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Value Chain Analysis Series: 4

Value Chain Based Approach to Micro-Enterprise Development

Value Chain Analysis-Chyuri Herbal Soap

Micro Enterprise Development Programme (MEDEP)
(MEDEP-NEP/08/006)
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ACRONYMS

BDSPO	Business Development Service Providing Organization
CFUG	Community Forest User Group
CSIDB	Cottage and Small Industry Development Board
DCSI	Department of Cottage and Small Industry
DDC	District Development Committee
DEDC	District Enterprise Development Committee
DFO	District Forest Office
DMEGA	District Micro-Entrepreneurs' Groups Association
DoF	Department of Forest
FECOFUN	Federation of Community Forest User Groups Nepal
FHAN	Federation of Handicraft Association of Nepal
FINGO	Financial Intermediary NGO
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
ILO	International Labour Organization
LFP	Livelihoods and Forestry Programme
MDG	Millennium Development Goal
MEDEP	Micro-Enterprise Development Programme
MEG	Micro-Entrepreneurs' Group
MFI	Micro Finance Institution
MLD	Ministry of Local Development
MoAC	Ministry of Agriculture and Cooperatives
MoFSC	Ministry of Forest and Soil Conservation
MoI	Ministry of Industry
MoEST	Ministry of Environment, Science and Technology
NEDC	National Entrepreneurship Development Centre
NMEFEN	National Micro-Entrepreneurs' Federation Nepal
OVOP	One Village One Product
RADC	Remote Area Development Committee
RMDC	Rural Microfinance Development Centre
RSDC	Rural Self-reliance Development Centre
RSRF	Rural Self-Reliance Fund
SCC	Savings and Credit Cooperative
SIYB	Start and Improve Your Business
TEPC	Trade and Export Promotion Centre
UNDP	United Nations Development Programme

Chapter-1

Selection of Value Chains for Promotion

1.1 Selected Commodities and Products for Promotion of Value Chains

Nepal is one of the poorest countries in the world with an estimated 31% of the population living below the poverty line. The importance of creating employment opportunities for its growing labour force in the context of poverty alleviation need not be overemphasized. Consistent with the Government's high emphasis on Poverty alleviation (10th Plan/PRSP, Three year Interim Plan) and the MDG of reducing the poverty level population by half between 1990 to 2015, the Micro-Enterprise Development Programme (MEDEP), with the support of UNDP has been working to improve the livelihood of poor families through entrepreneurship development. Micro-enterprises are increasingly gaining importance in the context of poverty alleviation in Nepal as in other countries. Recently GoN has come up with ***Micro Enterprise Policy 2064*** to facilitate the growth of micro enterprises following the norms and definition of the Policy.[1] MEDEP programme currently is active in 36 districts with direct beneficiary number exceeding 50,000 (over 65% being women). On an average incremental annual income per participating entrepreneur has been estimated at US$158 (representing an increase of 282% over base).

MEDEP has been working in several commodity sub-sectors based on market demand, local resource potential, and needs and demands of target groups (standard MEDEP approach of identifying the intervention area). It is now recognized that MEDEP needs to emphasize on a value chain based approach that provides a systematic basis to achieve significant sub-sector level impacts. *Value chains encompass the full range of activities and services of market actors required to bring a product or service from its conception to its end use and beyond*.[2] Value chain analysis helps identify the participants at specific functional levels such as primary producers, processors, product makers, retailers, exporters etc including the identification of strengths and weaknesses at each stage. Such analysis provides a sound basis to design and implement intervention strategies that will contribute to develop the sub sector to its potential level, increase value addition, and to achieve a significant increase in the number of target beneficiaries.

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[1] The Policy defines "Micro-enterprise" as any industry, enterprise or other service business, based particularly on agriculture, forest, tourism, mines, and handicrafts, which meets the following conditions:

I. In the case of a manufacturing industry, enterprise involving the investment of fixed capital of not exceeding two hundred thousand rupees, except house and land, and in the case of a service enterprise, an industry, enterprise involving the investment of fixed capital of not exceeding one hundred thousand rupees,
II. The entrepreneur himself or herself in involved in the management,
III. A maximum of nine workers including the entrepreneur are employed,
IV. It has annual turnover of less than two million rupees,
V. If it uses an engine or equipment, the electric capacity of such engine or equipment is less than five kilowatt (The recent **Industrial Policy 2067** has increased it to ten kilowatt)

Provided that notwithstanding anything contained above, any industry or enterprise which manufactures liquors, cigarettes or other tobacco products or for the establishment of which approval has to be taken will not be considered as micro-enterprise.

[2] Value Chain Program Design: Promoting Market Solutions for MSMEs, Action for Enterprise

The Scoping Study for MEDEP Phase III (Bajracharya 2007) has emphasized that one important dimension where MEDEP needs to focus its orientation is to ensure business growth through value chain analysis. Value chain approach is yet to be fully internalized. To gradually internalize value chain approach ten most potential commodities / products were identified, of which six were selected for detailed studies beginning from the middle of 2009.[3] These are *Allo*, Dhaka, Incense / Agarbatti, Sweet Orange / Orange, Lapsi, and Chyuri / Herbal soap.

MEDEP has recognized value chain development as an appropriate approach to strengthening of selected commodity sub sectors. The commodity value chains targeted for promotion were elected selected based on available information from secondary and primary sources from field offices, and partner organizations followed by an assessment of market demand, resource potential, and needs and demands of target groups.

The process of value chain selection basically considered the following factors:[4]

- Market demand/growth potential including unmet market demand
- Potential to increase income at rural level
- Opportunities for market linkages (internal and external)
- Potential for employment generation
- Outreach in terms of number of small enterprises
- Potential for value addition
- Trade potential / competitiveness
- External environment (e.g. government policies, taxes etc.)

1.2 Value Chain Analysis-Concept and Framework

On a conceptual level the following Fig-1 shows the different layers in the value chain framework. The value chain actors including both the direct chain operators (input suppliers, producers, processors, wholesalers, retailers, and exporters) and service providers (sector specific and cross-cutting services) operate within a local or national business enabling environment. In an increasingly integrated world the global business enabling environment especially with respect to export commodities becomes quite relevant. These may be the factors related to tariff and non-tariff barriers to trade including regulations on

[3] Ten identified priority commodities / products are:

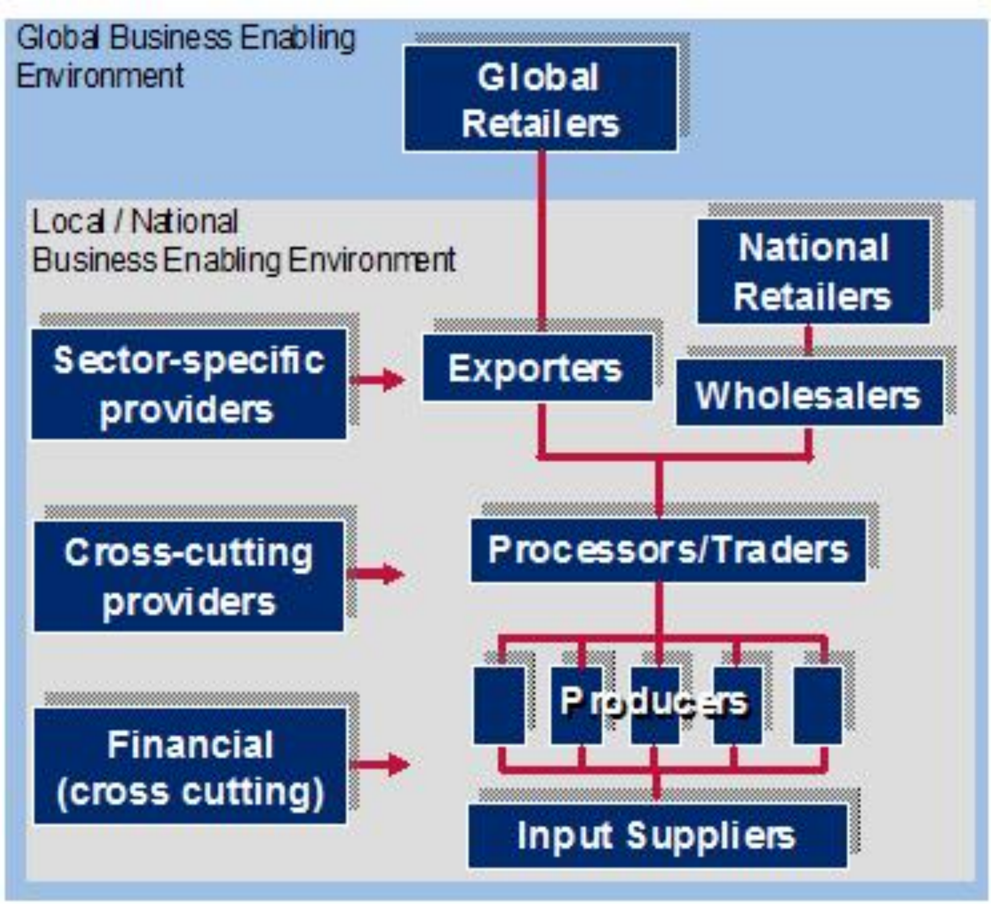
1. *Allo* (Himalayan nettle)
2. Ginger
3. Dhaka fabric
4. Honey
5. Herbal soap
6. Lokta (Nepali Paper)
7. Incense sticks
8. Bamboo products
9. Lapsi
10. Orange (Sweet Orange and Mandarin)

Refer to Annex-2 for basic information on the value chains currently supported by MEDEP.

