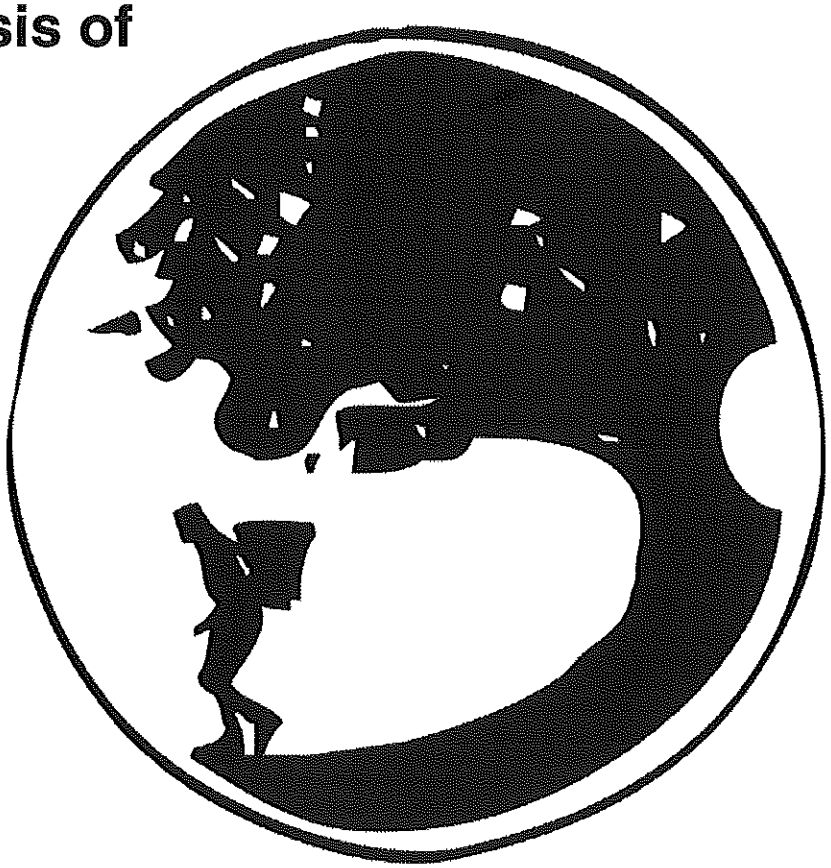
Graduation Research

Sjouke Bakker & Mirjam Oosting

February – September 2009

A Value Chain Analysis of the Chiuri Tree in..



..Majhbang; Siddhi; Chitwan; Nepal

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A Value Chain Analysis of the Chiuri Tree

Authors	Sjouke Bakker (880418001) Mirjam Oosting (880113002)
In cooperation with..	SNV Nepal
Date	August 24th, 2009
Language	English (Abstract also in *Nederlands*)
University	Hogeschool Van Hall Larenstein
Supervisors	Ben Helming Martin Jansen (Leela Rasaily) (Vijay Kesari)

Keywords	Chiuri, Chitwan, Chepang, Value Chain Analysis, Siddhi, Majhbang, Nepal, Local Economic Development, Poor Ethnic Group
Projectnumber	590102

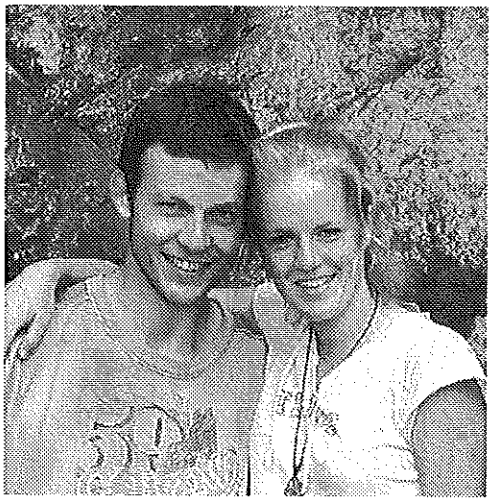
Preface

Goals & Target groups

This report has been written for our graduation project, which took place from March to July 2009. It has been written for any person; students, NGOs, Locals, etc to be an information source about Chiuri and its uses and to define chances for development of the local community of Siddhi and its surrounding VDCs. It also provides topics for further research and improvement.

Thanks..

.. Ben Helming, Martin Jansen, Bishnu Bahadur Tamang, Dal Bahadur Chepang, Leela Rasaily, Vijay Kesari, Deepak Bhattrai, Adrian, Laxmi & Umananda Dhungana, Sony & Ramji Rijal, Gunanidhi Sharma, Yogesh Subedi, Prabin Khanal and Hans Heijdra.



MEDIATHEEK

Hogeschool VAN HALL LARENSTEIN
Postbus 1528
8901 BV LEEUWARDEN

Abbreviations

AHP	Alternative Herbal Products
CF	Community Forest
CFC	Community Forest Committee
CFP	Community Forestry Programme
CFUG	Collaborated Forest User Group
CNP	Royal Chitwan National Park
DCO	District Cooperative Office
DDC	District Development Committee
DDO	District Development Office
DFCC	District Forest Coordination Center
DFO	District Forest Office
DOF	Department of Forestry
DOFRS	Department Of Forest Research and Survey
IPO	Indigenous Peoples Organizations
LHF	LeaseHold Forestry
MSI	Manakamana Soap Industries
NCA	Nepal Chepang Association
NEFIN	NEpal Federation of Indigenous Nationalities
NGO	Non-Governmental Organization
PC	Praja Co-operative
PVP	Praja Vikas Programme
SEACOW	School of Ecology, Agriculture and COmmunity Works
TRPAP	Tourism for Rural Poverty Alleviation Programme
UG	User Group
USP	Unique Selling Point
VDC	Village Development Committee

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Abstract

English

NTFPs are a growing source of income for poor rural people in Nepal. This research analyzes the value chain of the Chiuri tree. A tree which's seeds can be processed into Ghee (oil). This oil is used for many purposes. In this research, a case study is done in the village of Majhbang in Siddhi VDC, Chitwan District. This report describes the situation concerning the Chiuri tree in this area and defines two major chances for improvement of the value chain to achieve local development. These chances are described in a way that makes them locally executable, however they can also provide ideas for developments in other areas of Nepal.

Nederlands

NTFPs zijn een groeiende bron van inkomsten voor arme mensen op het platteland in Nepal. Dit onderzoek analyseert de 'value chain' van de Chiuri boom. De zaden van deze boom worden verwerkt tot een plantaardige olie: Ghee. Deze olie wordt gebruikt voor de productie van verschillende soorten producten. In dit onderzoek is een een case-study gedaan in het dorp Majhbang in Siddhi VDC, Chitwan District. Dit verslag beschrijft de situatie betreffende de Chiuri in het gebied en benoemd twee kansen voor verbetering van de value chain die leiden tot lokale ontwikkeling. Deze kansen zijn beschreven op een manier die ze lokaal uitvoerbaar maakt. Ze kunnen echter ook een bron van inspiratie zijn voor ontwikkelingen in andere gebieden van Nepal.

Nederlandse Samenvatting

Omschrijving Onderzoek

Na een aantal intensieve voorbereidingsweken, waarin we een afstudeervoorstel met doelstelling, onderzoeksvragen en een methode tot beantwoording van de vragen hebben geschreven, vertrokken we begin maart 2009 voor vier maanden naar Nepal om ons afstudeeronderzoek uit te voeren.

In het rurale Nepal zijn veel mensen afhankelijk van de producten die zij uit hun bossen kunnen halen. Er zijn verschillende soorten bosproducten; zoals hout, bamboe, bessen, hars, honing etc. Sommige producten worden verwerkt tot nieuwe producten, die dan ook geschikt zijn voor de verkoop, en andere worden alleen geoogst voor eigen consumptie en gebruik. Er wordt een tweedeling gemaakt tussen hout en 'niet-hout' bosproducten. De laatste categorie (in het Engels; NTFP's, wat staat voor 'Non-Timber Forest Products'), zijn één groeiende bron van inkomsten voor arme mensen op het platteland. Dit afstudeeronderzoek gaat in op één specifieke NTFP; de Chiuri-boom, en richt zich op een specifiek onderzoeksgebied; 'Siddhi VDC'. Siddhi is een plattelandsregio in de heuvels van midden Nepal.

De Chiuri is een boom die tot 18 meter hoog kan worden, vettige zaden produceert en groeit in de heuvelachtige gebieden (tussen 400 en 1500 meter). De inwoners van het onderzoeksgebied verwerken deze zaden tot een plantaardige olie; 'ghee'. Dit proces wordt ook wel een 'value chain' genoemd, een 'value chain' is een keten van activiteiten die leidt tot een eindproduct, bij elke stap wordt een beetje waarde aan het product toegevoegd, door verschillenden mensen en met behulp van verschillende materialen.

In Siddhi VDC woont vooral de etnische groep 'Chepang'. Dit is een gemarginaliseerde groep, die door ingrijpen van de koning langzaam weer wat terrein wint. In het verleden werden deze mensen gezien als de laagste kaste. Ze leefden in het bos en hadden geen belang bij landbouwgrond in het vruchtbare rivierdal. Daardoor hebben ze nu stukken grond hoger in de bergen waardoor het moeilijk voor ze is om landbouw te bedrijven.

Dit rapport beschrijft de situatie betreffende de Chiuri in het onderzoeksgebied en benoemdt twee kansen voor verbetering van de value chain die leiden tot lokale ontwikkeling. Er wordt ook beschreven hoe deze kansen uitgevoerd zouden kunnen worden en hoe dit proces dan vervolgens begeleid zou moeten worden. Het doel van het onderzoek is om een aanzet te geven tot lokale economische ontwikkeling in het onderzoeksgebied.

Methode

Het onderzoek is opgesplitst in 3 fasen; de oriëntatiefase, de onderzoeksfase en de implementatiefase. In de oriëntatiefase hebben we basiskennis betreffende het gebied en de bewoners opgezocht. In de onderzoeksfase hebben we geanalyseerd hoe de lokale bewoners met de Chiuri omgaan en hoe vervolgens dit product vermarkt wordt.

We hebben gebruik gemaakt van verschillende informatiebronnen. De belangrijkste bron van informatie was het houden van interviews. Daarnaast hebben we ook veel gebruik gemaakt van literatuur in de vorm van boeken en het internet.

Resultaten

Een van de opvallendste waarnemingen die we gedaan hebben, is dat de geoogste Chiuri zaden door een lokale organisatie tot Ghee verwerkt worden en dat dit vervolgens verkocht wordt aan zeepfabriekjes in Kathmandu, de hoofdstad van Nepal. Hierdoor maakt de Praja Co-operative, de lokale organisatie die overigens ook een maatschappelijke doelstelling heeft, weinig winst. Lokale bewoners, die de zaden oogsten, ontvangen alleen de waarde van de ruwe grondstof.

Een van onze aanbevelingen is om de productdiversiteit van de Chiuri Ghee te vergroten. De Ghee heeft vele toepassingsmogelijkheden, deze worden echter niet optimaal benut. De aanbeveling richting Praja cooperative en de lokale bewoners is om zelf Chiuri -zeep te gaan produceren. Dit is geen ingewikkeld proces; met minimale training en een relatief kleine investering kan het productieproces in gang gezet worden. De ruwe grondstoffen zijn vrijwel allemaal in het gebied

aanwezig, dus transportkosten zijn minimaal. Ook levert het werkgelegenheid op aangezien er een aantal (seizoens-) arbeidsplaatsen zullen worden gecreëerd.

