	1	250	1,200	750/kg	4,687.50	291%
Thread	4.0 kg	8	200	2,800	1,400/kg	5,600.00	100%
Cotton-blended cloth (1:1)	40 meter	11	200	5,000	450/m	18,000.00	260%

Source: SABAH-Nepal

Note: This data is from survey area. Green bark is not sold and dried bark is generally bartered.

Allo Samaj and Sana Hastakala said that they work on 20-35 per cent returns depending on whether the buyer is a wholesaler, institution or retail customer. Shopkeepers in Khandbari who buy and sell allo products estimated an average 20 per cent margin. The availability of regular, substantive and credible data will make for better-designed initiatives to support the value chain and its predominant actors, who are women HBWs.

10. Government interventions could help strengthen this value chain, to the benefit of the women HBWs involved: Craft-marketing agencies and FNCCI pointed

to the lack of clarity on taxes on the transportation of allo products. Government experts¹⁶ also suggested that its officials should be educated about allo production and its potential. While the Khandbari Municipality, as shared by Mr. Khatiwada the Mayor of the municipality, is keen to support allo due to its contribution to economic activity and future potential, he suggested this could be most effective if the national government declares allo a priority. Allo-friendly policies would give an impetus to all the actors, including the processors and marketers.

Table 6: SWOT Analysis for the Allo Value Chain With a Focus on Women HBWs

Strengths	Weaknesses
<ul style="list-style-type: none"> • Allo grows naturally and is abundantly available in large parts of Nepal. Only one-fourth of the crop is currently being harvested. • Allo fibre is stronger than other natural fibres, such as hemp, that are sold widely in Nepal and are popular in export markets. • Allo harvesting and processing skills have existed traditionally among the women of several ethnic communities, and have been passed on from one generation to the next creating a cadre of skilled workers across the allo value chain. • The allo value chain provides work and income opportunities for women HBWs who: live in extremely remote parts of Nepal and have no alternative livelihood options; want to work alongside attending to their farms and other household responsibilities; have health issues due to their age or have no other work opportunities. • A local market for allo products exists, and increasing demand for natural fibre-based products in the lucrative international market. Because of these opportunities, women HBWs continue to join the value chain. • There are no customs duties on the export of allo products from Nepal. 	<ul style="list-style-type: none"> • There is no credible data available on allo production, harvesting or trade. This makes it difficult to formulate a robust plan for moving women HBWs up the allo value chain. • Different districts have different and confusing taxation rules for NTFPs, often not clear even to the officials themselves. • The government appears to be apathetic towards allo-related activities. • The value chain processes are primitive and fraught with extreme drudgery. • So far allo has been marketed and sold only as a fashion product; its medicinal properties have not been explored so it is not positioned accordingly in the market.

¹⁶ Representatives of Small and Cottage Industries Department

Table 6: SWOT Analysis for the Allo Value Chain With a Focus on Women HBWs

Opportunities	Threats
<ul style="list-style-type: none"> Positioning allo in the international market as the top natural fibre from Nepal could give it a distinct impetus. Research into and dissemination of information on the medicinal properties of allo will expand the market for allo products. The demand for allo fibre by the carpet industry is huge and currently severely under-served. Organisations are emerging that are increasing the access of women HBWs who make allo products to local and international markets. They are providing design and product development, and skilling and marketing support. Though nascent, some of these agencies are supporting the creation of women HBW institutions. With an increase in allo output, this value chain should also receive support from existing industry organisations like the FNCCI and FNSCI. Local governments in allo-processing areas could become “champions” for the value chain and its actors. Special attention to this process by central government could help drive this. Women are involved with each stage of the allo value chain, from harvesting to the finished product. Investment in and support to women HBWs would be a step towards achieving SDG-8: “Promote Sustained, Inclusive and Sustainable Economic Growth, Full and Productive Employment and Decent Work for All”. 	<ul style="list-style-type: none"> If export markets remain untapped, in the longer run allo might lose the race to products made from other natural fibres, such as hemp and jute, which are cheaper and better established. To prevent this from happening, the quality of finished products should improve consistently, along with concerted national-level marketing efforts to promote the fibre.