[4] This closely follows the criteria used by GTZ to select sub sectors for value chain promotion (GTZ, 2008).

quarantine, sanitary and phyto-sanitory (SPS) requirements etc that influence the way the particular value chain functions.

Fig-1: Value Chain Framework



Source: MLinks-VCA\Chain Analysis-microLINKS Wiki.htm

Value chain analysis provides a basis to identify the chain actors and the weaknesses at each of the functional levels to help in designing appropriate interventions for strengthening the target value chains. How relevant is value chain analysis from the point of view of poor small producers? In the context of small producers chain upgrading can be achieved in the following two ways (Bolwig et al., 2008; Riisgard et. al. 2008).

Strengthening value chain coordination around the production node:

Value chain coordination is strengthened either by vertical integration in which an actor performs several functions in the value chain, or through contractualization which simply indicates use of contracts as a mediator of exchange between chain actors. Chain actors can cooperate and enhance fruitful exchanges between them (**Vertical contractualization**). Similarly, actors in the same position of the value chain can cooperate over such matters as input provision, bulking produce for easy access to markets, identification of potential buyers, as well as product certification (**Horizontal contractualization**).

Upgrading in the production node:

The common forms of upgrading in the production node include improvement in product quality, improved efficiency of production process, increasing volume of production, improving timing of supply, and compliance with mutually agreed upon industry standards.

1.3 Methodology

The study and the findings are presented based on a combination of primary including participatory methods and secondary sources of information.

- Review of Secondary Information / data on Chyuri Herbal Soap sub-sector.
- Resource Survey of Chyuri (MEDEP 2010)
- Interaction workshop with sub-sector value chain actors / stakeholders at Ghorahi (Dang) on 2-3 June 2010 for participatory Value Chain Mapping, SWOT Analysis, identification of constraints and possible solutions.
- Field survey with entrepreneurs and other chain actors including input suppliers, traders-Kathmandu, Pyuthan, and Bardiya (key informants, enterprise surveys)
- Information from Market surveys in Kathmandu (NORMS and MEDEP Marketing Unit).

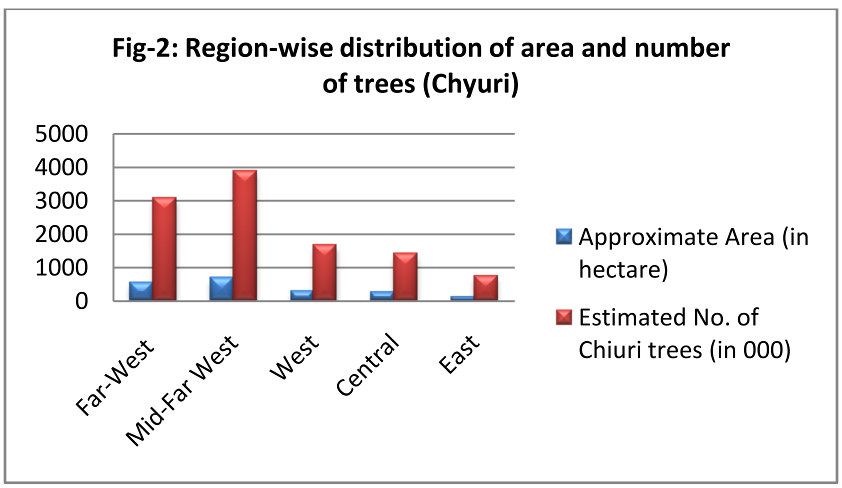
Chapter-2

Chyuri Herbal Soap Value Chain

2.1 Resource Analysis of Chyuri

Chyuri (*Aesandra butyracea*) is a medium sized tree native to Nepal. The tree is abundantly found in the mountain areas between 300 to 2,000 msl. Chyuri trees can reach to heights of upto 20 meters. The seed from Chyuri trees produces fatty acid oils that are mainly used as vegetable butter in rural areas especially to cook traditional Nepali bread "Sel Roti".

According to a resource assessment of Chyuri undertaken by MEDEP out of the 75 districts of Nepal, almost 50 districts are known to have Chyuri plants. The geographical distribution extends from Darchula, Baitadi and Dadeldhura districts in the far-west to Dhankuta and Ilam district in the east. The total number of Chyuri trees in the country is estimated at 10.8 millions. The highest number of trees (almost 40 percent) are found in the mid western development region (MWDR), which is followed by far western development region (FWDR). These two regions combined account for about 70 of the total number of trees in the country respectively (Fig-1)



Source: Resource Survey Chyuri (MEDEP 2010)

There are an estimated 5.6 million Chyuri trees at fruit bearing stage in the country with the potential to produce 37,245 MT of butter. There is a huge potential in terms of resource availability to produce Chyuri butter as well as honey as shown by the estimated figures of the resource survey (Table-1).

Table-1: Resource Potential for Chyuri-based Enterprises

District	Number of fruit trees	Estimated Quantity of Chyuri Products (in MT)			
		Fruits	Seeds	Butter	Honey
Achham	293,811	19,782	4,946	1,946	931
Baitadi	270,719	18,228	4,557	1,793	858
Bajhang	100,602	6,774	1,693	666	319
Bajura	118,741	7,995	1,999	786	376
Dadeldhura	236,043	15,893	3,973	1,563	748
Darchula	99,873	6,724	1,681	662	317
Doti	328,122	22,092	5,523	2,173	1,040
Kailali	159,426	10,734	2,684	1,056	505
Total of FWDR	**1,607,337**	**108,222**	**27,055**	**10,646**	**5,095**
Dailekh	115,689	7,789	1,947	766	367
Dang	269,990	18,178	4,545	1,788	856
Jajarkot	331,692	22,333	5,583	2,197	1,051
Pyuthan	276,026	18,585	4,646	1,828	875
Rolpa	311,394	20,966	5,242	2,063	987
Rukum	279,395	18,812	4,703	1,851	886
Salyan	229,296	15,439	3,860	1,519	727
Surkhet	199,764	13,450	3,363	1,323	633
Total of MWDR	**2,013,248**	**135,552**	**33,888**	**13,335**	**6,382**
Arghakhanchi	179,753	12,103	3,026	1,191	570
Baglung	136,209	9,171	2,293	902	432
Gorkha	73,604	4,956	1,239	488	233
Gulmi	34,791	2,342	586	230	110
Kaski	54,966	3,701	925	364	174
Lamjung	73,162	4,926	1,232	485	232
Myagdi	39,005	2,626	657	258	124
Nawalparasi	58,929	3,968	992	390	187
Palpa	103,366	6,960	1,740	685	328
Parbat	37,325	2,513	628	247	118
Syangja	36,461	2,455	614	242	116
Tanahu	41,260	2,778	695	273	131
Total of WDR	**868,831**	**58,498**	**14,625**	**5,755**	**2,754**
Chitwan	112,407	7,568	1,892	745	356
Dhading	61,424	4,136	1,034	407	195
Dolakha	61,434	4,136	1,034	407	195
Kavre	33,131	2,231	558	219	105
Makwanpur	194,409	13,090	3,272	1,288	616
Nuwakot	72,923	4,910	1,227	483	231
Ramechhap	41,308	2,781	695	274	131
Rasuwa	55,810	3,758	939	370	177
Sindhuli	103,500	6,969	1,742	686	328
Total of CDR	736,346	49,578	12,395	4,877	2,334
Bhojpur	42,037	2,830	708	278	133

Dhankuta	37,642	2,534	634	249	119
Ilam	54,380	3,661	915	360	172
Khotang	30,751	2,070	518	204	97
Okhaldhunga	52,067	3,506	876	345	165
Sankhuwasabha	71,636	4,823	1,206	474	227
Taplejung	35,828	2,412	603	237	114
Terhathum	46,932	3,160	790	311	149
Udaypur	26,096	1,757	439	173	83
Total of EDR	397,369	26,755	6,689	2,632	1,260
Grand Total	5,623,130	378,605	94,651	37,245	17,825

Source: Resource Analysis-MEDEP

2.2 Chyuri Herbal Soap Production Process

Chyuri herbal soap is a unique Nepalese product as it uses Chyuri butter as the base oil instead of animal fat. Although rural communities in the mountain areas were familiar with the beneficial effect of Chuyri butter on human skin the commercial enterprises for chyuri based soap making have come up only in the recent years thanks largely to the support provided by MEDEP.

The common method followed by micro-entrepreneurs for Chyuri herbal soap making is based on what is called the **"Cold Process Soap Making"**. Herbal soap making is a specialized process with a wide diversity in type of ingredients used depending on the target markets consisting of low end and upscale consumers. There are various kinds of oils, essential oils, and fragrances available that could be combined by individual entrepreneur to come up with specific product with unique characteristics. The common practice involved in Chyuri herbal soap making by micro-entrepreneurs consists of three main steps:

Step: 1- Mixing base oils

Chyuri butter and other oils such as castor oil, coconut oil are heated. The heating is required for proper integration of solid and liquid fats. Then the mixture of oils is stained by using cotton cloth to remove the impurities.

Step-2-Making Lye or Caustic Soda (sodium hydroxide) solution[5]

This step involves preparing solution of caustic soda very carefully by adding sodium hydroxide to water. The mixing is not done the other way as it may cause violent reaction to take place with fumes. After cooling of the solution the appropriate density is measured with Hydrometer.