Lokale mensen kunnen die proces echter niet zelf starten omdat ze de benodigde financiele middelen en kennis missen. Op dit punt is het de taak van een NGO om begeleiding en expertise te bieden. SNV is al actief in het gebied en is bekend met verschillende stakeholders. Ze zijn dan ook de aangewezen partij om deze rol op zich te nemen.

Evaluatie

De lokale bewoners, Praja Cooperative en de lokale bosbeheergroep willen graag nieuwe activiteiten ontplooien om hun economische situatie te verbeteren. Ze waren ook al wel bezig met het maken van toekomstplannen, maar door gebrek aan kennis en begeleiding kwam het niet goed van de grond. Wij hebben deze ontbrekende kennis boven tafel gehaald en tevens een houvast gegeven betreft proces begeleiding. De reacties op onze onderzoeksresultaten en aanbevelingen waren dan ook zeer positief; er werd genoemd dat onze inbreng een enorme stimulans is, en houvast biedt om nu echt ontwikkelingen in gang te gaan zetten. Een faciliterende rol van een NGO wordt hierbij, ook door hen, als voorwaarde genoemd. Maar er zijn in het verleden wel eerder samenwerkingen met NGO's geweest, waarbij programma's in het leven geroepen zijn die bijgedragen hebben aan lokale economische ontwikkeling. (Bege)leiding door een NGO wordt dus door locals niet als een probleem gezien.

Het uitvoeren van een afstudeeronderzoek in Nepal is niet altijd even makkelijk; je hebt te maken met taalbarrières, cultuur- en mentaliteitsverschillen en je beschikt niet meteen over de juiste ingangen en netwerken. Het is een uitdaging om je onderzoek dan toch in goede banen te leiden en af te stevenen op de gewenste resultaten. Ons afstudeeronderzoek is naar onze mening geslaagd. Het is een enorme ervaring geweest, waarbij onze flexibiliteit, improvisatievermogen en geduld zeer zeker op de proef gesteld zijn. We hebben er veel van geleerd en er tegelijkertijd enorm van genoten.

Introduction

Background

We, Sjouke Bakker & Mirjam Oosting, are two rural development students from the Netherlands. We are in our final year and we have done our graduation research in Nepal. Our study is about how to increase the economic, natural, recreational and/or social situation in rural areas by involving local inhabitants and relevant stakeholders in the process of project development. We chose to do our research in a different country than the Netherlands to experience a different society and the ways rural areas are being seen in a country where the priorities for development lay differently than in European countries.

We had to find a suitable organization that would support and supervise us during our research. We had contact with the University of Kathmandu and eventually we got the email address of SNV Nepal. This is a Dutch organization and we agreed that we could do our research for them. They offered us the possibility to do a value chain analysis on a non-timber forest product and give suggestions for improvement of the value chain to gain greater benefits for the locals.

Problem definition

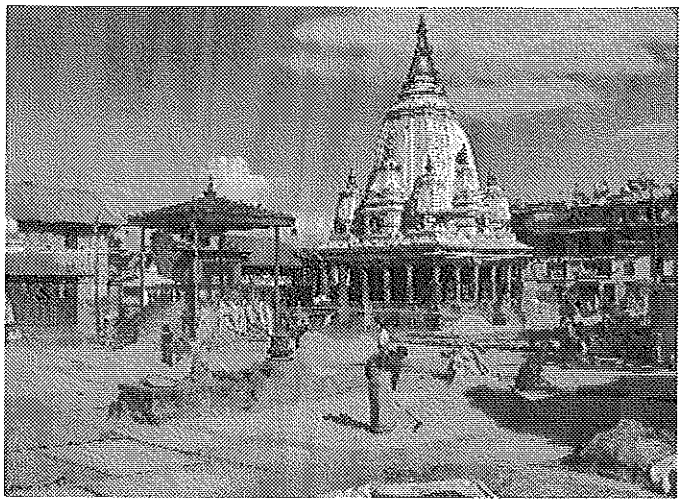

Figure 1: Durbar Square

Nepal

Nepal is one of the poorest and least developed countries in the world. The country has a lot of cultural and geographical differences. Nepal has over 25 million people and the majority (85%) of them live in rural areas, where they depend upon agriculture for their livelihoods. Over 50% of Nepal's population live in the flat, fertile lands of the Terai and the population here is increasing rapidly. While the Terai area covers only 17 percent of the total land area of Nepal, nearly half of the total population lives there now. There are more than 100 ethnic groups living in Nepal.

The Terai, or the plain areas of Nepal, lie in the South of the country adjoining India. Strategically, the Terai has been identified as the region with the greatest economic potential for the forest sector in Nepal, as the region possesses forests of high economic value and is one of the more biologically diverse areas in Nepal.

In 1990 persistent protests forced the government to agree to a new constitution re-establishing a multi-party democracy. Despite these political changes social change was slow and the political left fragmented in 1994 when the Communist Party of Nepal-Maoists was founded. Since 1996 the collapse of Nepali society has been truly dramatic resulting in close to 13.000 deaths, more than 200.000 people displaced internally, and the emigration of about 1.8 million. This decade of violence has captured world attention, especially for its impact on children.

Nepal's Economic Situation

Agriculture and industry are the most important economic sectors in Nepal. 80% of the people are working in agriculture. The main crops are rice, corn, wheat, millet and vegetables. Rice is grown, up to 2000m, corn wheat and miller up to 2800m then barley buckwheat and potatoes, up to altitudes of 4000m[1].

The industry in Nepal is concentrated around the urban areas. Here tea, cane, jute, tobacco and wheat are processed. However the industry is not powerful, due to the lack of energy, resources, technology, knowledge and infrastructure. Nepal is strongly dependent of India, because of the fact that a lot of imports are transported from the harbour of Calcutta.

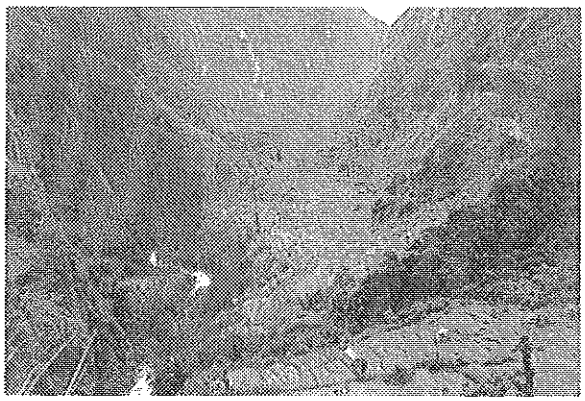

Figure 2: Landscape of Nepal

Forestry

Nepal has a unique position in biodiversity, forests and water resources. Forests cover about one-third of the total land area of Nepal and are estimated to be about 5.83 million hectares. Forest and shrub land together cover 39.6 percent of the country's total land mass. More than 40 percent of the area of Nepal is above 3,000 meter and is mostly unsuitable for agriculture or production forestry. More people are living in the more fertile areas so the stress on the forests is much heavier in the fertile area than in the mountainous areas.

Community Forest Concept

The community forestry concept in Nepal is an approach towards participatory forest management by local people, which maximizes forest products and increases income of the community. It is already implemented in the hilly areas of Nepal, were the locals now have the responsibility for their own forest.

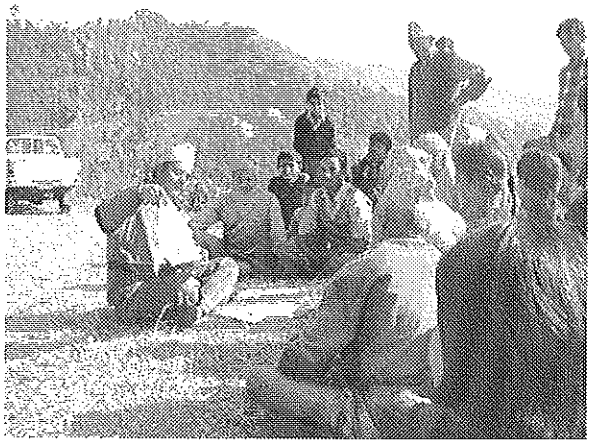

Figure 3: Community Forest Meeting

> *"Nepal was one of the first developing countries to adopt community forest management, which takes advantage of local people's indigenous knowledge and proximity to the forest to promote better decision-making. Giving management authority to user groups ensures that the community benefits from forest products, builds its capacity for self- governance, and increases its understanding of democratic principles."* (Ribot, 1995)
>
> *"The single most important program to conserve forests in Nepal, community forestry now benefits eight million people in 13,000 community-based user groups, which manage 1.6 million hectares of forest area across the country. These groups have helped reduce the deforestation rate in Nepal by 3.7–5.0 percent a year."* (USAID, 2006)

[1] Source: Mayhew B., J. Bindloss and S. Armington (2006)

Deforestation

The Nepalese forests are subject to fragmentation, deforestation and degradation. The rate of deforestation is much greater in the Terai area than in the hill area. Nepal has been experiencing a permanent rural-to-rural migration of households from the central hill zone to the Terai region. A lot of farmers from the hilly areas, for example, had to migrate to the fertile Terai in order to survive and to get some quality farmland. This migration led to widespread deforestation in the Terai. In the last decades almost 50% of the forests in Nepal were logged. About 87% of domestic energy in Nepal is produced by firewood. Wood is used for cooking and, during winter, also for heating.[2]

The people of Nepal have a high dependency on local forest resources. Food, fodder, firewood and timber are the main resources which the locals gain from their forest. Uncontrolled access to and use of forest resources at many places is leading to forest degradation in Nepal.

Timber and Non-timber forest products (NTFPs)[3]

> *"Non-timber forest products are often the most significant source of household income in remote areas, and women are more involved than men in NTFP harvesting. For timber, the economic potential is high but the market is dominated by a few, and is conflictive, making access for small timber producers difficult."*
> *(SNV, 2009)*

Timber products are trees which are legged for housing and other wood materials. Around 100 species are harvested from forest land; those can be called non-timber forest products.

The four major non-timber forest products in Nepal are:

- Pine resin for the production of glue and turpentine
- *'Khair'* heartwood for *'Katha'* and *'Kutch'*
- *'Sabai'* grass for paper production
- *'Sal'* seed for the production of oil are that are processed within the country.

Non-timber forest products can be medicinal and herbal products, decorative products, specialty wood products and/or edible products like mushrooms, walnuts and honey.

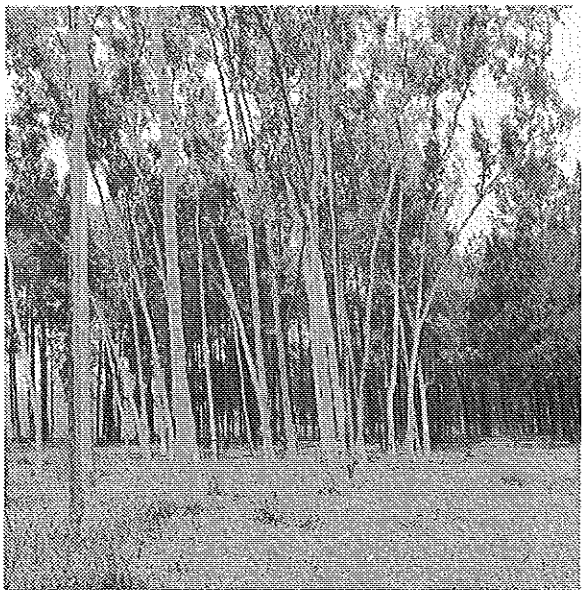

Figure 4: Sal Trees

SNV Netherlands Development Organization

SNV is a Dutch organization which aims to improve the living condition of poor people all over the world. They have over 1500 professionals working in more than 30 countries all over the globe. The motto of SNV is: "Connecting people's capacities" and they do so by giving expertise in supporting local organizations that have the potential to make a significant contribution to local development. The advisors of SNV are on the ground to listen, connect, advise, facilitate and exchange expertise.