Following is the value chain for allo as determined by this study. It highlights the various steps in the value chain and shares information on the role of the corresponding value chain actors:

Collection of Allo Bark from Forests	<p>Location - Forests of Bala and Sisuwa</p> <p>Involves travelling to the forests, staying for a couple of days, cutting bark from Allo plant, transporting cut bark back to village</p> <p>Workers Involved - Women Home-Based Workers supported by male family members – sons, husbands, brothers, uncles</p>
Drying of Allo Bark	<p>Location - In and around homes of the Women Home-Based Workers, in their villages - e.g. Malta village in Sankhuwasabha District</p> <p>Allo bark is dried for storage</p> <p>Freshly collected bark is laid out to dry so that it can be stored for further processing</p> <p>Workers Involved - Women Home-Based Workers</p>
Boiling of Allo Bark for Softening	<p>Location - In and around homes of the Women Home-Based Workers, in their villages</p> <p>Allo bark is very coarse, needs to be boiled in ash water for softening to make it suitable for yarn-spinning</p> <p>Workers involved - Women Home-Based Workers</p>
Beating and Washing of Allo Bark	<p>Location - In and around homes of the Women Home-Based Workers, in their villages</p> <p>Allo is soaked overnight in white clay called Kamero and put out for drying, dried Kamero is then taken off from the Allo bark by “beating”. Bark is then washed in wood ash.</p> <p>Washing is done at local stream or river in the village. With water shortage becoming an issue in villages now, this stage of processing has become difficult to complete.</p> <p>Workers Involved - Women Home-Based Workers</p>
Combing of Dried Allo Fibre	<p>Location - In and around homes of the Women Home-Based Workers, in their villages</p> <p>After beating off the clay, Allo fibre becomes soft and is combed, to prepare it for yarn spinning</p> <p>workers involved - Women Home-Based workers</p>
Spinning of Yarn	<p>Location -In and around homes of the Women Home-Based Workers, in their villages</p> <p>Community work centres such as SABAH CFC</p> <p>The combed fibre is spun into yarn using a spindle. Traditionally, a spindle called “Kattua” was used, though now other variations of this spindle are used as well</p> <p>Workers involved - Women Home-Based workers</p>
Production of Finished Goods	<p>Location - In and around homes of the Women Home-Based Workers, in their villages</p> <p>Shawls, ponchos, sweaters, handkerchiefs are some examples of products hand-knit using Allo yarn</p> <p>Allo yarn is also woven into Allo cloth on handlooms and powerlooms - often this yarn is mixed with cotton and wool to make various qualities of Allo cloth</p> <p>This Allo cloth is used to stitch bags, wallets, hats and other accessories</p> <p>Workers Involved - Women Home-Based Workers</p>
Trade of Finished Goods	<p>Location: District level - Local retail shops, SABAH CFC outlet, Allo Samaj district chapter, Allo Club</p> <p>National Level - Kathmandu outlet of SABAH Nepal (procured from SABAH CFC), Sana Hastakala (procured from Allo Club), Individual traders such as Mala Thapa Magar</p> <p>International Level - Exports by SABAH Nepal and Sana Hastakala to countries such as India, Japan, South Korea, Taiwan, USA, Canada and Australia</p> <p>National and International trade involves more organisations than individuals. These organisations are often headed by men, though both men and women are involved.</p>

Below is a Geographical Representation of the Allo Value Chain



Case Study: Krishna Kumari Rai Kulung

Member of the Board of Directors and CFC Leader, SABAH Nepal



Krishna Kumari was born around 50 years ago in the Sankhuwasabha district of Nepal in the Kulung Rai community. Her ancestors migrated to the forested mountainous regions of Sankhuwasabha in search of work and food. They experimented with natural forest produce to make clothes and food, and allo cloth was an outcome of their experiments. Over the years, allo has become an integral part of Kulung Rai community. In Krishna Kumari's words, "when a child in the Kulung Rai community is born, her/his umbilical cord is tied with allo thread, and when a person dies she/he is wrapped in an allo shawl. The girls of the family learn the art of processing and making products of allo from their mothers at a very young age. Allo is a product invented, made and sold by women. The allo supply chain is dominated by Kulung Rai women, while the men of the family play a supportive role."