Step-3-Mixing Lye solution and Oils.

[5] 5 **Sodium hydroxide** (NaOH), also known as lye and **caustic soda**, is a caustic metallic base. It is used in many industries, mostly as a strong chemical base in the manufacture of pulp and paper textiles, drinking water, soaps and detergents and as a drain cleaner. (Source: http://en.wikipedia.org/wiki/sodium_hydroxide)

Lye solution or caustic soda is added into the mixture of oils.[6] The combining of fatty acids (contained in oils) with alkaline solution (Lye) leads to the process known as saponification.[7] The mixture is stirred with the help of stick till it turns to be like a thin pudding.

Step-3: Mixing with essential oils and fragrances

Essential oils such as mentha, lemon grass as well as Neem oil are also added at this stage. The mixture is again stirred. After the mixing with essential oils and fragrances is complete the thick solution is poured into molds.

Chemical foaming agents are commonly used as foam boosters. The common foaming chemicals that are available in the market are *Sodium Lauryl Sulfate (SLS)* and *Sodium Laureth Sulfate (SLES)* of which the latter is known to have potential health hazards.[8] It cannot be said with certainty whether soap makers have also been using SLES as they are unaware of the chemical composition of the foam booster available in the market.

Step-4 Cutting, Curing, and Packaging

The following specific activities are followed after removing the soaps from the molds:

1. Cutting-Cutting into required size with the help of sharp knife or cutting machine
2. Finishing-Using Dye machine to give fine shape and marking
3. Curing- for about 4 weeks is recommended for soaps that use caustic sods
4. Packaging-with inner plastic cover and printed packaging material

The complete chyuri herbal soap making sequential process (as practiced by micro-entrepreneurs) has been shown in the following Figure-2.

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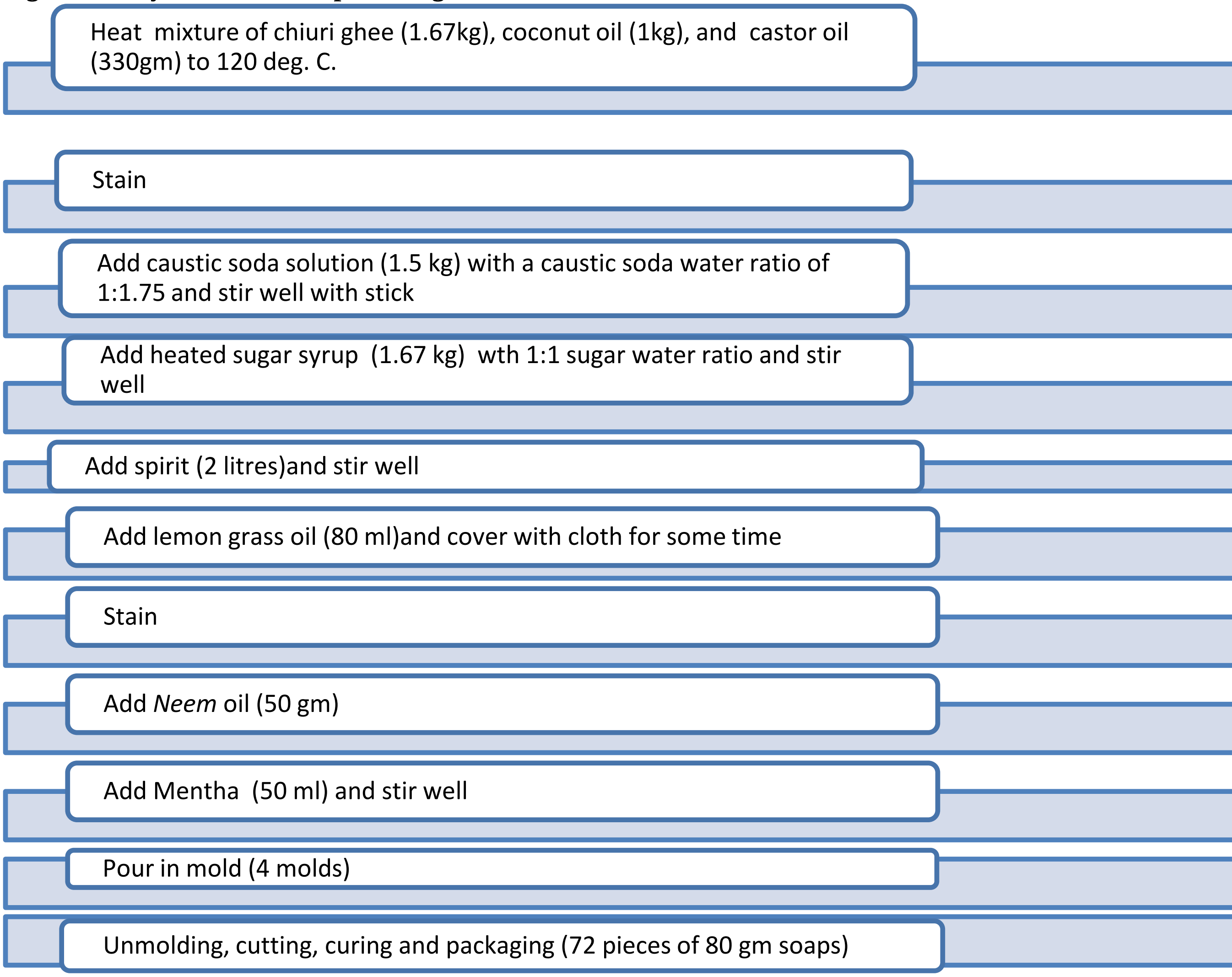
[6] Once both substances have cooled to approximately 100-110 °F (37-43 °C), and are no more than 10°F (~5.5°C) apart, they may be combined(http://en.wikipedia.org/wiki/Soap)

[7] Soaps for cleansing are obtained by treating vegetable or animal oils and fats with a strongly alkaline solution. Fats and oils are composed of triglycerides: three molecules of fatty acids attached to a single molecule of glycerol. The alkaline solution, often lye, promotes a chemical reaction known as saponification. In saponification, fats are broken down (hydrolyzed) yielding crude soap. Fats are transformed into salts of fatty acids and glycerol is liberated, leaving glycerin as a byproduct (http://en.wikipedia.org/wiki/Soap)

[8] Both Sodium Lauryl Sulfate (SLS) and its close relative Sodium Laureth Sulfate (SLES) are **commonly used in many soaps, shampoos, detergents, toothpastes** and other products that we expect to "foam up". Both chemicals are very effective foaming agents, chemically known as surfactants. In fact, SLES is commonly contaminated with dioxane, a known carcinogen. Although SLES is somewhat less irritating than *Sodium Lauryl Sulfate*, it cannot be metabolised by the liver and its effects are therefore much longer-lasting (http://www.natural-health-information-centre.com/sodium-lauryl-sulfate.html)

Figure-2: Chyuri Herbal Soap Making Process



2.3 Value Chain Actors

Collectors:

Chyuri is mostly collected from community forests in the mountain districts with Mid-west region having the dominant share. The following table provides the main features of the Chyuri collection. The main season for collection is between mid-Asar to first week of Bhadra which coincides with the busy rice transplantation season. On an average a household collects about 50 kg of seed in the season which is sold at the rate of Rs. 20 per kg. CFUG charges small fee of Rs. 25 to members and Rs. 50 to non-members for collection of chyuri seeds from community forest. Daily collection of seed (4-5 pathi) provides collectors with comparable earning to the going wage rates. There is no information, however of the total number of families collecting Chyuri seeds.

Table-2: Basic Information on Chyuri Collection

Chyuri collection per household	20 Pathi from CFUG (bari=5-7 pathi/tree)
Seed price	Rs.50/pathi of seed (1 pathi=2.5 kg)
Butter price	Rs 100-140/kg butter
Collection per person per day	4-5 pathi
Wage: • Male • Female	 Rs 200/day Rs 150/day
Collection during busy period coinciding with rice transplantation	Asar 15/20 to Bhadra 1st week (about 1.5 month)

Note: One pathi of Chyuri seeds is equivalent to 2.5 kg.

Chyuri Processors:

The number of traditional wooden Chyuri butter expellers (*Kols*) easily number more than 100. These expellers are manually driven and require four persons to operate. The daily output will be about 60 pathis or 150 kg of seeds. There are three modern expellers in operation with increased production efficiency over the traditional *Kols*. The modern expeller just requires an hour to process 40 pathis or 100 kg with three working persons an efficiency gain of over 400 percent in terms of total daily output. The processing involves grinding seeds followed by boiling with the addition of equal amount of water and little amount of salt (100 gm / pathi). The mixture is stained using fine cotton cloth after adding sufficient amount of water (usually 3-4 times in terms of volume) and left to solidify that takes anywhere between 3-4 hours in winter to two days in the summer season. The final product Chyuri butter is then packaged in plastic bags with 5 kg net weight at packing.

The following are available details on the modern expelling plant being operated at Pyuthan (fabricated by Universal Equipment Industries, Butwal).