SNV works in Nepal with oppressed ethnic groups like the Chepang. To empower these marginalised groups SNV wants to start projects in order to develop their livelihoods. A value chain analysis is a way to investigate whether the locals could have more benefits from their local natural resources.

Value chains of timber and NTFPs

> *"A value chain is a chain of activities. Products pass through all activities of the chain in order and at each activity the product gains some value".*[4]

---

[2] Source: http://www.panda.org/

[3] Source: FAO (2000), "Forest Sources of Nepal", County report.

[4] Source: http://wikipedia.org/

Timber and non-timber forest products also have a value chain. Products are being harvested from the forest in a certain way and they have a sequence of activities in which certain adjustments are applied to the product. The value of the product increases through the process.

Our research will focus on the value chain of the Chiuri. A tree which produces seeds which the locals sell locally. These seeds can be processed into Ghee, an oil which can be used for multiple purposes.

Structure and modification of this document

We divided our research into 9 research questions (see page 14). Our chapters are based on those research questions. Chapter 8 (recommendations) and 9 (implementation of the recommendations) have been merged to prevent repeating of the same information. The chapters of this report are:

1. NTFPs in Nepal
2. Community Forestry
3. Chitwan District
4. Siddhi VDC
5. The Chiuri
6. The Value Chain of the Chiuri
7. SWOT Analysis of the Value Chain
8. Recommendations for Improvement
9. Discussion

The following appendixes are attached:

A. Reactions of Stakeholders on Poster Presentation
B. Minutes of the Interviews
C. Maps of Nepal, Chitwan and the Research Area

Methods & Analysis

Introduction Methods & Analysis

In this chapter, our methods are described. Our research questions are listed, and the way we gained information to answer them is described. Also a description of the structure and planning of our research can be read in this chapter.

Research Questions

Main question

1. In which way can the value chain of the Chiuri in the research area ward 6 of Siddhi VDC in Chitwan be improved and how can the process to implement these improvements be managed?

Sub questions

1. **What are the main non- timber forest products in Nepal?**
   1.1. What are non-timber forest products?
   1.2. What do their value chains look like?

2. **How do Community Forestry Committees cope with forest products and their value chains?**
   2.1. What is a Community Forestry Committee and what are their main goals?
   2.2. Which people do participate in Community Forestry Committees?
   2.3. Which policies do Community Forestry Committees have on harvesting forest products?
   2.4. How do Community Forestry Committees work and who is leading the process?
   2.5. Does the Chiuri exist in the region of the CFC and if so; which value chain does it have?

3. **What are the main characteristics of the Chitwan district?**
   3.1. How can the area be described: climate, landscape, population density, culture, history, government
   3.2. Which Community Forests and Community Forestry Committees does Chitwan have?
   3.3. How are the Community Forests and the CF Committees distributed through Chitwan?
   3.4. What are the main forest products which are being harvested in Chitwan?
   3.5. Is the Chiuri being harvested outside the research area in Chitwan?

4. **What are the main characteristics of the research area ward 6 of Siddhi VDC and how is the harvesting of the non- timber forest products being managed?**
   4.1. Where is the research area ward 6 of Siddhi VDC located?
   4.2. Which size and how many inhabitants does it have?
   4.3. What is the role of the Community Forestry Committee in the research area ward 6 of Siddhi VDC and which activities are they doing?
   4.4. What is the policy on harvesting forest products?
   4.5. Which non-timber forest products are being harvested in the research area ward 6 of Siddhi VDC and what are their value chains?

5. **What are the main characteristics of the Chiuri in the research area ward 6 of Siddhi VDC?**
   5.1. What is the Chiuri?
   5.2. What are the qualities of Product X?
   5.3. What are the local applications of the Chiuri?
   5.4. Which applications does the Chiuri have elsewhere?
   5.5. How and where is the product distributed to?
   5.6. Can there be harvested enough in seeding the needs of all the local inhabitants?

6. **What does the value chain of "product X " in research area "CF " exist from?**
   6.1. Which links and (sub) products can be divided?
   6.2. Which activity is done at each link?
   6.3. Which and how much value does each link add to the product?
   6.4. Where does the added value go?
   6.5. How many people are involved in the chain of the Chiuri?

7. **What are the strengths, weaknesses, opportunities and threats of the value chain of the Chiuri in research area ward 6 of Siddhi VDC?**

8. **Which improvements of the value chain of the Chiuri can be extracted from the opportunities and strengths?**
   8.1. Which chances for improvement can be divided from the strengths and opportunities of the value chain?
   8.2. Which chance does have the most potential?
   8.3. Which benefits does the improvement bring? (employment, income, development)
   8.4. How can the improvement generate more income for the locals?

9. **How can the improvement(s) be implemented?**
   9.1. Which steps are needed?
   9.2. Which materials are needed? What does it cost?
   9.3. Is there enough support from locals and stakeholders? (What do the locals say about it?)
   9.4. How should the process be managed and by who?

Gaining of Information

The main goal of the research is to examine in which way the value chain of forest the Chiuri in the research area ward 6 of Siddhi VDC in Chitwan can be improved, and how the process to implement these improvements can be managed. In order to reach this goal, the research is cut into three phases and nine sub questions. This gives structure to the research and it ensures that the right information will be gained. The three phases are:

- Phase 1 : Research and fieldwork about Community Forestry's and value chains
- Phase 2: A value chain analysis of Product X in research area ward 6 of Siddhi VDC
- Phase 3: An advice on how to implement value chain improvements and how the implementation process should be led.

Each phase provides information to answer some of the sub questions. We split each sub-question into smaller questions; those smaller questions create the method to make the research more feasible. In this chapter the method to come to the answers on the sub-questions will be described for each phase.

The most common used research methods in our research are literature research and interviews. In the first phase of our research we used a lot of literature, because the information necessary for those chapters was already reported by someone else, so we could use that as an information source. In the second phase we used literature and interviews to get to know specific details about our research area. In the third phase we used the information gained in phase 1 and 2 to define improvements of the value chain.

First we will describe the methods used, and after that we will describe each phase in more detail.

Literature research

In phase 1 and 2 we used literature to gain information to answer the research questions. It was difficult to find good literature, because a lot of information is available in Nepali, but we needed it in English. We found some digital information and also the library of the Department of Forestry was a good source. It was easy to find good literature for questions 1, 2 and 3 but for questions 4 and 5 it was difficult. Little information existed on these topics so we also used the method 'interview' (see below) a lot.

Interviews

For us, having interviews in Nepal is not as easy as it is in the Netherlands or English speaking countries. We have to rely on the English skills of the translator and hope that he translates everything the interviewed persons says. Nepali people also love to say that you have the wrong person, and send you to the next one, who is supposed to know more about the subject, or has better English skills. A detailed report and the minutes of these interviews can be found in appendix B. The table below lists all the interviews we have done.

Interview	Date	Actor
1	12-03-2009	SNV Nepal
2	13-03-2009	SNV Hetauda
3	13-03-2009	FECOFUN Makwanpur
4	14-03-2009	Visit 3 Community Forests in Makwanpur District
5	15-03-2009	District Forest Office Makwanpur
6	15-03-2009	SNV Hetauda
7	18-03-2009	Praja Co-operative
8	27-03-2009	Institute of Forestry
9	27-03-2009	District Forest Office Pokhara

10	28-03-2009	Chairman of Community Forest in Parbat VDC
11	08-04-2009	Gokul Rijal (Forestry Student)
12	13-04-2009	District Forest Office Chitwan
13	13-04-2009	District Forest Coordination Center Chitwan
14	15-04-2009	Praja Co-operative
15	17-04-2009	Locals (Kaji Chepang)
16	26-04-2009	Department of Forestry
17	26-04-2009	Forest Research and Survey Center
18	27-04-2009	Tourist Service Center
19	07-05-2009	Bishnu Bahadur Tamang
20	08-05-2009	Indreni Community Forest Committee
21	10-05-2009	Praja Co-operative
22	23-05-2009	Manakamana Soap Industries
23	26-05-2009	Alternative Herbal Products

Dealing with Opinions

We talked to a lot of people during our research; people with different backgrounds, functions, educational levels and different opinions. They sometimes don't know the exact answer on a question, but they give an answer based on their own knowledge and feelings and that makes it subjective. In this paragraph a description is given about how we dealt with subjective information during our interviews.

During all are interviews we focused on facts, because facts are more trustful and measurable than opinions. Our questions were very specific, short and written in 'easy English'. They were all focussing on facts; amounts of kilo's, rupees, people, area surface, amount of years etc. They were easy to answer and there could be no misunderstanding about it. An interview is never going strict from question to the answer. The interviewed person is also telling (a lot) other relevant side-information. This side-information sometimes contains subjective information, as people tend to mix their frustrations and or enthusiasm within the answers as well.

We cannot expect the people to give scientific based and totally objective answers on our questions. So we have to take into account that the information out of interviews is not totally reliable. However, this reliability can be increased in a few ways; the interviewer has influence on it.

The choice of the person you will interview is the first way of influence on the reliability. You have to find the right person for your interview, but this depends not only on the knowledge this person has, but also on his or her position, function and background. You have to get to now all the possibilities you have. You have to know which organizations and groups (stakeholders and actors) are involved in your research subject and you have to understand the hierarchy; their role and influence on your topic. You should always get in contact with the party who is having the most influence in the area, because they can probably provide you a lot of information, and you will get to know about organizational structures, policy and policymakers.

An example: if you want to have information about the production of wood in a remote rural area; you can interview the manager; who is selling the wood, but you can also interview a local villager who is dealing with the wood as well, but on a different way. They have different positions and backgrounds and they can provide you information about the same topic, but then from different perspectives. You just have to be aware of those characteristics of the person you interview.

Another way to increase the reliability is to check the answers by repeating the same questions, during the interview. If you doubt an answer that is given, you can repeat the question later on, and then you will get to know if the answer was right.

We are analyzing the value chain, so all different 'levels' are equally important to us. We don't value the opinion of locals more than the opinion of policy makers, or the other way around. Every party we spoke with is equally important for the value chain. We also did some interviews with other

organizations that are not relevant for the value chain, but these were to gain general information. In these interviews we did not gain any subjective information, and if we got it we did not use it.

Phase 1

Goal

To gain knowledge about; Community Forests, Community Forestry Committees, value chains of NTFPs and about the Chitwan district.

Method

This phase endures 5 weeks and will answer the research questions 1, 2 and 3. It can be called the 'pre-research'. In this phase knowledge is gained about Community Forests, Community Forestry Committees, value chains of NTFPs and general knowledge about the Chitwan district. This background information is necessary in order to be able to give funded answers and advice in phase 2 and 3.

To reach this phases' goal both theoretical and practical information is necessary. We will contact NGO's related to forestry and community forestry. They are the local experts and we rely on their information for a realistic view on these subjects. We also will do own observations and desk research about the topics. We also will use former research as sources for information about forestry in Nepal and value chains of NTFPs in Nepal.

The sub questions of this phase are given below, and consequently the method on how to gain the required information will be described. Thereafter the steps will become clear.

1. **What are the main non- timber forest products in Nepal?**
   1.1 What are NTFPs?
   1.2 What do their value chains look like?

1.1: To be able to describe the main non-timber products of Nepal we will do desk research and we will speak with organizations related to forestry in Kathmandu.

1.2: During our fieldwork in Pokhara en Pang, we will analyze NTFPs and their value chains. Besides that we will do desk research and will speak with organizations about it.