Krishna Kumari is currently on the Board of Directors of SABAH Nepal and also manages the SABAH's community facilitation centre (CFC) in Khandbari. She is a successful woman leader in Sankhuwasabha, however, her journey has been a difficult one. She says, "I am a skilled home-based worker. However, I can't read or write as my parents didn't have enough money to send me to school." At the age of 13, Kumari was forced to migrate to Bhutan, where she worked as a labourer at an orange orchard.

Despite tough working conditions, she continued working there for three years to provide for her family in Nepal. Upon her return she travelled to Kathmandu to work in the carpet factories, where she faced even harder work conditions. She soon returned home, where women of her community had started producing allo for commercial sale, with the support from Ms. Susi Densmore, a social activist. She learnt how to weave from her fellow sisters and was able to weave 15 metre of cloth in ten days. Soon she started teaching weaving to other women and began organising groups within the village.

When the SABAH Nepal team visited Khandbari in 2008 to explore their work in the region, Krishna Kumari, who had moved to the town for her daughter's education, was the first woman HBW to join them as a member. In 2012, she started SABAH CFC with 15 members, and today it has a membership of 1,282 HBWs.



RECOMMENDATIONS FOR FUTURE ACTION

1. Strengthen the availability and analysis of data, to improve the planning and design of activities that support the value chains, especially for women.

- a Systematic and periodic reviews of the two value chains would support better analysis: This study was unable to access sufficient, good quality, and well-triangulated data to credibly comment on returns and value addition in the different phases of the allo value chain. Experts consulted during the study raised the issue of the almost complete absence of data on volume of product being harvested, processed, and traded, as well as on sales, prices and returns. Data gaps make it difficult to analyse and track the evolution of the value chain and to plan for improvements. The data on cardamom is slightly better, but gaps here also limit robust analysis. In particular, both value chains suffer from a lack of women-centred and gender-specific research, which precludes any discussion on the changes needed to support women actors, including HBWs.
- b An alliance of institutions could help set up and strengthen a systematic data-generation process: For both allo and cardamom, such alliances need to be forged that can work with the government and its agencies responsible for data gathering, compilation and dissemination. Institutions like IFAD and the World Bank are well-placed to lead this process, especially if they involve research partners such as: ICIMOD; industry and trade representatives like FNSCI - specifically their women's cells; institutions widely connected to primary producers such as SABAH, Allo Samaj, Sana Hastakala (for allo) and UNNATI, Practical Action (for Cardamom); development agencies such as ANSAB; and all the value chain actors. Specialised regional or international institutions, such as the International Trade Centre (ITC), HNSA, and Women in

Informal Employment: Globalising and Organising (WIEGO) may also be interested in joining this effort, particularly given their interest in women in trade.

2. Advocate for women-centred strategies to trigger a supportive eco-system; given their predominance this will likely upgrade the entire value chain.

The cumulative effect of efforts at several fronts will have a positive impact on women as well as on the value chains. To start with, government support and women-friendly policies will encourage more women to enter the value chain. Women-friendly technologies in collection and processing, “will reduce drudgery, (improve quality) and also increase the overall production of allo products” (Shreshtha, ICIMOD). In the case of cardamom, this would apply to women farmers during the harvesting and processing stages. Similarly, building women's capacities and supporting their institutions should improve the quality and marketability of their products, and reduce transaction costs for those marketing their products. In large cardamom, this will give women farmers and processors a stronger negotiating position vis-à-vis buyers and contractors. If they have facilities that reduce the time they spend on family responsibilities, they could increase the time spent on value chain activities. Additionally, for allo in particular, innovations in the design of products created by women and appropriate marketing of these produce would expand markets. This would also make the allo value chain more efficient and increase output, and enable it to meet the expanding demand – as in the case of carpet production based on allo inputs. As this value chain matures, functional specialisation will emerge, which is known to usher in improved quality, efficiency and returns, but not without a supportive environment for its main actors that allows for an easy transition

to new ways of work and life. In the case of cardamom where the market is well-established, this could also lead to a better distribution of returns among farmers, traders and processors and, hopefully, to greater product diversification for women into spice powder, cardamom tea, fibre products, and so on.