Table-3: Details on Modern Chyuri Processing Plant

Cost of Expeller	**Rs. 175,000**
15 HP Motor	Rs 39,000
Transportation	Rs 3,000
V belt (3)	Rs 2,700 (3 years durability)
Electricity connections (Three phase)	Rs 10,000
Total investment cost	**Rs 2,29,000**
Repair and Maintenance	Rs 3,000 per year
Processing Cost and Margin (unit: one kg chyuri butter)	
Cost items: • Chyuri seed = 3.7 kg @ Rs.20 / kg • Electricity	 Rs 74.00 Rs 14.80

• Labour • Salt **Total cost (direct)** **Sale Price** **Gross Margin**	Rs. 2.75 Rs 2.00 **Rs. 93.55** **Rs. 140.00** **Rs. 46.45**

The Gross margin in Chyuri butter making enterprise is estimated at Rs. 46.45 per kg. The processing charge is Rs. 15 per pathi or Rs. 6 per kg of seed. The plant currently runs at less than 25 percent of its processing capacity of over 10 Metric Tons of seeds per year. The single plant at full capacity production level is able to support 12 soap making enterprises with annual output level of 36,000 pieces of soaps each. This clearly illustrates the technical feasibility of establishing small scale chyuri processing plants to support the chyuri butter based herbal soap making enterprises.

Input Suppliers

There are suppliers of chemicals and oils based at Birgunj and Kathmandu imported mostly from India. The main chemical used in herbal soap making is Caustic soda, and to some extent SLS (foam booster). A variety of oils are used in herbal soap making including castor oil, coconut oil, Neem oil, and palm oil.

Herbs Production and Processing Co. Ltd. (HPPCL), an under taking of Government of Nepal (est. 1981) is involved in processing and distillation of medicinal herbs and aromatic plants collected in wild form, cultivated in private sectors and well as from its own farm. It sells the processed essential oils, extracts, and products in domestic and international markets. The company has its own land of 350 hectares is located at 14km. from Nijgadh in Terai has been carrying out the cultivation and processing of medicinal and aromatic plants in 200 hectares. [9] HPPCL is the supplier of some of the essential oils such as Mentha Oil, and Lemongrass Oil to herbal soap enterprises. The list of essential oils and extracts produced by HPPCL is given in Annex-2.

Chyuri Herbal Soap Producers

The chyuri herbal soap producers include micro-entrepreneurs promoted by MEDEP numbering over 100, and some small and medium specialty herbal soap making enterprises located in Kathmandu (less than 10 enterprises). The soap producers can be categorized as follows:

Micro-Entrepreneurs-Mainly produce for low end of the market for cheaper herbal soap products. The price ranges between Rs. 20-40 per unit of soap with 80-90 gm net weight. These entrepreneurs have received short-term (usually 7 days) of skill training on herbal soap making. The MEs have limited technical knowledge as far as the quality standards, and use of various ingredients is concerned. The products are poorly packaged and sold mostly in local markets through sales outlets managed by DMEGAs. One chyuri herbal soap enterprise in Pyuthan has developed link with

[9] Source: http://www.mfsc.gov.np/index.php?module=herbs_pro

Mahaguthi, a fair trade organization to supply the herbal soaps that are packaged and marketed with the fair trade label.

Small and Medium producers-These are mainly specialized soap producers based in Kathmandu that cater to the high end of the market. The products are available in the price range between Rs. 80-275. The main herbal soap brands in the niche segment are *Wild Earth*, *Nature's Essence*, and *Bounty Himalaya* that specifically target the upscale market (tourists and expatriates). These herbal soap brands do not use Chyuri butter as one of the base oils using instead various imported oils. The other popular brands that use Chyuri as one of the base oils include *Okhati, Asmi,* and *BlueBell* etc. The specialized herbal soap producers are generally well educated and dedicated entrepreneurs having an in depth knowledge of soap making and the market conditions including the quality standards of the importing countries.

Retailers

The major retailers of herbal soaps are supermarkets, department stores, and large retail stores within Kathmandu valley. These include *Bhat-Bhateni, Saleways, Namaste, Nav Durga, and Suvechha* etc. (Annex-provides the list of major retail stores dealing in herbal soaps). The major retailers deal both in imported as well as locally produced herbal soaps. The collectively branded herbal soaps produced by MEs have just recently been introduced into some of these major retail stores (see Section- for the new marketing initiative of SMPPL). Herbal soap products targeted for the upscale market segment (tourists, and expatriates) are mainly sold in book/gift shops such as *Pilgrims, Wisdom Books and Aroma Shop*) that are located at main tourist areas in Kathmandu and Lalitpur.

Exporters

There is lack of data on the quantity of herbal soaps exported from Nepal. In any case the export market for herbal soaps presently is limited due to several reasons including the difficulty in meeting the quality standards and the regulations (such as FDA in the USA). Some specialized herbal soap producers such as *Bounty Himalaya, Nature's Essence* and *Wild Earth* and a few Fair Trade Shops notably *Mahaguthi* have been exporting herbal soaps to overseas countries.[10] Most herbal soaps exported are non-Chyuri based. Mahaguthi is probably the single important exporter of Chyuri based herbal soaps procuring directly from an herbal soap making micro-enterprise located at Pyuthan.

Service Providers

Business development service providers have an important role in promoting herbal soap enterprises by providing skill training, access to appropriate technology, and linkage with markets at the meso level of the value chain. MEDEP has worked through the local NGOs developed as BDSPOs to

[10] The export data of herbal shops is not available. One specialty soap producer has been exporting approximately 10,000 soaps per year to overseas countries (information provided by Basudev Sapkota of Nature's Essence P.Ltd.).

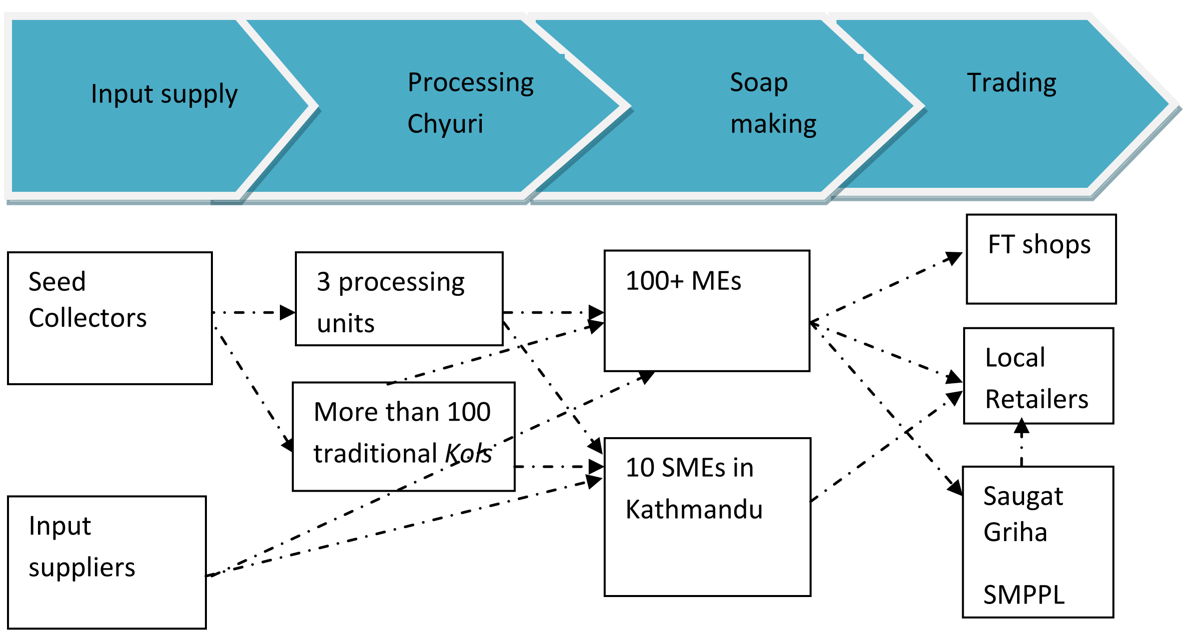
provide services to the MEs in the programme districts. Chyuri herbal soap making being forest based enterprise the CFUGs have an important role to expand the product value chain by supporting its beneficiaries to initiate income generation actives involving collection and processing of chyuri.

There are also private technical service providers to establish and operate chyuri processing plants. One such provider is the Butwal based *Universal Equipment Industry* that also fabricates the expelling machine for chyuri processing. There is only limited number of service providers on technical aspects of herbal soap making especially to develop niche products for the export markets.

The financial service providers include MFIs such as Nirdhan, Grammen and the Savings and Credit Societies (Cooperatives). As MEDEP does not have a credit component (as it had in Phase-I with ADB/N) access to micro-finance has remained an issue with low coverage of MFIs in remote mountain districts as well as operating procedures not seen as being friendly by the MEs (these being high interest rates 18-24 percent, short repayment schedules, high charge for defaulting and loan limit of Rs. 60,000 without collateral etc). MEDEP has to date supported the establishment of 130 SCCs (of which eight have been linked already with RSRF, the wholesale lending institution created by Nepal Rastra Bank) that are playing an important as providers of financial services to MEs.

2.4 Value Chain Map

Fig-2: Value Chain Map



Note: FT shops are shops affiliated with FTGN. About half of Kathmandu based herbal producing SMEs especially those producing for the upscqale market and for export do not use Churi butter aqs one of the base oils.

The list of selected value chain actors is given in Annex-3.

2.5 Market Analysis

The herbal soaps are targeted to urban Nepalese belonging to all age groups especially from 25 to 50 who are conscious of their skin health and less price sensitive. Unlike the mass products like Lux, Lifebuoy, etc, herbal soaps cater to niche markets who value the benefits of pure herbal products.