2. **How do Community Forestry Committees cope with forest products and their value chains?**
   2.1 What is a Community Forestry Committee and what are their main goals?
   2.2 Which people do participate in Community Forestry Committees?
   2.3 Which policies do Community Forestry Committees have on harvesting forest products?
   2.4 How do Community Forestry Committees work and who is leading the process?
   2.5 Does the Chiuri exist in the region of the CFC and if so; which value chain does it have?

2.1: This information will be gained from desk research and from fieldwork. SNV will provide literature about Community Forestry, besides that we will visit the Community Forestry Committee in Pang (we have contact with the chairman) and in Pokhara (during our trekking).

2.2/ 2.4: Most of the information will be gained from desk-research and we will speak to SNV about it, they have knowledge about Community Forestry as well. We will write down our observations about the people who are in the Committee and we will talk with the chairman in Pang about the formation of the group and the hierarchy. We also will talk with other members of Forestry Committees in Pokhara.

2.3: The policy on harvesting forest products will be gained by desk research, by own observations and by conversations with NGO's and Community Forestry Committee's.

2.5: We will ask locals from in the different villages we pass, if the Chiuri is being harvested in their forest. If not, we will ask them is it is harvested in somewhere in the neighborhood. In that way we do

have the chance to have a look on the value chain of the Chiuri and the way it is harvested. We will write down all the observations, and will try to talk to the locals about the value chain. We also will take pictures of the product and the activities.

3. **What are the main characteristics of the Chitwan district?**
   - 3.1 How can the area be described on climate, landscape, population density, culture, history and government?
   - 3.2 Which Community Forests and Community Forestry Committees does Chitwan have?
   - 3.3 How are the Community Forests and the CF Committees distributed through Chitwan?
   - 3.4 What are the main NTFPs which are being harvested in Chitwan?
   - 3.5 Is the Chiuri being harvested outside the research area in Chitwan?

3.1: This information will be gained from desk research and own observations. We will find the required information on the Internet or in literature. We will ask SNV, they probably have some sources or literature about it. We also will add a map in the description, which makes it more visible.

3.2 / 3.3: The information for this question will be gained from desk research and conversations with relevant NGO's in Chitwan. We want to have a complete list with all the Community Forests and all the Committees. After gaining the information we will to put the distribution of the CF Committees on a map.

3.4: We will gain this information by desk research and literature. But we also will talk with NGO's about it. The product is will be a list with the main NTFPs and a short description of them.

3.5: We first of all will ask SNV about the distribution of the Chiuri in Chitwan. Besides that we will do desk research about it.

Steps and global planning

1. Visit organizations in Kathmandu
2. Discuss with Supervisor
3. Visit Community Forest.
4. Visit relevant organizations.
5. Report Information

In the first week of this phase we will visit the SNV head office in Patan and we also will visit their regional office in Hetauda. Then we can have a conversation with SNV to define the Chiuri; the non-timber forest product which we will investigate. By picking the product this 'early' we will narrow down our research.

In week 2 of phase 1 we will visit Chitwan to be able to answer question 3. The information we need to answer this sub question will be partly obtained from SNV. Also part of the information will be acquired by speaking with local Community Forestry Committees.

In the last three weeks of phase 1 we will visit Pang VDC and the region north of Pokhara to experience the Community Forests ourselves and to see if the product we want to investigate is also harvested in areas outside Chitwan. In Pang VDC we have contacts with the chairman of the Community Forest Committee. In Pokhara we are going to speak with the Forestry Institute (IOF) and the Annapurna Conservation Area Project (ACAP). In these weeks, we will gain the information which is needed for sub question 1 and 2. This is only the information gained by own observations and conversations with NGO's, the desk research will be done at other moments.

Phase 1 will take us 5 weeks to complete. After these weeks we will have a clear view on community forestry, their committees and Chitwan and we will have chosen a product which's value chain we will investigate.

Interviews

Interview	Date	Actor
1	12-03-2009	SNV Nepal
2	13-03-2009	SNV Hetauda
3	13-03-2009	FECOFUN Makwanpur
4	14-03-2009	Visit 3 Community Forests in Makwanpur District
5	15-03-2009	District Forest Office Makwanpur
6	15-03-2009	SNV Hetauda

Interview 01

Goal	To introduce ourselves and to discuss our research.
Choice of the person	We had a conversation / interview with Hans Heijdra; he is the director of SNV Nepal. He was our first contact person; we contacted him by telephone when we were still in the Netherlands and we had some email contacts with him. So it was logical that we visited him first.
Prepared questions	- Who is responsible for our supervision? - What can we expect from the supervision? - How is the supervision normally done? - What do you think about the main goal and the methods of our research? - What do we have to take in account when we pick the research area and the NTFP? - Do you have documents about former research on NTFP value chains? - Practical arrangements (exchange telephone numbers, etc.)

Interview 02

Goal	Introduce ourselves and discuss our research.
Choice of the person	Leela Rasaily will be our supervisor so we went to visit her, in the regional office of SNV in Hetauda.
Prepared questions	- What does your function consist of? - Which projects is SNV Hetauda doing at the moment? - What do you think about the main goal and the methods of our research? - Which NTFPs are harvested in Chitwan district?

Interview 03

Goal	Gain information about Community Forestry.
Choice of the person	FECOFUN is an organization which is assisting Community Forest Committees. According to SNV Hetauda they could provide us with information about NTFPs and from Community Forests in the Terai. Preshpa Raj Parajrai is the chairman of FECOFUN Makwanpur.
Prepared questions	- What is the FECOFUN - What do they do? - Which NTFPs are harvested? - What do they think about the value chain of NTFPs?

Interview 04

Goal	Gain information about NTFPs.
Choice of the person	The three community forests have been chosen based on the NFTP they focus on .There were three different products, so we could see a wide variety of NTFP and compare the methods and policies of the CFC.

Prepared questions	- When has the Community Forest been founded? - What is the most important NTFP and how is it harvested / processed? - How does the CFC manage and administrate? - What do they do with the profits? - How are local development and community forestry related?

Interview 05

Goal	Gain information about NTFPs and Community Forestry.
Choice of the person	The District Forest Office is the government's regional representation related to forestry issues. When something is happening with the forest it has to be administrated in the DFO. This is an important actor to supply us with information about Community Forestry.
Prepared questions	- Which NTFPs are harvested in Chitwan? - How many CFs are in Chitwan? - Do you have literature about Community Forestry in Nepal?

Interview 06

Goal	Discuss which research area and NTFP to choose.
Choice of the person	We had a conversation with Leela Rasaily; regional coordination of SNV Hetauda and Vijay Kesari; a freelance forester for SNV. They are both our supervisors and not Hans Heijdra, because they are working in Chitwan District; the district in which our research would take place. Leela can give us recommendations about the content and methods of the research, while Vijay has knowledge about NTFPs and value chains.
Our preparations about criteria on the research area and NTFPs	The research area: - should be in Chitwan district - not necessary in the national park - It has to be a small area - In the neighbourhood of Sauraha (tourist area) - There have to be a few people who speak English - It need to have a community forest and a committee - There should be a local NTFP expert which we can communicate to The NTFP: - There should be a local and regional market for the NTFP - There should be enough links to divide in the value chain - The basic resource has to be processed; not only selling of raw product - It should be an advantage if the product is also harvested in the hilly area; just to compare them and their value chains
Prepared questions	- What do you think about those criteria? - What else do we have to take in account when we pick the research area and the NTFP? - Which NTFPs are suitable for our research? - In which areas do these NTFPs grow?
Discuss the possibilities and choose the research area and the NTFP	- Based on our criteria and based on the experience and knowledge of our supervisors.
	- What do you expect from the outcome of the research? - Do you have information about this product and this research area? > Documents, reports, maps, names of NGO's, other possibilities? - Do you have general information about: o NTFPs

	o Community Forestry o Chitwan District o Former research on value chains - What can we expect from the supervision? - How will our communication be? - Practical arrangements (exchange telephone numbers, etc.) - Do you have interest in having an evaluation in the end of the research?

Phase 2

Goal

To analyze the research area ward 6 of Siddhi VDC in Chitwan and the value chain of forest the Chiuri.

Method

This second phase will endure 7 weeks, in the period from 13th of April until 29th of May. This phase will answer the research questions 4, 5, 6 and 7.

This phase is the main phase of our research, because in this phase the value chain analysis of the Chiuri in the research area ward 6 of Siddhi VDC in Chitwan will be done. Therefore we need to gain information about the Chiuri, the research area ward 6 of Siddhi VDC and value chains. We will also use the information and knowledge which we gained in the first phase, like the information about value chains of the Chiuri in the hilly area of Nepal and the information about the Chitwan district.

The sub questions and the smaller questions are given below, and consequently the method on how to gain the required information will be described. Thereafter the steps will become clear and be shown in a global planning.

4. **What are the main characteristics of the research area ward 6 of Siddhi VDC and how is the harvesting of the non- timber forest products being managed?**
   - 4.1 Where is the research area ward 6 of Siddhi VDC located?
   - 4.2 Which size and how many inhabitants does it have?
   - 4.3 What is the role of the Community Forestry Committee in the research area ward 6 of Siddhi VDC and which activities are they doing?
   - 4.4 What is the policy on harvesting forest products?
   - 4.5 Which NTFPs are being harvested in the research area ward 6 of Siddhi VDC and what are their value chains?

4.1: The research area ward 6 of Siddhi VDC is chosen in phase one, together with SNV. And we will put the location and the exact borders of the research area on a map.

4.2: The size will become clear on the map and we will ask SNV about the amount of inhabitants.

4.3: We need to know which Community Forestry Committee is active in the research area, maybe SNV does know that, and otherwise, we will ask the locals. When we know the name of the committee and the names of the members we will get in contact with them. We probably have to arrange a translator in order to talk with them about their activities. We will write everything down.

4.4: We will ask them about the policy related to harvesting forest products.

- Who is in charge? - Which rules are there? – How is the process going? – Do they have meetings? – How do they deal with new developments? -

4.5: We want to have a list which forest products which are being harvested and we will ask the members of the Committee about the value chains. Together with a member we will go into the field in order to do our own observations about value chains.

5. **What are the main characteristics of the Chiuri in the research area ward 6 of Siddhi VDC?**
   5.1 What is the Chiuri?
   5.2 What are the qualities of Product X?
   5.3 What are the local applications of the Chiuri?
   5.4 Which applications does the Chiuri have elsewhere?
   5.5 How and where is the product distributed to?
   5.6 Can there be harvested enough in seeding the needs of all the local inhabitants?

5.1/ 5.2: We will do desk research about Product X, and give a general description about it and will point out the qualities. And we will ask locals and the Committee about it.

5.3: Together with a member of the Committee we will go into the field and will have a look on the value chain of product X. We will try to interview the people who are working with the value chain and ask them about the product and its applications.

5.4: We will use the gained information about the Chiuri in phase 1 and will do some desk research about it. SNV maybe has some good sources.

5.5: We need to get in contact with a local "product X expert", who can tell us everything about the distribution and who might take us to selling point or the 'distribution centers'. We will take pictures of it and will write everything down.

5.6: The local expert can tell us about the amount of harvest and if there is harvested enough in seeding all the local needs.

6. **What does the value chain of "product X ", in research area "CF "exist from?**
   6.1 Which links and (sub) products can be divided?
   6.2 Which activity is done at each link?
   6.3 Which and how much value does each link add to the product?
   6.4 Where does the added value go?
   6.5 How many people are involved in the chain of the Chiuri?

6.1 / 6.2: Maybe the local expert is able to draw the value chain for us, and maybe he can show and bring us to the links. Than we are able to see which activities are done.

6.3: Based on our own logical thinking and in consultation with the local expert or other people, we will describe which and how much value is added at each link. Maybe we can express it in Rupees, working hours or the costs of the needed materials.