- a An estimate of economic losses due to sub-optimal working conditions of women HBWs in the value chain would help inform advocacy with the government for women-friendly policies: Directing government attention to the key value chain actors – women HBWs – and their potential in enhancing economic returns is a necessary first step to building a supportive environment. Government policies targeted at women can help realise the full potential of the value chains and attract the interest of other non-government actors in the two commodities. An estimate of the economic losses from the poor working conditions of women in allo and cardamom production could be one way to convince governments of the urgent need for action. As mentioned earlier, local governments are keen to support economic enhancement, especially since elections are imminent and in cardamom- and allo-growing areas women form a large majority of the electorate. Thus, such a study would be timely and helpful in making inroads with the government.

- b Support to women-friendly mechanisation of manual processes is a low-hanging fruit: Both value chains are in a dire need of modernisation. Women HBWs are severely affected by the drudgery associated with the traditional processes. Apart from taking up a lot of their time and energy, the outdated processes affect their health and reduce the number of years they can spend in value chain activity. For instance, bark requires several rounds of cleaning, pounding and washing in



flowing water before it is ready for spinning into thread, which is still done on traditional tools. Similarly, in cardamom, mechanisation of harvesting the produce, and the use of processors for drying and tail-cutting would improve the quality of the output and the efficiency and time-use of women involved in these processes. Clearly, automating some of the processes, especially at the bottom-end of the value chains, has the potential to substantially improve productivity, returns and the general well-being of women participating in the process. Both the government and interested non-government actors could play a role in this.

- c Strengthening institutions of women HBWs will give them a more persuasive say in price determination and will support women-specific needs. This will work towards making women more “equal” actors in the value chain, playing their appropriate role in decision-making and being in a position to command returns commensurate to their value addition. In the current situation, given the weak women’s agency, upgrading the value chains without ensuring an equal voice for women actors runs the risk of increased value being usurped by men. As a first step, government

support to women's institutions at the local levels could trigger this process across the value-chain – for instance, in policies favouring women's institutions in taxation, financing, capacity building, and so on. This is of particular relevance for the large cardamom value chain where women, even though larger in number and contributing significantly, continue to suffer from poor returns and a negligible role in price determination.

3. Allo needs national attention for women HBWs to benefit in the long term as well as the value chain itself to evolve and generate higher economic return:

Allo offers substantial income-earning potential for women HBWs. In the expanding natural-fibre product market, it could command a unique place if positioned well. However, unlike cardamom, for which the government of Nepal has announced a five-year export policy, allo remains largely neglected, even though it grows abundantly, and it provides much-needed employment and income for women of several ethnic communities, who have the skills to process it and continue to work with it in their daily routine. Government promotion and support could be the impetus for efforts to reduce the drudgery involved in the process and its adverse impact on women workers' health, as well as to improve returns. Some specific actions to

improve women HBWs' work in the allo value chain are:

- a Advocate with the government to provide allo the 'national fibre' status, to increase focus on the value chain and attract investment in the sector.
- b Allo needs to be seen as a product that empowers women. Work towards making the women HBWs who produce allo products the focus and not the products themselves, as is the case currently.
- c Promote research in the areas of reduction in drudgery for women HBWs and also into the properties of allo, to better position it in the market.
- d Invest in women-owned enterprises to enable them to move up the value chain.
- e Invest in creating better access to international platforms for marketing the product.
- f Exchange between Nepal, India and Bhutan for improved production and marketing.