There are numerous herbal soaps in the market which are mainly dominated by imported products (Table-4). These imported products are available in attractive packaging in varieties of fragrances and variants. The following Table-shows the comparative analysis of herbal soaps available in the Nepalese market. In terms of price local herbal soaps compare favourably with price per SKU in the range Rs. 0.47-1 as imported brands are in the price range Rs. 0.7-1.33. The imported brands and some domestic brands target the upscale or higher end with relatively high income consumers whereas products of micro-enterprises are mostly catering to the low end market.

Table-4: Comparative Analysis of Herbal Soaps Available in Nepalese Market

Brand	SKU (gm)	Price	Price per SKU	Manufactured	Ingredients
Herbal Soap	85	40	0.47	Nepal	Chyuri ghee, coconut oil, Neem oil, castor oil, glycerin and natural fragrance
Asmi Chyuri Neem Ayurveda Soap	100	85	0.85	Nepal	Oils: Neem, coconut, castor, palm, chyuri Herbs: Artemesia, valgaris linn, pyllanthus embica linn, centereila aslatica linn, elicpti albor, ocin, sanctum linn, lichen Dye: Termeric Fragrance: Pamrose, citronella and lemongrass oil
Yong Chim Tea Tree Soap-Refresh mild clean	100	99	0.99	Thailand	Sodium, glycerin, tetrasodium, edita, AHA, BHA, pepermint, tea tree oil, fragrance
Plant Centa Anti-Aging & Whitening Soap Detoxify & Rejuvenate Skin	135	179	1.33	Philippines	Water, coconut oil, acid, cocomido propyl betain, sodium cocoate, sodium palmate, sodium etidronate, cocodiethanolamide, titanium dioxide, sodium, isethionate

YC-Extra Whitening Soap with pure Lemon & Orange	100	110	1.1	Thailand	Sodium soap, glycerin, tetrasodium EDTA, AHA, BHA, herbal extracts, lemon & organe extracts
Okhati Vita-E yukta	100	50	0.5	Nepal	Alovera, amala, neem, ginger, tulasi, titepati, coconut oil, castor oil, glycerin, essential oil
New Papaya Skin Whitening	135	63	0.47	NA	Pure papaya extracts, coconut oil, coate sodiumhydroxide solution, BHA, vitamin C, glycerine, titanium dioxide, perfume
Roselyn Skin Britening & Smoothening Papaya Herbal Soap	135	99	0.73	Thailand	NA
Whitening Herbal Soap	110	77	0.7	Thailand	Sodium palmitate, sodium palm, kernilate, glycerin, papaine, triclosan, frangrance
Pure Herbal Carambola Fruity Skin Whitener Sunblock Moisturizer & Hypoallergenic	100	99	0.99	Thailand	Sodium palmitate, sodium palm kernelate, water, sodium laurate, propylen glycol, palm oil, cethyl alcohol, sodium lactate, alcohol glycerin, sorbitol, lactic acid, sodium staerate, sodium chloride, tetrasodium EDTA, betaine, tetrasodium, etidronate, averrhoa carambola fruit extracts, sodium hydroxide, aloe vera extract, titamium dioxide, fragrance
Nepal Neem Ayurveda Soap 100% vegetable base	100	100	1	Nepal	Oils: neem, coconut, castor, palm, chyuri Herbs: Artemesia, phylianthus emblica, centerella asiatica elicpta albe comum sanctum, lichen Dye: Turmeric Fragrance: Pamarosa, citronella & lemongrass oil
2 Yonu Chin Dark Spot Remover Soap	100	132	1.32	NA	NA

Margo	90	18	0.2	India	Sodium Palmate, Sodium palm,Kemelate/cocoata, sodium soap of Neem oil, aqua, Tale,Perfume , sodium chloride, petroleum Jelly, Lauric acid, Disodium EDTA, Lanolin, Hard paraffin, VitE, Acetate,glyceryl monosterate

Source: Market Survey in Kathmandu-MEDEP Marketing Unit

The following Table-5 provides a comparative assessment of the three brands of herbal soaps produced by micro-enterprises. It is clear that local market constitute an important share (25-75 percent of total sales) implying that products of MEs are mostly targeted to the low end of the market segment with prices in the range between Rs 20 to Rs. 30. Developing MEs products into high value products for niche markets requires quality assurance to consumers as well as improved measures at product branding and packaging to make these products competitive with imported herbal soap products.

Table-5: Comparison of three main brands of Herbal Soap produced by MEs':

Particular	**Brands**		
	Herbal	*Neem*	*Natural*
Place	Pyuthan	Nawalparasi	Bardiya
Individual or Group	Individual	Group (4 MEs)	Group (five MEs)
Main ingredient	Chyuri butter	Chyuri butter	Chyuri butter
Weight	85gm	80gm	90gm
Price	NRs 22 to 30	NRs 25	NRs 20
Annual production (pcs)	24,000	36,000	24,000
Main market	Local -25%; Outside district- 75%	Local- 50%; Outside district- 50%	Local -75% Outside district- 25%

2.6 Gross Margin and Profit Analysis

Chyuri herbal soap making provides reasonable return to entrepreneurs with gross margin per production batch of 23.6 percent and profit margin of 21.4 percent (Table-6). A micro-enterprise with production level of 36,000 pieces of herbal soaps per year will be able to earn a profit of Rs. 185,400 per year. The total annual Chyuri butter requirement for the enterprise will be 850 kg.

The profitability is affected by the rising prices of key ingredients such as Chyuri butter and other imported oils (such as castor oil). In the past one year due to increased demand the price of Chyuri butter has increased from Rs. 100 per kg to the current rate of Rs. 140 per kg (an increase of 40 percent). Most enterprises are running much below the full capacity levels because of problems related to marketing, availability of raw materials, and working capital (finance). Scaling up of production levels with improved market linkages will help increase profitability by lowering input costs (enabling procurement in bulk) and also indirect costs (per unit cost allocation will be lower).

Table-6: Gross Margin and Profit Analysis of Chyuri Herbal Soap

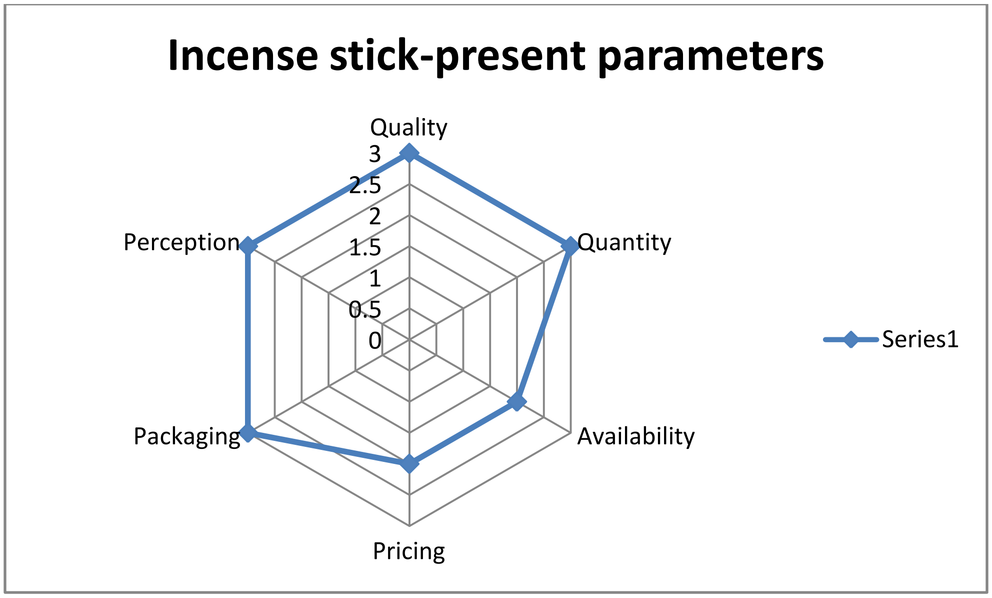
	Unit	Qty.	Price (Rs)	Total (Rs)
Sale	Pc	72.000	25.00	1,800.0
Materials				-
Chyuri butter	Kg	1.670	140.00	233.8
Coconut oil	Kg	1.000	150.00	150.0
Castor oil	Kg	0.330	200.00	66.0
Caustic Soda	Kg	0.850	64.00	54.4
Sugar	Kg	0.835	70.00	58.5
Spirit	Lit.	2.000	60.00	120.0
Neem Oil	Kg	0.050	200.00	10.0
Essential oils (Mentha, Lemon grass)	Liter	0.130	1,000.00	130.0
Packaging Material	Pc	72.000	3.50	252.0
Labour Cost	Pd	2.000	150.00	300.0
Total cost				1,374.70
Gross Margin				425.30
less depreciation				15.8
less repair and maintenance				1.4
less other costs (rental)				22.4
Profit				385.70
Gross Margin (%)				23.63
Profit (%)				21.43

Note: Calculated per production batch (72 soaps) and based on production practices of Selected soap making micro-enterprises. Gross margin and profit margin shown are percentages to sales value.