6.4: We have to 'follow' the product in order to get to know where the value goes. Maybe we can measure it from the salary of the employees. We have to ask the local expert about the financial process.

6.5: We can gain this information by counting the employees and the people who sell the products. We also want to know if this people are all locals: if they do live in the research area.

7. **What are the strengths, weaknesses, opportunities and threats of the value chain of the Chiuri in research area ward 6 of Siddhi VDC?**

We will do a SWOT analysis of the value chain of Product X. Therefore we need to have a method which tells us how to do the analysis. We will ask SNV if they have done value chain- or SWOT analysis before and if they have a method for it. We have had some experiences with SWOT analysis within out study Rural Development, so we will use our own knowledge as well.

Steps and global planning

1. Define research area.
2. Describe research area.
3. Describe picked NTFP in Chitwan.
4. Contact relevant organizations concerning research area and product.

5. Describe links of value chain.
6. Describe activities and added value at each link.
7. Do a SWOT analysis of the Value Chain of the Chiuri

At the end of phase 1 we will return to Chitwan. In the first two weeks we will gain information about the research area ward 6 of Siddhi VDC and the Chiuri. Parties we will contact in this phase are the Community Forest Committee of the research area and development organizations that are active in the area.

After we made a decent description of the Chiuri we will analyze its value chain. We will first describe each link and then we will analyze how much value each link adds and how much people are involved at each link. After we have gotten a clear view of the value chain of the forest product we will make a SWOT Analysis, which will be an instrument for us to define improvements that are applicable on the value chain.

Interviews

Interview	Date	Actor
7	18-03-2009	Praja Co-operative
8	27-03-2009	Institute of Forestry
9	27-03-2009	District Forest Office Pokhara
10	28-03-2009	Chairman of Community Forest in Parbat VDC
11	08-04-2009	Gokul Rijal (Forestry Student)
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17	26-04-2009	Forest Research and Survey Center
18	27-04-2009	Tourist Service Center
19	07-05-2009	Bishnu Bahadur Tamang
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22	23-05-2009	Manakamana Soap Industries
23	26-05-2009	Alternative Herbal Products

Interview 07

Goal	To introduce ourselves and discuss which exact research area to choose
Choice of the person	Dal Bahadur Chepang is the manager of the Praja Co-operative and SNV gave us his name as a good source of information in the area. Bishnu Tamang, a volunteer for the Praja Co-operative, could translate between Nepali and English for us.
Prepared questions	- What is the Praja Co-operative? - When is it founded, and what are the main goals? - In which areas grow a lot of Chiuri trees? - How is Siddhi VDC divided? - Are there people who speak English? - When is the harvesting season of the Chiuri? - When can we meet next time?

Interview 08

Goal	To gain information about the Chiuri tree, community forestry and NTFPs in Nepal.
Choice of the person	The Institute of Forestry is an education centre where there is teaching about all

	aspects of Forestry. This could be a great source of information for us.
Prepared questions	- Do you have literature for us regarding Chiuri, CF or NTFPs? - Do you know where we can find this literature?

Interview 09

Goal	To gain information about Chiuri in Kaski district and the Annapurna area.
Choice of the person	The District Forest Office in Pokhara administrates everything about forestry in Kaski district, which is a part of the Annapurna Conservation Area. This makes it a party that most likely has information about which trees are growing in that area and where those trees are growing.
Prepared questions	- Can you provide us information about Chitwan district? - Do you have information about Community Forest in Chitwan? - Do you have information about the Chiuri?

Interview 10

Goal	To see the Chiuri tree and gain more information about it.
Choice of the person	The chairman of the community forestry in Pang VDC, Parbat district, planted 2 Chiuri trees on his private land some years ago.
Prepared questions	- When did you plant these trees? - How tall can the trees become? - Are there more Chiuri trees in this area? - Do they grow just as good as in the Terai?

Interview 11

Goal	To find more literature about Chiuri, NTFPs and Community Forestry.
Choice of the person	Gokul Rijal is a forestry student, so he should know where to gain information about these topics.
Prepared questions	- Where can we find information for our research? -

Interview 12

Goal	To gain information about Community Forestry and Chitwan district.
Choice of the person	The DFO in Chitwan has forestry information about our research area and about Chitwan district.
Prepared questions	- How many CFs are in Chitwan district? - Do you have English literature about CF in Chitwan? - Do you have general information about Chitwan in English?

Interview 13

Goal	To gain information about Community Forestry and Chitwan district.
Choice of the person	SNV Hetauda has advised us to go to the DFCC because it could be a good source of information. SNV was one of the initiators that have set up the DFCC some years ago.
Prepared questions	- What are the goals of DFCC? - Do you have English literature about CF in Chitwan? - Do you have general information about Chitwan in English?

Interview 14

Goal	To prepare the visit to the research area
Choice of the person	We wanted to arrange our visit to the research area; and we needed to arrange interviews and a guide. Bishnu Tamang (the translator) was our contact person and he offered to help us with the practical arrangements, so we talked to him.
Prepared questions	- What can you tell us about Majhbang?

	- How do we get to Majhbang? - Can we have interviews with local people in Majhbang? - What else can we arrange in Majhbang, related to our research?

Interview 15

Goal	To gain information about the research area and about the uses of the Chiuri tree.
Choice of the person	We interviewed local people of Majhbang, as they are living in our research area. And as they are they are harvesting Chiuri seeds. So they can provide us with specific information.
Prepared questions	- How many households does ward 6 have? - What is the size of the research area? - When is the harvesting season of the Chiuri seeds? - How are the seeds harvested? - How many seeds are harvested? - Where is the Ghee sold to? - Which products are made from the Chiuri? - Where are to products sold? - For how many rupees are they sold? - How are the products transported? - Does ward 6 have a community forest? - Can we talk to a member of the community forestry?

Interview 16

Goal	To provide literature about the topics of out research
Choice of the person	We went to the Department of Forestry in Kathmandu, as several people recommended us to go there and we assumed by ourselves that they should have literature about our topics. We wanted to talk to the head of forestry, but he was away, so we talked to the secretary and he helped us to find information in the library.
Preparations	- We had a critical look on our research questions and we made of list of which information we needed. About: - NTFPs of Nepal - Value chains of NTFPs - Community Forestry - The Chiuri tree - Chitwan district (forestry, economy, statistics etc.) - Siddhi VDC - Maps

Interview 17

Goal	To provide literature about the topics of our research
Choice of the person	The secretary of the department of forestry recommended us to go to the Forest research and survey centre; which was located near the building of DOF.
Prepared questions	- As we didn't find any information about the Chiuri in the library of the DOF, we had a look for specific information for it in the survey centre.

Interview 18

Goal	To gain information about the Chitwan Chepang Hills trail and tourism in Chitwan district.
Choice of the person	The Tourist Service Centre is the point where tourists can go for information about tourism in Nepal. This is why there are English speaking people that can provide us with information about tourism in Chitwan.

Prepared questions	-

Interview 19

Goal	To discuss our questions and when to ask them.
Choice of the person	Bishnu Bahadur Tamang is our translator
Prepared questions	- We have made a list of questions. Is it possible to ask these questions in the CFC meeting tomorrow? How many people are there and how will we be introduced?

Interview 20

Goal	To gain information about the uses and distribution/sale of the Chiuri in Majhbang.
Choice of the person	Indreni Community Forest Committee is the only community forestry in ward 6 so they probably have policies on harvesting and know what is done with the production.
Prepared questions	- We made a matrix of the different steps in harvesting/processing and by who/where/when it's done. Can you fill it in? - What is the location of Indreni CF exactly? - What are the goals of Indreni CF? - Do you have policies on harvesting forest products? - How many members has Indreni CF? - How many members has the CFC and how are they organized?

Interview 21

Goal	To gain information about sale of the Chiuri Ghee and other NTFPs.
Choice of the person	Praja Co-operative buys the Ghee and sells it to other people.
Prepared questions	- How many Ghee does PC buy and for which price? - How many Ghee does PC sell and for which price? - Which other NTFPs does PC buy and sell and for which price?

Interview 22

Goal	To gain information about sale and processing of the Chiuri Ghee.
Choice of the person	Manakamana Soap Industries (MSI) is buying Chiuri Ghee from Praja Co-operative. We want to analyze what they do with it and what value they add to the product.

Prepared questions	- <u>Buy</u>
	  o How much Ghee does your company buy yearly?
	  ▪ *How much of it comes from Shaktikor?*
	  ▪ *Where does the rest come from?*
	  o For how much do you buy the Ghee?
	  ▪ *For how much do you buy the Ghee from Shaktikor?*
	  ▪ *For how much do you buy the Ghee from other companies?*
	  o When does you company buy Chiuri Ghee?
	  ▪ *How many times a year do you buy Ghee from Shaktikor?*
	- <u>Sell</u>
	  o For how much do you sell the Ghee?
	  ▪ *Are the prices for Ghee fixed or do you have to negotiate?*
	  o To which clients is the Ghee sold?
	  ▪ *How much do they buy?*
	  ▪ *Where are they located?*
	  ▪ *For which price do you sell it?*

- <u>Process</u>
  - Do you process the Ghee in any way?
  - Do you need special ingredients for the processing?
  - How much money does the processing cost?
  - Do the clients process the Ghee into different products?
    - *Which products?*
    - *What is the price of these products?*
    - *Which product has the best market?*
    - *Which product is the easiest to process?*
- <u>Transport</u>
  - By who is the Ghee transported?
    - *How is the Ghee transported?*
    - *What are the transportation costs?*
- <u>Promotion & Marketing</u>
  - How do you promote the products?
  - How do you promote the Ghee?
  - What do you think about the Ghee market?
    - *Is there international potential?*
    - *Will the Ghee market grow in the future?*
- <u>Organization</u>
  - How many staff does your organization have?
  - Does your organization have one or more office(s)?
  - Where in Nepal does you organization work?
    - *Sell to..*
    - *Buy from...*
  - For how many years does your organization exist?
  - Since when does you organization trade/process Ghee?
- <u>Other Products</u>
  - Which other products does your company trade?
    - *Which product is the most valuable for your company?*
- <u>Future & Past</u>
  - Does you organization have future plans?
    - *Does it have plans regarding the Chiuri?*
    - *How does your organization value the Chiuri?*
  - Have there been problems with Chiuri in the past?
    - *Which problems?*
    - *How were they solved?*
  - Do you think you will buy more Chiuri Ghee in the future?
  - What about the price of Chiuri Ghee. Has it changed a lot compared to other products?
    - *Do you think it will change in the future?*
  - Do you have plans to increase marketing of Ghee?
  - Are you trying to find new markets for Ghee/Ghee-products?
- <u>Other Questions</u>
  - What about the quality of the Ghee?
    - *Is the taste important?*
    - *What is the most important ingredient of the Ghee for you organization?*

	▪ *Is there a difference between Ghee from ... and from Shaktikor?* o Do you have a marketing plan of Chiuri Ghee? o What do you do with your profit? ▪ *Improvement of Quality/Diversity?* ▪ Management Strategies?

Interview 23

Goal	To gain information about sale and processing of the Chiuri Ghee.
Choice of the person	Alternative Herbal Products (AHP) is buying Chiuri Ghee from Praja Co-operative. We want to analyze what they do with it and what value they add to the product.
Prepared questions	- See questions of Interview 22.

SWOT Analysis

In this chapter the method of our SWOT analysis is described. Below an overview of the different steps we took within our analysis, and consequently a detailed description of the different steps.