4 For improved returns and better work conditions, more focus needs to be given to women HBWs in the large cardamom value chain:

As with allo, and in general, products are the focus of most interventions where public or profit-making institutions are involved. The worker involved is secondary, and it is assumed that any gains in production or marketing will automatically flow to her or him. However, this is clearly not the case for women HBWs in the large cardamom value chain in Nepal, as indicated by past studies. The focus of the interventions needs to shift to women HBWs – farmers, shopkeepers, and processors. Some specific actions recommended are:

- a Government and related institutions need to design interventions that focus on these women, such as credit access and training that exclusively benefit them.
- b Interventions by government and other institutions will have to penetrate deeper into the more remote and inaccessible areas,





to benefit the most-isolated and marginalised women HBWs, whose knowledge gap is widening due to their isolation from the mainstream. In the study area, past and current initiatives have only focussed on accessible areas (around Phunling Bazaar) or Phumbru.

- c Women farmers need to be educated on the quality of their product.
- d For more women farmers to shift to processing and improve their returns, they need to be organised and skilled, so they can produce good-quality products and have the power to negotiate favourable price and other conditions.
- e **Cardamom-powder based products have the potential to bring an attractive return for women HBWs.** Nepal is heavily dependent on India for the export of its large cardamom, and in the process shares returns that it would not have to if it exported directly. It may even be able to command a better export price for its

product if processing is improved. However, reducing its dependence on India for cardamom exports will require time, investment and concerted efforts to set up facilities for phyto-sanitary testing, create an easy system for export documentation, and work out transport arrangements. Improving the skills and working conditions of women farmers and processors in the value chain may take less time than this and is likely to increase returns to some extent. This will probably still not break the command of traders and exporters – most of whom are men – over the rest of the actors. In this context, Himalica's initiatives with cardamom powder are promising for women HBWs. Over a shorter period of time, innovation and testing in cardamom powder-based products, such as cardamom tea, spice mixes, and so on could yield a basket of items that can be easily produced by women HBWs at a good margin.

- f **Strengthening national capacity**

along with regional sharing can help prevent disease-related crop loss across Nepal, Bhutan and India: Plant disease is reportedly one of the biggest threats to large cardamom outputs in Nepal, and has adversely affected the income of many farmers. ICIMOD and other local institutions have been working to address some of the issues causing these losses. Neighbouring areas in India and Bhutan also produce large cardamom and face a similar threat. India has a specialised centre for large cardamom, which supports various initiatives in varietal research, disease management, data on production and export, market prices, and others. Knowledge on these can be shared among countries through relevant institutions, to prepare for, prevent and manage diseases affecting the crop. This mechanism would also help strengthen Nepal's capacity to manage its large cardamom crop.



Large cardamom and allo are two fairly different products – one is a well-established export good, while the other, allo, has huge potential that is far from being tapped, as farmers struggle to expand production and raise quality to meet market demand. Yet they are similar in that women HBWs are the mainstays of both value chains, but currently operate in sub-optimal conditions, resulting in untapped economic potential, which could be extremely large. Understanding the constraints and supporting women can lead to major gains across the value chain. Many of the current challenges cannot be solved at the individual level and would need government and institutional intervention in policies, technological improvements and market access.

This report would be a good starting point to:

- Engage and support collectives and organisations of women

home-based workers in the two value chains;

- Convince the government to formulate and strengthen policies that focus on women home-based workers in the two value chains;
- Persuade industry and trade bodies to design and execute women-centred initiatives to maximize their returns;
- Work with government and other bodies to set-up a system to regularly collate comprehensive data on value chains, which will allow in-depth and on-going analysis; and
- Design projects/programs for action on the report's recommendations –to start with, a study estimating economic losses due to the sub-optimal working conditions of women HBWs could help with advocacy and building awareness on these issues.