2.7 Competitiveness Analysis

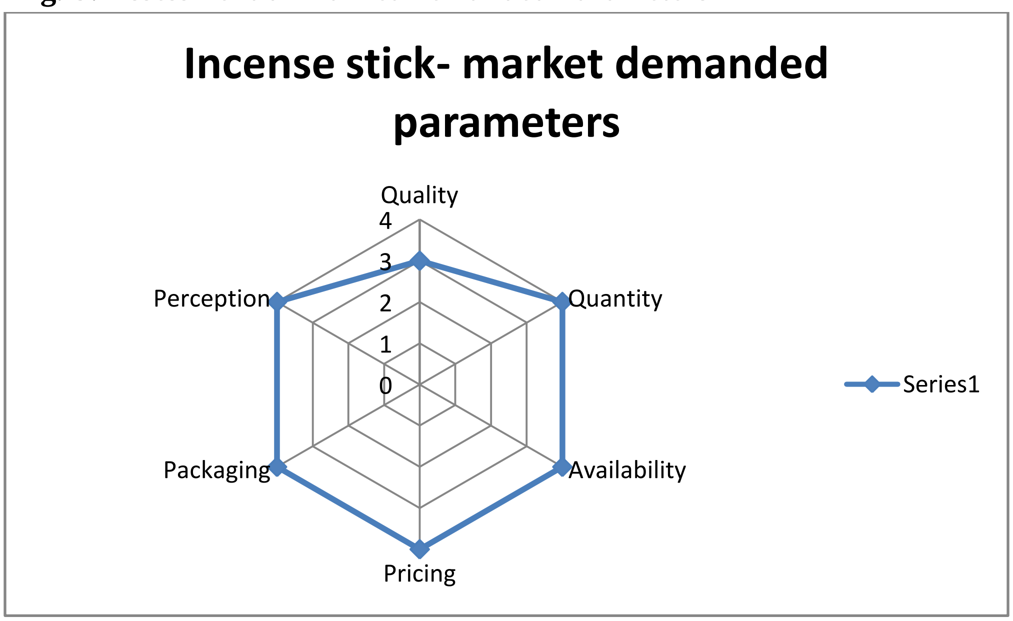
A market study conducted by NORMS for MEDEP has analyzed the present and market demanded parameters with respect to herbal soap through Spider Diagram (NORMS 2010) as follows:

Fig.-4: Assessment of Present Parameters



Present herbal soap product has met quality standards for market but need to work more on packaging and quantity to be supplied. Buyers are interested to link with MEDEP entrepreneurs for supply linkages and are ready to subcontract monthly for product. Pricing of herbal soap at present is as per market demand.

Fig.-5: Assessment of Market Demanded Parameters



There has been price variation in herbal soaps according to positioning of herbal soaps the major factor has been ability to supply products to buyers in given time. The herbal soap business can be treated as a business for immediate linkages with the buyers with subcontracting mechanism for wholesale supply and developing packaging and positioning for brand development.

2.8 SWOT Analysis

A SWOT analysis has been conducted for the Chyuri herbal soap sub-sector based on a participatory approach with value chain actors. The following table highlights the main strengths and weaknesses as well as opportunities and threats to develop the sub-sector.

Table-7: Strengths, Weaknesses, Opportunities and Threats (SWOT)-Chyuri Herbal Soap

Strengths	• Raw materials are locally available • Processing can be done locally • Wasted raw materials can be utilized
Weaknesses	• Poor quality of products • Prevalence of traditional processing technology • Lack of complete understanding of soap making process
Opportunities	• Increasing demand of herbal soaps • Institutions available for promotion of herbal soaps • Industrial policies are supportive and encouraging
Threats	• Competition created by the imported brands • Negative perception by the consumers • Lack of quality testing facilities • Dependence on imported inputs

Nepal is uniquely endowed with the abundance of Chyuri trees that provide the main ingredient (oil) for herbal soap making that helped eliminate the need for using animal fat. Chyuri based herbal soap making enterprises can have significant impact on improving the livelihoods of poor people with meager resources. Poor families can benefit and play an important role in the value chain simply as collectors and processors of Chyuri seeds from community forests and can be linked with soap making enterprises.

Probably the main weakness is the poor quality of Chyuri based herbal soap products except a few producers. Herbal soap makers especially the micro-entrepreneurs have only very basic knowledge of soap making. They do not have a full understanding of the use of different ingredients and also seem unaware of the potential harmful effects of the use of some chemicals in soap making such as foaming agents. In the processing of Chyuri seeds still the traditional practices dominate that are labour intensive and are less efficient compared to modern expelling units.

The opportunities within the Chyuri herbal soap sub-sector are immense considering the increasing demand for natural products by consumers not only in the export markets but domestically too. The commitment of various projects to develop Chyuri based enterprises has expanded the opportunities for the sub-sector to expand. Moreover, a micro-enterprise friendly Industrial Policy 2067 is expected to further support the growth of micro-enterprises including Chyuri based herbal soap making enterprises.

The sub-sector is not without potential threats. These mainly consist of competition from imported brands. A lot needs to be done to improve the quality of herbal soaps to the level of imported brands that have a wide variety in terms of use of essential oils, herbal ingredients and fragrance oils. There is a negative perception prevalent among consumers on the quality aspect of locally produced herbal soaps which may hinder the expansion of the sub-sector. The dependence on imported inputs may also affect the future growth of the sub-sector especially because of rising prices of imported oils such as castor oil. The lack of laboratory facilities to test the quality and purity of ingredients may lead to the problem in export of soaps. In order to successfully enter the competitive export markets there should be full quality assurance that the soaps are free from any harmful chemical substances.

Chapter 3

Role of MEDEP in Promoting Chyuri Herbal Soap Value Chain

3.1 Creation of MEs

MEDEP is a poverty alleviation programme targeting the upliftment of families below poverty line by developing entrepreneurship and viable micro-enterprises. The programme has been emphasizing on creation of viable enterprises involving mainly the agro-based and forest-based products and commodities. The forest- based enterprises such as those based on Chyuri butter are seen as being much more relevant for the poor families to start micro-enterprises because of the relatively lower requirement of working capital which is an important consideration given the low access to micro-finance in the remote areas.

Since 1998 MEDEP has succeeded in creating a total of 192 entrepreneurs in Chyuri processing and herbal soap making (Table-8). However, only about 60 percent are currently either active or seasonally (semi-active) active in the sub-sector. The cumulative sales value and profit are reported to be Rs. 33 Million and Rs. 22 Million respectively.

Table-8: Chyuri herbal soap entrepreneurs by Category

Category	Number of Entrepreneurs	Sales value (Rs)	Profit (Rs)
Active	113	23,321,343	19,025,004
Semi Active	3	981,530	934,622
Inactive	76	8,884,672	6,224,767
Total	192	33,187,545	26,184,393

Note: Cumulative data to September 2010 (Source: MEDEP / GIS-MIS)

MEDEP has been a pioneer in the field to promote Chyuri based herbal soap making having recognized early on the potential to utilize the abundantly available resource in making herbal soaps by completely substituting for the use of animal fat. Although much remains to be done to upgrade the quality, and scale-up the enterprises, the foundation has been laid in terms of introduction of efficient Chyuri processing technology and several groups of MEs involved in chyuri based herbal soap making in such remote mountain districts as Baglung, Pyuthyan, Rukum, Baitadi, and Dadeldhura as well as in Nawalparasi and Bardiya in the Terai.

3.2 Specific Supports in the Value Chain

- Entrepreneurship and Skill Training:

The selected target beneficiaries are provided with entrepreneurship training. The training modules developed by ILO-SIYB have been adapted with revisions to suit the local condition in which majority of the potential beneficiaries are hardly able to read and write. Training of Potential Entrepreneurs (TOPE) and Training of Starting Entrepreneurs (TOSE) are conducted for approximately two weeks duration to make the selected beneficiaries capable to understand the basic concepts of business.

Those entrepreneurs who select Chyuri processing and herbal soap making enterprises are provided skill training such as Herbal Soap Making (7 days) and Chyuri Oil Extraction (15 days) to start the enterprises.

- **Linking with Micro-Finance**

MEDEP does not have a micro-finance component but provides assistance to link MEs with MFIs. Access to micro-finance remains weak especially in the remote mountain districts where most of Chyuri herbal soap MEs are located. Overall about 52 percent of MEs created by MEDEP are reported to have some access to Micro-finance from financial service providers.[11] Even in areas apparently served by MFIs their operational procedures are not seen as being friendly to MEs (such as high interest rates of 18-24 percent and unpractical repayment schedules).

- **Upgrading Processing Technology**

Technical support is provided to upgrade the processing technology of Chyuri. Transitioning from the existing traditional method of oil extraction to the relatively efficient processing technology is being facilitated and supported by linking entrepreneurs with manufacturers of machinery and equipment. Common Facility Centres (C FCs) are also supported in the case of the hard core poor as processing centres to be managed on group basis.

- **Marketing support**

Marketing support has been provided through the dedicated sales outlets called *Saugat Grihas* managed by DMEGAs (a total of 28 are operating at present) at district and RMC level. At central level the sales outlet managed by *Saugat Micro-Promotion Private Limited (SMPPL)*, the business wing of NMEFEN has been receiving support as the lead market outlet for the products of MEs including herbal soaps. A recent development has been the initiation by SMPPL to collectively brand and market Chyuri herbal soaps under the ***Saugat Natural*** brand name. MEDEP has provided support to make MEs aware of the importance of Intellectual Property Rights and benefits of collective branding by organizing workshops. Similarly, assistance was provided to link herbal soap producing groups to enter into contractual agreement with SMPPL for collective branding with the stipulations of supply quantity, price, and quality standards and payment mode to be met by the contracting parties. The herbal soaps produced by a soap making enterprise in Bardiya are now being marketed by SMPPL under a new collective brand name

[11] MEDEP (2009)

Saugat Natural. The product is now available in the leading Department Stores, and Retail Shops in Kathmandu valley.