1. Literature study about SWOT Analysis
2. Define opportunities and threats
3. Define 5 subtopics for strengths and weaknesses
4. Brainstorm about strengths and weaknesses
5. Selecting strengths and weaknesses out of brainstorm
6. Selecting strengths and weaknesses suitable for the relation-matrix
7. Rating the relationships in the relation-matrix
8. Describing the issues
9. Recommendations

1. Literature study about SWOT analysis.

Before we started our SWOT analysis we first did some literature study. We read about different methods of a SWOT analysis and about criteria to define strengths, weaknesses, opportunities and threats. We decided to use a relation-matrix, as it is an existing method and commonly used in SWOT analyses. We specified our method by dividing different steps we take to analyze. These steps, 1-11, are described in this chapter.

2. Defining opportunities and threats.

We had a close look at our research goal: Local Economic Development. Our research aims to create new jobs, more product value and a more efficient way of processing and harvesting a non-timber forest product. The exact quote from our research proposal is:

> *'With an improved value chain the local inhabitants will earn more money with their product which allows them to save money for investments or other technological improvements.'*

This goal is already giving a specific focus and borders to the opportunities and threats we can define. We determined which opportunities and threats were related to this goal, by considering the situation and possibilities in the research area. We already know how the people and Praja Co-operative are dealing with the Chiuri Ghee and the economic development has to be related to the production and sales of Chiuri Ghee in the area.

The people in the research area have too little capacity and knowledge for reaching economic development by themselves. They are already strongly connected to Praja Co-operative, which is buying their Chiuri seeds. So if the local people have to benefit from economic development, the development has to be initiated with the help of Praja Co-operative.

Opportunities are ways to reach economic development and threats are issues that can slow down or even stop economic development. The opportunities and threats are situated on macro level. Our opportunities represent a way to include the Chiuri Ghee production within local economic

development; in such a way that the people in ward 6 will benefit fro it as well. We formulated the following opportunities:

1. Increase the marketing of Chiuri products
2. Increase product diversity
3. Increase production quantity
4. Expanding group of clients

The threats are constraints regarding the opportunities to include the Chiuri Ghee production within local economic development.

5. Limited Market
6. Over harvesting

3. Defining 5 sub-topics for strengths and weaknesses.

The strengths and weaknesses need to be related to our research, so we first selected subtopics; which the strengths and weaknesses had to be related to. In that way the analysis will be more focused on the research topic. We picked the following sub-topics; the tree / the Ghee/ the people/ Praja Cooperative and 'other'. We picked those topics on the following motivation:

Our research is focusing on the value chain of a specific NTFP in a specific research area. The NTFP is a key character of our research. Our NTFP is the Chiuri Ghee from the Chiuri tree; the tree has an important role as it is the natural resource. So that's why the Ghee and the tree are 2 sub-topics on which the strengths and weaknesses are based. The research is focusing on a specific area; ward 6 (Majhbang). The local people in this area are our target group; we are doing the research for them. They are harvesting the NTFP and they are an important actor within the value chain; so the strengths and weaknesses should be related to them as well. The value chain is mapping the trail of the Chiuri Ghee from Majhbang; and is focusing market as well; who is selling and reselling it. The subtopic 'other' is made because of specific relevant strengths and weaknesses which are not related to the tree, the Ghee, the people or the market. With this fifth topic we were enabled to select some strengths and weaknesses from a broader range too.

4. Brainstorming about strengths and weaknesses.

We wrote down all the strengths and weaknesses we could think of, related to the topics we defined in step 3. We based it on the information we already gained, so we read through every chapter of our report to be sure to collect all the relevant strengths and weaknesses. Sometimes a strength can also be seen as a weakness; it depends from whose 'eyes' and perspective is it seen. Our perspective is that of the local people in our research area as well as Praja Co-operative. They are our target group and they need to get the benefits of developments we attempt to establish.

5. Selecting strengths and weaknesses.

In order to be able to select strengths and weaknesses from the brainstorm which will be used for the SWOT analysis, we used criteria. Our criteria are based on the opportunities and threats we defined in step 2, and the 5 sub-topics we defined in step 3.

The strengths should be characteristics of one of the five subtopics (the tree, the Ghee, the people, the market, or a highly relevant other topic) that can have impact on the opportunities or the threats.

Weaknesses should be characteristics of one of the five subtopics that can have a negative impact on the opportunities and threats, and therefore should be strengthened.

The table to the right clarifies how the strengths and weaknesses should be compared to the opportunities and threats. See page 69 for the full list of strengths and weaknesses.

	Opportunities	Threats
Strengths	*How can the strengths be applied to make use of the opportunities?*	*How can the strengths be used against the threats?*
Weaknesses	*How can the weaknesses be strengthened to make use of the opportunities?*	*How can the weaknesses be strengthened to use them against the threats?*

We selected and formulated strengths and weaknesses which applied to the criteria.

6. Selecting strengths and weaknesses suitable for the matrix.

The next step was to select the most important strengths and weaknesses to use in the relation-matrix. We took the opportunities as a starting point and than selected the strengths and weaknesses. So we started for example with; 'increasing the marketing of the Chiuri', and than we took the list with strengths, and we had a critical look; compared them with each other, and selected the most important ones. So the selection was based on the importance and influence it would have on the opportunity. We also estimated on how many of the opportunities and threats they would have impact. We chose the ones which had the most impact and were therefore most relevant to reach the main goal. See page 69 for the full list; the underlined strengths and weaknesses are the ones we selected for the matrix.

7. Rating the relationships in the matrix.

We made a matrix that showed the relation between the strengths and weaknesses, and the opportunities and threats (See page 72). We first ticked the relations; because not every strength has got a relation with every opportunity and not every weakness has got a relation with a threat. We filled in X'es in the boxes with relations. We evaluated every 'relation' in this matrix, and defined the strength of the impact. We rated them with a rating from 1 to 5 based on how strong the impact; the most important links, with rate 4 or 5, we call "Issues". So the boxes with no number; do have no relationship.

Impact means that the utilization of the Strength or improvement of the Weakness can contribute to the development of the Opportunity or protects against the Threat.

1. Little / Non-existing impact
2. Little impact
3. Average impact
4. Strong impact
5. Very strong impact

We also calculated the average impact the strengths and weaknesses had on all the opportunities and threats (1 till 5) and the total sum of all the impact ratings from the strengths and weaknesses on each opportunity and threat. In this way the some statistics are shown.

8. Describing the issues.

We did not describe every issue, but we made a description of the opportunities and threats, specifying the issues that were rated 4 and 5. We took the opportunities and threats as starting points and listed the related strengths and weaknesses. Than we explained how each strength and weakness was related to the opportunity or threat. We also explained globally how the strength could be applied to contribute optimally to the opportunity, and how the weakness could be strengthened in order to have less negative impact on the opportunity etc. We only described this globally, as the detailed description would be given in the recommendation.

9. Describing recommendations.

We described recommendations, based on the descriptions of the relations and the situation in the research area. Recommendations are a short description of the outcome of the SWOT analysis in which is explained what we see as chances for reaching the opportunities.

Phase 3

Goal

To give advice about improvements of the value chain to increase economic benefits for the locals in the research area in Chitwan.

Method

This phase will start on the 1st of June and ends on the 8th of July. This phase will take about 5 weeks, of which approximately 2 weeks will be reserved to write a final report. In this phase we will answer

the research questions 8 and 9. We will write an advice on how to improve the value chain of the Chiuri in order to gain economic benefits for the locals in the research area.

The sub questions and the smaller questions are given below, and consequently the method on how to gain the required information will be described. Thereafter the steps will become clear and be shown in a global planning.

8. **Which improvements of the Value Chain of the Chiuri can be extracted from the opportunities and strengths?**
   - 8.1 Which chances for improvement can be divided from the strengths and opportunities of the value chain?
   - 8.2 Which chance does have the most potential?
   - 8.3 Which benefits does the improvement bring? (Employment, Income, Development)
   - 8.4 How can the improvement generate more income for the locals?

8.1/ 8.2: We will analyze the strengths and opportunities and we will brainstorm about which chances it processes. This will be based on our own logical thinking and based on the information we have about the value chain and the research area. We will discuss the chances and potentials with the local expert and SNV.

8.3: After we decided which chance has the most potential, we have to write down which benefits it will provide to the locals. We will exactly describe which aspects our chance or improvement includes and what each aspect does add.

8.4: We will discuss our idea for improvement with the CFC and together we can write down how it can generate more income for the locals.

9. **How can the improvements be implemented?**
   - 9.1 Which steps are needed?
   - 9.2 Which materials are needed? What do they cost?
   - 9.3 Is there enough support from locals and stakeholders? What do locals say about it?
   - 9.4 How should the process be managed and by who?

9.1 / 9.4: We will use our knowledge about process management to divide the steps. We also will discuss it with the local expert, SNV and the Committee, in order to create some social support.

9.2: We will describe the materials that are needed for the improvement of the value chain.

9.3: We will discuss our idea on improving the value chain with the committee and get to know their opinion about it.

Steps and global planning

1. Convert strengths and opportunities into specific improvements
2. Describe the process to implement the improvements
3. Estimate Benefits for the locals.

In the third phase of our research we will use the information gained in phase 1 and 2 to give an advice for development in the research area. We analyzed the value chain of the Chiuri and extracted some strengths and opportunities. In the first week of phase 3 these will be converted into improvements for the value chain. These improvements will be aiming to generate more income for the locals.

These improvements are based on the SWOT-Analysis we made in phase 2. We also give advice on how to implement those improvements and how to lead the process towards implementation of the improvements.

Interviews

Interview 24

Goal	To discuss our results and ideas with the local people, Indreni community forestry and Praja Co-operative and discuss ways to implement these changes or ideas.
Choice of the person	These are all the relevant actors in the research area that will have to work together to start one of the developments we defined.
Prepared questions	- Presentation of our Results.

Implementation of improvements

We merged chapter 8 and chapter 9 because we thought that those two chapters would otherwise contain a lot of double information. We had a look at our (sub-) research questions of chapter 8 and 9 and we based the new structure of chapter 8 on them. We took our 2 opportunities as starting points. First we gave a global description about them; in which we described which benefits the opportunity would bring to the locals and to Praja and how it would generate income. After that we listed the requirements; the factors which the opportunity would be dependent of. Those requirements are based on the information from chapter 7; the strengths, weaknesses, the other opportunity and the threats. But they are also based on logical thinking; we went though the whole process of implementation in our minds; and we automatically came up with requirements.

We consequently made a detailed description of every step we could foresee within the process towards implementation of the opportunity. We did not have a format for it; but we used our knowledge about process management, which we gained in our study, and our logical thinking to formulate the different steps. The steps in the process had to be easy to understand and they had to be easy to execute. We took a few other aspects in account as well; like the ability of the people to join in meetings. They are probably not interested in long-term processes, and we for example assumed that we better plan 1 meeting in which a lot of work could be done, in stead of spreading it out over 3 meetings. We tried to aim for a bottom-up approach, but on a certain level. The people don't have experience with integral process management, so we should not make it too 'strange' for them. They need top-down knowledge exchange as well. There is a lot of support needed; we cannot expect them to have knowledge about management plans or marketing, so the borders have to be already prepared. We involved the local people within the preparation phase of the implementation process, but we did not involve them in the writing of the final management plan because some things have to be done top-down.

During the process of writing our recommendations, we saw Praja Co-operative as a leading stakeholder. They will be able to read our (English) report, and the locals won't. Their office is also located in a central point, so they could act as a facilitator.

Poster Presentation

We prepared six posters to discuss our results with the locals from Majhbang, the Indreni CFC and Praja Co-operative. On these posters we described our recommendations with text and graphics. The text was all in Nepali so the local people could also read it. We used photographs from our visits to the soap industries to give our spectators an image of how soap is processed from their ghee.