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X ANNEXURES

List of Respondents – Large Cardamom

Farmers

No.	Name	Gender	Place Interviewed
1.	Pavitra Karki	Female	Phrumbu, Taplejung
2.	Ganga Maya Limbu	Female	Phrumbu, Taplejung
3.	Ambika Sigdel	Female	Bajogara, Taplejung
4.	Manmaya Gurung	Female	Bhunkulung, Taplejung
5.	Tulasa Karki	Female	Phrumbu, Taplejung
6.	Tika Sigdel	Female	Phrumbu, Taplejung
7.	Damar Kumari Sigdel	Female	Phrumbu, Taplejung
8.	Lila Maya Sigdel	Female	Phrumbu, Taplejung
9.	Tulasa Dahl	Female	Phrumbu, Taplejung
10.	Jhanukha Karki	Female	Phrumbu, Taplejung
11.	Phul Maya Limbu	Female	Tapetak, Taplejung
12.	Sumitra Bhandari	Female	Lakuridada, Taplejung
13.	Kal Maya Limbu	Female	Bajogara, Taplejung
14.	Chandra Kumari Limbu	Female	Phrumbu, Taplejung
15.	Maya Gurung	Female	Sattaldada, Taplejung
16.	Bishnu Limbu	Female	Dadagau, Taplejung
17.	Menuka Sunuwar	Female	Panthabari, Taplejung
18.	Sangita Sunuwar	Female	Panthabari, Taplejung
19.	Rajkumari Gurung	Female	Sattaldada, Taplejung
20.	Mahendra Kumari Limbu	Female	Bajogara, Taplejung
21.	Sarita Limbu	Female	Chautara, Taplejung
22.	KC Maya	Female	Lakuridada, Taplejung
23.	Dil Kumari Gurung	Female	Panthabari, Taplejung
24.	Maita Maya Limbu	Female	Sattaldada, Taplejung
25.	Phurba Diki Sherpa	Female	Panthabari, Taplejung
26.	Anisha Pokhrel	Female	Bajogara, Taplejung
27.	Krishna Maya Pokhrel	Female	Bajogara, Taplejung
28.	Kamala Pokhrel	Female	Bajogara, Taplejung
29.	Indira Baral	Female	Bajogara, Taplejung
30.	Uma Devi Pokhrel	Female	Bajogara, Taplejung
31.	Sebika Dasal	Female	Bajogara, Taplejung
32.	Lila Devi Dahal	Female	Bajogara, Taplejung
33.	Nabina Limbu	Female	Panthabari, Taplejung
34.	Bidhya Prasad Sharma	Male	Phrumbu, Taplejung
35.	Padam Bahadur Limbu	Male	Dadagau, Taplejung
36.	Narendra Maden Limbu	Male	Bajogara, Taplejung
37.	Jas Bahadur Gurung	Male	Panthabari, Taplejung
38.	Khadga Raj Limbu	Male	Sattaldada, Taplejung
39.	Harka Gurung	Male	Bajogara, Taplejung

Traders

No.	Name	Gender	Place Interviewed
1.	Govinda Raj Bapal	Male	Phunling Bazaar, Taplejung
2.	Nirmal Bhattarai	Male	Birtamod
3.	Goma Kathiwada	Female	Phunling Bazaar, Taplejung
4.	Deepak Nepal	Male	Phidim

Processors

No.	Name	Gender	Place Interviewed
1.	Gunja Chaudary	Female	Birtamod
2.	Maya Gurung	Female	Helipad Area, Taplejung
3.	Astha Kumari Limbu	Female	Bajogara, Taplejung

Farmers Group

No.	Name	Place Interviewed
1.	Sattaldada Farmers Group	Taplejung

Experts

No.	Name – Organization	Gender	Place Interviewed
1.	Naresh Chandra Ghimire– Department of Agriculture	Male	Taplejung
2.	Tara Ghimire – President, Chamber of Commerce	Male	Taplejung
3.	Nirmal Bhattarai – President, Large Cardamom Entrepreneurs Association, Nepal	Male	Birtamod
4.	Kanchenjunga Himalica –Agricultural Group		Taplejung
5.	Chandra Bahadur BK – Field Supervisor, Taplejung – Environment Conservation and Development Forum (ECDF)	Male	Taplejung
6.	Sunil Acharya – Senior Officer, Department of Cottage and Small Industries	Male	Taplejung
7.	Kailash Dixit – Director of Aarya Aroma	Male	Kathmandu
8.	Mayor's Office		Taplejung
9.	Hansaram Pandey – Director, FNCCI	Male	Kathmandu
10.	Anu Joshi Shrestha – Value Chain Expert, ICIMOD	Female	Kathmandu