The following Table-9 shows the prices at the three levels (Producers/MEs, SMPPL, and the Retailers, costs involved and the Margin earned by the entities.[12] Calculations are with respect to one unit of 80 gm net wt. herbal soap. Packaging is done by SMPPL after procuring at ex-factory price. SMPPL in this case has taken up the role of wholesaler / distributor earning reasonable margin to help it bear the extra costs to undertake market promotion activities including product

Table-9: Price Analysis of Collectively Branded Chyuri Herbal Soap

Producer: Rs 20/-	SMPPL: Rs 45/-	Retailer: Rs 60/-
• Raw materials: Rs 9.64 • Labour: Rs 4.17 • **Total cost (direct): Rs 13.8**	• Purchase soap at: Rs 20 from producers • Transportation: Rs 0.54 • Load/unload: Rs. 0.13 • Packaging material: Rs 3.5 • Packaging labour: Rs 0.83 • Overhead: Rs 4 • **Total cost: Rs 29** (does not include rental cost due to free space available)	• Purchase soap at Rs. 45 from marketing agency (SMPPL) • Other cost: NA • **Total cost: Rs 45** (does not include other direct and indirect costs)
Producer's margin: Rs 6.19	**SMPPL's margin: Rs 16**	**Retailer's margin: Rs 15**

advertisement that is needed for successful market penetration of the product. Currently SMPPL it is not paying any rent in its premises made available free of cost by DCSIO, but it may be have to be factored in as cost item in future to calculate the actual profitability. At the retail level to the associated costs (both direct and indirect) are not available to calculate the actual profit margin at the retail price of Rs. 60 for the herbal soap. The discount or margin at retailer level could be lowered at competitive levels with other established brands provided the product

[12] Based on interview with Mr. Krishna Rai, Manager SMPPL

demand is enhanced in the market. SMPPL may have to work backwards to increase the rewards to the MEs once it starts receiving higher margin.

3.3 Value Chain Upgrading-Vision and Strategy

MEDEP role in promotion of Chyuri based herbal soap enterprises has been significant despite the fact that the value chain approach has not been fully internalized or mainstreamed in MEDEP-III.[13] There is tremendous possibility to upgrade the Chyuri herbal soap value chain by focusing on the two main fronts:

- Increasing the rewards for chain actors in the value chain mainly through support on upscaling – this involves product quality improvement, better packaging, branding, and quality assurance etc.
- Including poor target beneficiaries into the value chain - this involves developing enterprises based on the abundantly available resource.

For a medium term vision for next five years there is the real possibility of increasing the number of beneficiaries by at least 2,000 poor families and successfully integrating them into the herbal soap value chain (with main geographical focus in mid and far-west regions). The following table shows that such chain upgrading strategy will need less than 1 percent of the estimated potential production of Chyuri butter. To supply Chyuri butter to fully meet the requirement of production enterprises which is estimated at 334 metric tons of Chyuri butter there will be a need to establish 60 small processing units (processing about 20 metric tons of Chyuri seeds) as micro-enterprises.

Table-10: Potential Number of Enterprises for Chain Upgrading

Particular	Unit	Rs.
Production of soaps per unit (annual)	pcs	36,000
Chyuri butter required per production unit (annual)	mt	0.835
No. of potential Enterprises	no	400
No of target beneficiaries	no	2,000
Total quantity of Chyuri butter required	mt	334
Requirement as percent of potential production of chyuri butter	percent	less than 1%

The key elements of the strategy should be collaboration with existing and other potential stakeholders active in the herbal soap value chain and partnering with the private sector. MEDEP supports will be focused on the micro-entrepreneurs whereas collaboration with other

[13] The current phase (MEDEP-III) including the extended period is to end on March 2011. The fourth phase of MEDEP is in formulation stage by UNDP.

stakeholders and private sector will help strengthen the linkages between chain actors for the growth of the sub-sector.

Chapter 4

Chyuri Herbal Soap Value Chain Constraints

4.1 Infrastructures

Poor infrastructures in some of the areas where herbal soap making enterprises are promoted have resulted in higher production costs with the risk of making the enterprises uncompetitive and unsustainable. Herbal soap making requires various bulky ingredients that have to be transported to production facility (hence, higher production cost). Moreover, finished products have to be dispatched to market centres incurring high transportation cost. The problem of poor roads or lack of connectivity has been faced by MEs created by MEDEP in such districts as Baitadi, Rukum, and Baglung.

4.2 Policy Related

The recent Industrial Policy-2067 is seen as friendly to MEs. However, the Act and rules are yet to be formulated to facilitate the development of micro-enterprises for their easy registration at local level and enhancing the access to resources through policy harmonization on the collection, and trade of NTFPs.[14] The utilization of CFUG funds on income generation activities has not materialized as expected due to lack of clear guidelines on MED based on NTFPs.

4.3 Input Supply

Among the present weaknesses are the problems related with the availability inputs mainly oils that are imported such as castor oil, coconut oil, and Neem oil. The soap entrepreneurs find it difficult to obtain oils and chemicals in timely manner as the importers / stockists of chemicals and oils are located in major cities such as Birgunj, and Kathmandu. The increasing price of imported oils and fragrance oils has been responsible for increased cost of production in recent years. Linking producers to reliable input suppliers and promoting the use of locally available oils and fragrance oils are some of the possible solutions in this regard.

4.4 Micro-Finance

Chyuri as a resource is abundantly available in some of the most remote districts of mid and far west. However, these areas have low access to services by MFIs. The existing lending limits also are not very helpful to support the establishment of chyuri processing units that may need fixed investment between Rs. 150,000-200,000. Moreover, the high interest rates charged (18-24 percent) and unpractical repayment schedules are the existing constraints faced by MEs.

4.5 Technology

[14] See Poudel et. al. 2010 for existing policies and constraints on NTFPs trade.

The herbal soap value chain actors (producers and exporters) are weak in terms of their capacity on quality assurance because of lack of quality testing facilities for essential oils and fragrance oils (HPPCL to some extent provides testing services for essential oils). The dye machine for finishing and marking is also not available in the country and has to be imported from India.

4.6 Market Access

Market promotion is very weak especially for products of MEs. The producers are weakly linked with the major retailers. Moreover, poor packaging, labeling, and branding have hindered the chyuri herbal soaps to penetrate into the supply chains of major retail stores, and to successfully compete with the established brands. The possible solutions will be to develop a clear marketing strategy based on target market segment as well as to improve packaging, and branding with the emphasis on collective branding of MEs products.

Table-11 Major Identified Constraints and Possible Solutions

S.no.	Problems	Possible solutions
1	Infrastructure • High transportation cost in remote areas like Baitadi (4-hours walk), Baglung	• Promote production only in the areas which are connected to roads • Improved road access/connectivity
2	Policy related: • Act and rules to support Industrial Policy 2067 • Guidelines on the utilization of CFUG funds for MEs creation	• Funds for income generation (35%) from CFUG to be used for Chyuri herbal soap enterprises promotion. • Simplify registration of Micro-enterprises at local level.
3	Input Supply • Problem in timely availability • Increasing price of imported oils/fragrances	• Link producers to reliable input suppliers • Use of locally available oils/fragrances
4	Micro-Finance • Lack of access • Lending policies of MFIs not friendly to MEs	• Increase access though SCCs • Simplify lending procedures (interest charged, repayment schedules etc)
5	Technology : • Lack of quality testing laboratory • Dye machine is not locally available	• Establishment of well equipped laboratory to test purity of essential oils and grade of perfumes • Conduct training on technical aspects of soap making
6	Market Access: • Lack of market promotion • No proper packaging, and branding	• Develop strategy based on target market segment

		• Improve packaging • Collectively brand MEs products

Chapter-5

Recommendations for Value Chain Upgrading

The Chyuri herbal soap value chain development has tremendous potential for upgrading to benefit a large number of resource poor families in the mountain areas especially in the mid and far-west regions. MEDEP has rightly prioritized and played a leading role in Chyuri herbal soap sub-sector value chain development.

There is the real possibility from the resources side to include over 2,000 new beneficiaries in the Chyuri herbal soap value chain as Chyuri collectors / processors and herbal soap producers.

To achieve the above Chyuri herbal soap value chain upgrading vision the following major recommendations at strategic level are provided:

- **Appropriate Marketing Strategy**
  Products should be developed with specific market segments in mind such as low end and high end markets. Herbal soap products for the low end markets are to be marketed locally through district and RMC level sales outlets. Products targeted for upscale markets will be of high quality and have to be competitive to the brands sold at leading retail stores. MEs can produce and market individual brands in the low end markets whereas marketing agency such as SMPPL should collectively brand and market in the target high end markets including for export working closely with MEs to enhance product quality.

- **Improving Product Quality and Assurance**
  The products of MEs are perceived to be of low quality which however is debatable as quality should be viewed as being relative to the market segment targeted for the product. In any case herbal soap producers are facing the difficulty in assessing the quality of ingredients that go into soaps such as regarding the purity of oils, and grade of perfumes. Quality assurance is critical especially if product is targeted to the sophisticated export markets such as EU, Japan, and the USA. DFTQC is capable to test quality of food items but the same type of testing facility is not available for industrial chemicals and fragrance oils. HPPCL provides testing service for essential oils but the cost per sample is considered to be high by entrepreneurs. There is also a need to educate herbal soap producers on the potential health hazards of using certain chemicals such as the foaming agent SLES which may be contaminated with dioxane a known carcinogen.