Non-Timber Forest Products

NTFPs

Non-Timber Forest Products or NTFPs are products of the forest that are not classified as timber. There are different kinds of NTFPs; ranging from food and medicine to materials for local rituals and livelihood. Some examples include edible nuts, mushrooms, honey, fruits, herbs, spices, aromatic plants and gums.

> *"Two fundamentally different types of use of NTFPs can be divided; one by household and communities that use these products to meet existence needs, the other market-oriented"*[5].

Several million households worldwide depend heavily on NTFPs for subsistence of income. In total there are now 150 NTFPs of major significance in international trade. In the recent years the development of the NTFP sector has contributed to environmental goals as well, including the conservation of biological diversity. Those rural people are involved in the conservation, utilization and sale of NTFPs. NTFPs are considered to have an enormous impact on employment and income generation to the rural people.

NTFPs in Nepal

With the increasing contribution of NTFP to the Nepalese economy, particularly the contribution to poor household economies, its value has been recognized widely. The forestry sector of Nepal contributes 15% to the national GDP where NTFPs contribute 5%. About 90% of the population is living in remote areas, where they are practicing a traditional health care system basically depending on medicinal plants. 470.000 households are involved in commercial collection of NTFPs and poor people's involvement is even higher. The trade of medicinal plants is one of the major sources of revenue to the government as well as some cash income to the rural people. In response to the growing international market for herbal products, the market of NTFPs has seen a gradual rise in recent years in Nepal. Medicinal and aromatic plants have been identified as one of the potential high value commodities in the recent year. In Nepal, NTFPs are being produced from natural forests, plantations and private forest land.

There are more than 7000 vascular plant species where 2000 plants have medicinal properties and over 1463 species are used locally in Nepal. About 10.000 -15.000 tons of plant products of more than 100 species are exported to India. In most of the cases just raw material is being exported; however there is a trend towards local processing. For example; the producers of wintergreen target European markets. A change in the Nepali government policy banned the export of raw wintergreen, so now more processing is done at the local level which adds more value.

There is a lot of research done in Nepal about NTFPs. Different organizations have defined a priority list of potentially high value NTFPs. The most important products are Kurilo, Chiraito, Yarshgumba, Timur and Jatamashi. These are plants with a medicinal use and they produce oil which is being used in different products like soap, perfumes and shampoo.

Constraints

The development of NTFPs can be seen as a successful manner to create new sources of income and to contribute to poverty alleviation. But there are some constraints as well.

- There is poor knowledge regarding identification, availability, productivity, regeneration and uses of many NTFPs. Identification of NTFPs is difficult and species are traded under different names.
- Local people lack skills, techniques, tools and guidelines to assess NTFP resources
- There is limited initiative on scientific research and exploration of local knowledge NTFP management.

[5] Source: Victor M. (1996)

- People find NTFP activities attractive because of the low technical and financial entry requirements; freely available resource base and instant cash in times of need. However if they do not process the products locally, the raw material tend to yield low returns.
- Another constraint is about the lack of access to market information. People who gather forest products live in remote areas and are among the poorest and least informed, with little education. Without access to market information, forest dwellers have little knowledge of how much a consumer in the city or in developed countries will pay for the final product. And they have little or no means of bargaining for an increased stake in growing profits. They receive less than 10% of the final selling price. Most profits go to traders, distributors and retailers.
- There is the risk of overexploitation and loss of control of the natural resource. For example in India, Indonesia and parts of Africa there is evidence that gatherers are over-harvesting some important medical plants towards extinction. Nevertheless, many experts in the forestry sector believe that the exploitation of NTFPs is less ecologically destructive than timber harvesting and thus provides a basis for sustainable forest management.
- In most cases however, forest dwellers have changed their focus from the resources they always have used, towards income generation out of domestication/ cultivation. This can result in losing control of a natural resource that has previously represented an independent source of income. It is important that inhabitants of remote forest areas are able to connect to the economic benefits of growing global markets for NTFPs.[6]
- Communication en coordination between policy-makers, traders, implementers and communities/collectors/cultivators are weak.
- Most of the CFUGs management plans do not include NTPF management.
- Woman are the primary collectors and users of resources, however they do not have influence in decision making in resource management. One of the reasons for that is that due to the past efforts of involving them in routine jobs. Even when woman were made part of the CFUG, the decisions continued to be made by men.[7]

Issues of sustainable NTFP management

Sustainable NTFP management is a dynamic process that deals with ecological, economic and social aspects. Every species has unique and important roles and functions to maintain certain level of stability within the ecosystem. With the implementation of NTFP management there is always the risk of rejection the technology by local people if the functions and requirements of NTFP management conflict with social values, norms and behaviours. Furthermore the ownership of NTFP resources and management by local communities is a key factor for sustainability.

Most of the NTFPs cannot be accumulated to a long period of time since most of them are perishable and produced annually such as flowers, fruits, seeds, leaves and for some species the whole plant. Therefore NTFP resource assessment should aim to calculate the periodic yield rather than continue the harvesting of the resource, which will lead to more complex management problems. The quality of the plant products produced varies greatly with time, which also has to be taken into account. Even a small patch of forest contains several NTFPs which need diversified tools, techniques and methods to access the resources and manage them properly.

Value Chains of NTFPs

While products have economic value and since efforts need to be taken before it can be sold, each product and each NTFP has got a value chain. Forest products are sold to consumers for a certain price. There are different ways to add value to the product. Several steps or activities are taken, before the product is ready to be sold. At each step there is some value added to the product, therefore all these links together form a chain of activities which is called 'value chain'. A value chain

[6] Source: Carr M. and others (2008)

[7] Source: Luintel H, Banjade M.R., Neupane H.R., Pandey R.K (2004)

can also be called a 'production chain'. The first step in the chain is to harvest the product out of the forest; consequently the raw material is being processed into a product, sold, distributed and or retailed. The processing can take a lot of time and can also exist of many links. The length and of the value chain varies from the one to another; sometimes the people can make many different products from one raw material, then the complexness is larger and the chain will be longer. It all depends of the characteristics of the resource.

Below a definition made by SNV;

- The sequence of processed from inputs for a specific product to primary production, processing, marketing to final consumption;
- An organizational arrangement that links and coordinates producers, processors, merchants, and distributors of a specific product;
- A knowledge system combining information, technology and skills to coordinate production and marketing, and achieve high quality of produce. [8]

The first definition is most common one, the other two are pointing out different perspectives and approaches considering value chains.

A value chain exists of products, people and processes. There can be many people involved in the value chain like: (see also figure on page 36)

- local gatherers
- transporters
- the community forestry committee
- peoples organizations
- regional traders
- retailers
- distributors
- supermarkets
- local markets

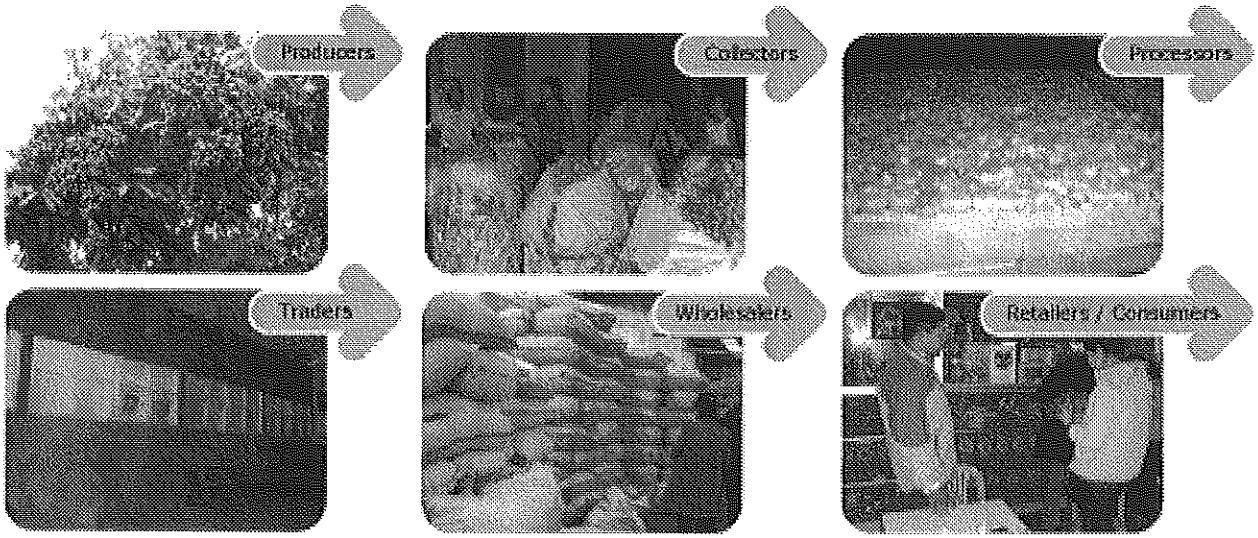

Figure 5: Value Chain Stakeholders

[8] Source: SNV Asia (2008).

Value chains are stressing the way local communities are linked to, and economically interdependent on, their wider environment. Analysis and development of those value chains can identify constraints and can result in solutions, like for example; quality improvement of the product by implementing new technologies, improvement of cooperation, stimulating self-empowerment of locals, linking stakeholders to each other, knowledge exchange about NTFPs to the locals, better access to markets and increasing involvement of small scale producers and entrepreneurs in global value chains. In this way production, income and employment opportunities for the poor can be increased.

Value chains can be put in flow diagrams to visualize the way different actors (people) and factors (processes) interact. The main activities, stakeholders, facilitating institutions and the way there are linked to each other are now divided and become clear. Mapping of value chains is an effective manner to investigate value chains. While mapping and pointing out the activities, processes and stakeholders involved; it becomes clear which 'trail' the product is taking to finally become ready for the consumers market.

Community Forestry in Nepal

Forests of Nepal

As stated in the introduction, Nepal is a biologically diverse country. There are a lot of different climate zones and that means that there are also different forest types. The different zones are:[9]

1. Nival: above 5000m, a zone of permanent snow.
2. Alpine: 4000-5000m, a zone of alpine grasslands and rangelands often associated with juniper thickets, rhododendrons bushes and cushion formations.
3. Sub-Alpine: 3000-4000m, a zone of fir and birch with varying degrees of rhododendrons (several species).
4. Temperate: 2000-3000m, a zone of evergreen oaks and rhododendrons, upper limits in western Nepal are characterized by conifers while in eastern Nepal deciduous broadleaved forest may dominate.
5. Sub-Tropical: 1000-2000m, chir pine zone in western Nepal and *Schima-Castanopsis* zone in central and eastern Nepal.
6. Tropical: below 1000m, a zone of Sal and savannah.

Each of these 6 zones features different kinds of forests. The Chiuri grows at the altitude of 400 to 1500m, so in this chapter we will focus on zone 5 and 6.

Sub-Tropical Zone

The bio-climate of this zone is warm sub-humid to humid. The number of rainy days ranges from 90 to 120 days. The mean annual precipitation ranges from 1000mm to 2500mm. The subtropical zone of east and central Nepal is known as the *Schima-Castanopsis* zone while, in west Nepal, this zone is characterized by chir pine. In central Nepal there is an overlap and a mixed chir pine broadleaved forest is more common.

The different forest types in the sub-tropical zone are:

- Chir Pine Forest
- Chir Pine-Broadleaved Forest
- *Schima-Castanopsis* Forest

Tropical Zone

This zone has largely been transformed into agricultural land and human settlement except for the protected areas such as wildlife reserves and national parks. The main forest types in this area are:

- Hill Sal Forest
- Lower Tropical Sal Forest
- *Terminalia* Forest
- Tropical Evergreen Forest
- Tropical Deciduous Riverain Forest
- Riverain *Khair-Sissoo*
- Savannah and Grasslands

The Chiuri grows in 'Lower Tropical Sal and Mixed Broadleaved Forest', '*Eugenia-Ostodes* Forest (which grows only in the extreme eastern part of Nepal and is very rare)' and '*Schima Castanopsis* Forest'. Thus, the Chiuri can be found in both the sub-tropical and the tropical zone.