List of Respondents – Allo

Processors

No.	Name	Gender	Place Interviewed
1.	Sangeeta Rai	Female	Khandbari
2.	Amrita Rai	Female	Khandbari
3.	Sangeeta Kulung Rai	Female	Khandbari
4.	Safalta Rai	Female	Khandbari
5.	Lalsari Rai	Female	Khandbari
6.	Lal Kumari Rai	Female	Khandbari
7.	Sara Rai	Female	Khandbari
8.	Uma Shrestha	Female	Khandbari
9.	Prabha Raut	Female	Khandbari
10.	Barta Biko	Female	Khandbari
11.	Kamla Rai	Female	Khandbari
12.	Sushila Neopaane	Female	Khandbari
13.	Rajita Kumari Rai	Female	Khandbari
14.	Nirmala Rai	Female	Khandbari
15.	Tirsana Rai	Female	Khandbari
16.	Sumitra Rai	Female	Khandbari
17.	Tulasa Dahal	Female	Khandbari
18.	Pavitra Rai	Female	Khandbari
19.	Chandrakala	Female	Khandbari
20.	Asmita Rai	Female	Khandbari
21.	Devika Kulung Rai	Female	Khandbari
22.	Sushmita Rai	Female	Khandbari
23.	Dhan Lakshmi Rai	Female	Khandbari
24.	Dil Kumari Rai	Female	Khandbari
25.	Nirmala Rai	Female	Khandbari
26.	Ranita Shakya	Female	Khandbari
27.	Hemkala Rai	Female	Khandbari
28.	Ritu Kulung Rai	Female	Khandbari
29.	Mohan Kumari Rai	Female	Khandbari
30.	Mani Kumari Rai Kulung	Female	Malta
31.	Lakshmi Maya Rai	Female	Khandbari
32.	Mamta Kumari Rai	Female	Khandbari
33.	Suntali Kulung Rai	Female	Malta
34.	Bimla Kulung Rai	Female	Malta
35.	Sharmila Kulung Rai	Female	Malta
36.	Poornimaya Kulung Rai	Female	Malta

Traders

No.	Name	Gender	Place Interviewed
1.	Kailash Sankhya	Male	Khandbari
2.	Nishan Rai	Female	Khandbari
3.	Bishnu Kumari Kulung Rai	Female	Khandbari
4.	Bishnu Limbu	Male	Khandbari

Traders Group

No.	Name	Place Interviewed
1.	Sana Hastakala	Kathmandu
2.	Allo Samaj	Khandbari

Experts

No.	Name – Organization	Gender	Place Interviewed
1.	Robin Man Amatya – CEO, SABAH Nepal	Male	Kathmandu
2.	Yujraj Shakya – Chair, District Chapter of Federation of Nepalese Chamber of Commerce and Industries	Male	Khandbari
3.	Krishna Bhagat Pradhan - VP, District Chapter of Federation of Nepalese Chamber of Commerce and Industries	Male	Khandbari
4.	Saroj Bajracharya – General Secretary, Federation of Handicrafts Association of Nepal	Male	Khandbari
5.	Dron Rai - Industry Officer, Small and Cottage Industries	Male	Khandbari
6.	Murari Prasad Khatriwada - Mayor	Male	Khandbari
7.	Shobha Gurung – VP, Federation of Nepalese Chamber of Commerce and Industry (FNSCI)	Female	Kathmandu
8.	Anu Joshi Shrestha - Value Chain and Enterprise Development Specialist, Livelihoods, ICIMOD	Female	Kathmandu
9.	Mukund Sanjer - Assistant Conservation Officer, Department of Forest and Wildlife Conservation	Male	Khandbari
10.	Hari Singh Dhami – Law Officer, Forest Department	Male	Kathmandu
11.	Krishna Bhatta – Programme Coordinator, Poverty Alleviation fund Nepal	Male	Kathmandu
12.	Mala Thapa – Allo Trader	Female	Kathmandu
13.	Rajesh Verma – MEDEP	Male	Kathmandu
14.	Bashu Babu Aryal – Country Officer, IFAD	Male	Online Interview

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