- **Strengthening Linkages between Chain Actors**

  Linkages between chain actors should be strengthened. Herbal soap producers need to be linked with reliable suppliers of quality inputs. Most MEs are small producers procuring inputs in small quantities. So, the MEs need to be linked with input suppliers that are ready to respond to small orders at a time. MEs should be directly linked with Chyuri processors for procuring at reasonable price. Upstream linkages should be strengthened between Chyuri processors and collectors by developing collection as an organized activity based on pre-negotiated contracts.

  The specialty herbal soap producers still seem reluctant to incorporate chyuri butter as one of the base oils probably because of concern with quality. There is a need to link the Chyuri processors with the high end product makers to expand the market for processed Chyuri as well as to promote export of unique Chyuri based herbal soaps.

  Downstream linkages are strengthened by helping MEs to integrate their products into the supply chains of major retail stores and exporters. The Fair Trade Shops offer good opportunity for such integration and are likely source of embedded technical services to MEs to upgrade product quality to meet the requirement of the sophisticated export markets. Developing a sub-contracting mechanism (producing for further value addition by small and medium enterprises) will help in such type of mutually beneficial contractual relationships between chain actors.

- **Strengthening the capacity of service providers**

  The capacity of existing private service providers on three areas technical, business, and financial services should be strengthened for further growth of the sub-sector. MEDEP has been following a sub-contracting mode by which target beneficiaries receive supports through competitively selected BDSPOs. However, service providers have weak capacity to deliver quality services in terms of skill training, market access, access to appropriate technology, linking with MFIs and business counseling for upscaling of enterprises. The services provided should be in terms of complete package rather than on piece meal basis in order to promote the selected product/ commodity value chains. MEDEP should continue to support in capacity development of service providers for their effective role in promotion of value chains to benefit the target families.

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ANNEXES

Annex-1: MEDEP supported Value Chains: Prioritized Commodities / Products

Name of Enterprise	No of Entrepreneurs	Sales Value (Rs)	Profit Value (Rs)
Allo	769	51,924,550	41,999,850
Bamboo Products	738	87,225,522	60,458,688
Honey	2,475	233,644,810	204,776,801
Chiyuri / herbal soap	116	24,302,873	19,959,626
Dhaka	635	117,068,793	82,381,914
Ginger	872	228,330,717	209,372,332
Incense stick	1,200	140,519,372	113,077,339
Lapsi	190	10,529,642	5,453,231
Lokta	151	18,358,362	13,342,914
Orange/Sweet Orange	356	21,665,608	5,272,396
Total	**7,502**	**933,570,247**	**756,095,090**

Note: Cumulative data to September 2010 including Active and Semi-active Entrepreneurs only.
(Source: MEDEP / GIS-MIS)

Annex-2: Essential Oils and Extracts Produced by HPPCL

Essential Oils	Extracts
Arrtemisia Oil	Amala (Emblica) extracts
Anthopogon Oil	Belladonna extracts
Camomile Oil	Chiraita extracts
Calamus Oil	Lichen extracts
Citronella Oil	Rosin
French basil Oil	Taxus extracts
Kachur Oil	
Mentha arvensis Oil	
Juniper berry Oil	
Jatamansi Oil	
Lemongrass Oil	
Palmarosa Oil	
Sugandha kokila Oil	
Turpentine Oil	
Wintergreen Oil	
Xanthoxylum Oil	

Source: http://www.mfsc.gov.np/index.php?module=herbs_pro

Annex-3: List of Selected Chyuri Herbal Soap Value Chain Actors[15]

Chain Actor (Type)	Contact person	Name of Company	Contact address
1. Input Suppliers			
1.1 Chemicals and oils	Mukesh Mittal- GM	Sarawagi Group	Head office: Opp. to Birgunj Sugar Mill Tel: 51-200957, 200968, 522042, 521336 Fax: 51-523149 Email: mukesh @sarawagigroup.com.np Branch office: 48/57 Falful Marg, Kuleshwor, Kathmandu. Tel: 01-4279475/4270008/4270071, Fax: 4277195, 9802900391 Website: www.sarawagigroup.com.np
	Ajay K. Sah	Jay Durga Enterprises	Adarsa nagar, Birgiunj Tel: 98550-22830 (mobile)
	Ganga Sapkota	Super Chem Enterprises	Gyaneshwor, Kathmandu Tel: 4415753, 4423198
		Herbs Production and Processing Co, Ltd. (HPPCL)	Koteswore, Kathmandu Email: hppcl@wlink.com.np Fax: 00977 1 630232 Ph: 00977 1 992152 / 992167 / 992232
1.2 Chyuri butter	Mr. Thapa	Small Star Mill	Damti, Dharmawati VDC w.n. 4, Pyuthan dist.
2. Machinery fabricator (for chyuri processing)	Rama Kanta Chaudhary	Universal Equipment Industries	Butwal Tel: 545217

[15] Note: Some chain actors listed above are not producing chyuri based herbal soaps. However, they are included because of the important role they have in the herbal soap value chains.

3. Designer/printer for packaging	Sakar Lal Shrestha	Concept RevolutionPvt. Ltd.	223 Ganeshman Rd Tripureshwore, Kathmandu Tel: 4212293, 98511-06555 (Mobile), email: sakar@silverirose.com
	Ramesh Raut-Manager	Water Communication Pvt. Ltd.	New Baneshwor, Kathmandu Tel: 4783696, 4780941 Fax: 4783598, 9841432789 email : info@water-comm.com
	Anmol Tandukar-Manager	Media Gallery Pvt. Ltd.	Gusingal, Kupondole Lalitpur Tel: 5533431 Fax: 5520160, 9851055413 email: mediagallery@wlink.com.np
3. ME's Product distributor	Krishna Rai Manager	Saugat Micro Promotion Pvt. Ltd.	Tripureshwor, Kathmandu Tel: 6215404, 4741041773 Email: nmefen@gmail.com nmega.nepal@gmail.com
4. Herbal Soap Producers	Kalika Srijana Mahila Jeevikoparjan Program	-	Bagnaha-2, Bardiya
	Marketed by: Herbo International P. Ltd, Baneshwor	Ayu Herbal & Organic Food Industries P. Ltd.	Gongabu , Kathmandu

	, Kathmandu		
	-	Mayur Herbal Products	Kathmandu
	-	Ashmi Herbal Industries	Tel: 01-4465016 Email: ashmiherbal@gmail.com
	-	Trikon Health Foundation P. Ltd.	PO box: 11437, Kathmandu Tel: 01-4478286 Email: drthapa@gmail.com
		Alternative Herbal Product P. Ltd.	Kausaltar, Bhaktapur Tel: 01-6202842 Email: ahi@infoclub.com.np
	Ms. Durga KC	Jhumruk Herbal Enterprise	Maranthana, Pyuthan
	-	Jagrit Laghu Udhyami Samuha Product	Tel: 9847051031
	-	Vasaan Herbal Product	Kathmandu, Nepal Tel: 01-4880645 Email: info@vasaana.com Website: www.vasaana.com
	Basudev Sapkota	Nature's Essence P. Ltd.*	Bhatbhateni, Kathmandu Tel: 4413388, 9841-696785 (mobile) E-mail: info@naturesessencenepal.com Website: www.naturesessencenepal.com
	Rajeev Pandey	Bounty Himalaya*	Tel: 9841-325384/98510-76218 Website: www.bountyhimalaya.com
	Anil Pradhan	Wild Earth Pvt. Ltd.*	Dhapasi Marg, Bansbari, Kathmanmdu Tel: 4374178 E-mail: info@wildearthnepal.com Website: www.wildearthnepal.com
5 Major Retailers	Namaste Dept. Store		Pulchowk
	Bhat-Bhateni DS		Bhat-Bhateni, Maharajgunj
	Saleways Dept. Store		Jawalakhel
	Swagat Family Mart		Kalanki
	Subekshya Dept. Store		Sitapaila
	Ritu Saugat		Pokhara
	Sulav Super Store		Naya Bazaar
	New		New Baneshwor

	Baneshwor Dept. Store		
	Nava Durgar Dept. Store		New Baneshwor
	Ajeema Grocery		Patan
	Saugat Griha	Sales outlet of Saugat Micro Promotion Pvt. Ltd. (SMPPL)	Tripureshwor
Exporter		Mahaguthi	

*Producer/exporter

PHOTOGRAPHS

Chyuri (*A. Butracea*) tree with branches laden with fruits in Pyuthan district.

Step -1 of Chyuri herbal soap making: heating mixer of chyuri butter, with oils

Staining

Making caustic soda solution (note the use of protective mask to protect against inhalation of fumes during the mixing process.

Staining and mixing solution with oils

Pouring in molds

Use of Dye Machine for finishing and marking

Herbal soaps stored / cured before packaging.

Some Chyuri herbal soap brands produced by micro-entrepreneurs' groups

Chyuri seeds ready for processing to extract butter.

Modern Chyuri expelling machine installed at Damti village in Pyuthan district (below)

Stakeholders' workshop on *Chyuri Herbal Soap Value Chain* held at Ghorahi (Dang) 2-3 June 2010.

Herbal soap enterprise group members (Bardiya) in meeting with SMPPL for initiation of Collective branding and marketing of herbal soaps under the ***Saugat Natural*** brand (25 November 2010)