People and their Forests

The (rural) people of Nepal experience the forest as an important source of energy;

- It provides timber, firewood and construction wood,
- It enables sustainable production of agricultural crops,
- It provides fodder for livestock,

[9] These zones are defined by: Shrestha K.R. and B. Schultz (2002).

- It conserves soil and water,
- It provides medicinal herbs and several other products of daily necessity.

Forests have many functions and therefore there is a long tradition of conserving forests and planting and protecting trees in Nepal.

People consume forest fruits and the food bearing trees are mostly private property. In the Mahabharat range the people consume wild fruits and nuts from trees such as Okhar, Katush, Chiuri, Lapsi and Amala. Forests also provide fodder for livestock. This consists of shoots, foliage and fruits. In Nepal tree leaves make up about 40% of annual feed consumed by buffaloes and 25% of that eaten by cows. Until only recently some tribal people depended almost completely of what they could harvest from the forest.

The forest situation has changed with the growing population of Nepal. As the number of people increases, more food is needed to feed them. As a result large areas of forest land were converted into farm lands. The forests were also logged to fulfil the demand of the forest industries and earn revenue for the government.

History of Community Forestry

The concept of Community Forestry is very popular in Nepal. The National Forestry Plan (NFP) was passed by the government in 1978. The national forestry plan set out forest policies and described a comprehensive forest management policy. The main objectives of the national forestry plan are the following; [10]

- To make Nepalese people self-reliant in timber, fuel wood, fodder and other forest products.
- To create ecological balance and conserve the physical environment.
- To mobilize the forest resources for social and economic benefits on a sustainable basis.

In order to meet the objectives, the national forest policy called for the following steps to be taken;

- All forests should be managed according to a written plan.
- Forests should be considered as the social property of the people.
- Intensive forest management systems should be developed by involving communities in accordance with geographical conditions and social needs.

Since the publishing of the NFP, considerable effort has been focused on Community Forestry by the Department of Forest through projects assisted by Non-Governmental Organizations (NGOs). One of the main chapters of the NFP is the Community Forestry Programme (CFP) under which all accessible hill forests will be handed over to local communities.

The CFP was implemented with the following goals;

- To satisfy the basic needs of people for forest products such as fuel wood, fodder, timber and other products.
- To promote self-reliance of the community through their active participation in local forestry projects.
- To reduce environmental degradation.

Community forests are very important because they cover the bare and barren hills which otherwise would be easily eroded and degraded. Particular attention has been given to the planting of fast growing fuel wood trees and fodder trees for feeding the livestock which is so important for the rural community in Nepal.

> *The total area of already realised CF and potential CF is 3.561.600 ha where the total forest area of Nepal is 5.874.700 ha.*[11]

Today CF is everywhere in Nepal and a lot of NGOs are assisting existing CFs and setting up new ones. A lot has been learned from past experiences. The most important thing is that local people should be

[10] Source: Shrestha K.B. (1997).
[11] Source: Kayastha B.P. (1991).

empowered to manage the forest themselves and only need minimum requirement from outside organisations. In this way they are really responsible the forest.

Management of Community Forests

There are 75 districts in Nepal. At district level the 'district forest officer' has the responsibility for implementing the CFP. He is assisted by three to five community forestry assistants and by the rangers in the district. The district forest officer has got regular contact about coordination and administrative issues with the 'local development officer' of the District Development Office (DDO) and heads of other offices. District seminars, regional meetings with CFC members further help to create better understanding at the district level. The training programme of nursery foremen and forest watchers are organized at the district by the district forest officer and community forestry assistants.

The VDC and the CFC are the most important institutions at local level. This is acknowledged by the Operational Plan which has to be signed by the chairman of the VDC, chairman of the CFC and the DFO. There may be one or more CFCs in a village. One of the most important tasks of the forest committee of users group (CFUG) is to prepare and implement management tasks in consultation with the community forest assistants and DFO. They are also responsible for protecting and developing the Community Plantation (CP) and CF.

Leasehold Forestry

In areas where local communities are not able or willing to manage forest lands as community forest, Leasehold Forestry may be introduced. But the priority has been given to benefit the many; by community forest, less priority goes to benefit the few households who are leasing forests. Both community and leasehold forestry are community based forest management programmes. But there are some fundamental differences in community and leasehold forestry. The size of a LHF is 1 hectare per household ranging from 3 to 10 hectare per group and averaging 6.5 ha per group, where the size of a CF is unlimited. LHF is only targeting people living below the poverty line, where CF targets all rural people. LHF is implemented in 30 of Nepal's 74 districts, where CF is implemented in every district.

LHF has been a pro-poor programme and is targeting poor, marginalised, women-headed households and ethnic groups. For the last few years, community forestry is also moving towards pro-poor programmes and upliftment of rural livelihoods. The poor household can lease the forest for a maximum of 40 years. There is no fee charged. The District Forest Officer is authorised to hand over leasehold forest to the groups of poor households.[12]

Community Forestry Committees

Community Forestry legislation enables handing over of existing government forest to the local community. After handing over the forest is called community forest. The management and protection of such a forest is being carried out by a Community Forest Committee (CFC).

Before a forest will be declared 'Community Forest', a committee has to be elected. This committee will be responsible for the management, conservation and sustainable harvesting of the forest. The committee has a chairman, deputy chairman, secretary and common members. In some areas the Community Forest Assistant (who works for the DFO) fulfils the role of secretary and thus plays a vital role in organizing the CFC. Usually a committee exists of 20 - 30 members, who are elected democratically, and they represent all the users of the Community Forest (often more than 100 households). These households are called 'members' of the CF. Members of the CFC form a real representation of the members of the CF. They are people from all segments of the rural population. Possible tasks of the CFC are;

- Preventing illegal cutting or damage of any form to the CP and existing forest.
- Penalizing those who break the rules.
- Stopping cattle from grazing in the CP and in restricted areas of the CF.
- Preventing fire hazard and organizing fire protection measures.

[12] Source: Singh B.K. (2006).

- Solving conflicts regarding CP and CF.
- Helping in the preparation of management plans for CPs and community forests in cooperation with DFO and Community Forest Assistants (CFA).
- Assisting in demarcation of CP and CF.
- Implementing the management plan for CF and CP.
- Updating the management plans.[13]

The CFC has a meeting schedule. In general they come together once a month, but if necessary they will meet twice a month. The revenue gained by selling their forest products can be divided or used for development of facilities for the community. It depends on the policy the CF has written down in there management plan.

Each month the CFCs do calculations and administrations on their forest products. All the members of the CF are present when the calculation is being done. The date is written down in a large book, by the secretary. The following topics can be administrated; what they sold, date, document number, particular name of product, how much money, categories from where money comes, amount of waste (also used as fuel), loan from outside, income, advance income, etc. Every CFC has got his own way for administration, but it has to be done properly and according to the rules set up by the DFO. [14]

Policies within Community Forestry

The CFC makes a management plan for their Community Forest; this is done in cooperation with the District Forest Office. This plan contains policies on the harvesting of forest products, restricted areas, fodder and fuel supply, etc.

The activities that are done for conserving the forest are also written down in the management plan. Prices for specific forest products like fuel wood and construction wood are fixed.

[13] Source: Kayastha B.P. (1991).

[14] Source: Interview with Chuhga Khola Community Forest Members.

Chitwan District

Chitwan District

Nepal can be divided in three geographical areas: the Himalaya, the Mahabharat range and the Terai. The Himalaya is the most northern part and is very mountainous. The Mahabharat range is the middle part of the country and is a hilly area. The Terai is just flat land and covers the entire southern part of Nepal. Chitwan is located in the Terai area and is one of Nepal's 75 districts. See also the map on page 113.

Climate of Chitwan

The Terai has a similar tropical climate to the northern plains of India, hot as a furnace from May to October and drenched by monsoon rains from June to September. Temperatures are ranging from 20 degrees in winter to 40 degrees in the summer. The annual monsoon rains can severely affect transport in the region, dirt roads turn to mud, dry stream beds become raging torrents and roads and bridges are routinely washed away.

History of Chitwan

The Terai was once one of the most important places of the Indian subcontinent. It has different religious places; Lord Buddha was born in Lumbini and Sita, a goddess of Hinduism was the daughter of the historical king Janak who ruled at Janakpur.

Janak founded the Mithila kingdom, which flourished until the third century AD when its lands were seized by the Gutpas from Patna in northern India.

The depopulation of the Terai began in the 14th century, when the Mughals swept across the plains of northern India. Hundreds of thousands of Hindu and Buddhist refugees fled up into the hills, many settling in the Kathmandu valley, which later rose to prominence as the capital of the Shah dynasty. Aided by legions of Gurkha warriors, the Shahs reclaimed the plains, expanding the borders of Nepal twice to their modern size. Although the British never conquered Nepal, they had regular skirmishes with the Shahs. A treaty was signed in 1816 that trimmed the kingdom to roughly its current borders. Nepal later regained some additional land (including the city of Nepalganj, see map on page 113) as a reward for assisting the British in the 1857 Indian uprising.

The Terai was covered by little areas of jungle well into the 1950s. The indigenous people of the plains, the Tharu, lived an almost stone age existence until 1954, when DDT was used to drive malaria from the plains and thousands of land-hungry farmers moved into the Terai from India and the Nepali hills.

Today, the Tharu, are one of the most disadvantaged groups in Nepal and huge areas of the forest have been sacrificed for farmland and industrial development. Nevertheless, some large patches of wilderness remain, preserved in a series of excellent national parks, and the massive industrial and agricultural development in the plains is slowly raising the quality of life for the nation, at least in economic terms.[15]

Geography of Chitwan

The district has a total area of 2239 square kilometer and the Royal Chitwan National Park (CNP) covers 43% of this. There are 36 VDCs (Village Development Committees) in Chitwan.

The main city of Chitwan is Bharatpur. This is also the biggest city in the district and with its 125,112 inhabitants the 7th largest city of Nepal.

Bharatpur is one of the fastest growing cities of Nepal. It lies on the banks of Narayani River and serves as a commercial centre of Chitwan district and central region of Nepal. The economy of Bharatpur was traditionally based on agriculture. The agricultural land is gradually converted into the residential and industrial areas.

Main industries of Bharatpur are small scale processing industries. A large number of poultry industries have developed in the municipality. It is believed that it covers more than 60% of the total

[15] Source: Mayhew B., J. Bindloss and S. Armington (2006).

poultry demand of the country. Moreover, this municipality has a substantial volume of poultry products for export trade. Other meager productions of the city are honey, mushrooms, floriculture, and service industry (education and health). Chitwan is regarded as food surplus district, which is processed in Bharatpur and sold to major cities of the country including Kathmandu and Pokhara. Its central position along with the crossroads of Bharatpur has enabled it to increase its wholesale and retail trading function.

Population of Chitwan

Chitwan's population size was measured in 2001 for 468,699 people. This accounts to 2.03% of Nepal's total population. There are 92.851 households with an average household size of 5.05. 36% of the population is below 15 years old and 7% is older than 60 years. The working population between 15 and 60 years is 57%. Chitwan has 98 men for every 100 women.

Tourism in Chitwan

In Chitwan lies the biggest National Park of Nepal; the 'Royal Chitwan National Park'. The one-horned rhinoceros, Bengal tiger and other animals live in this park and this is one of the major attractions for tourists to Nepal.

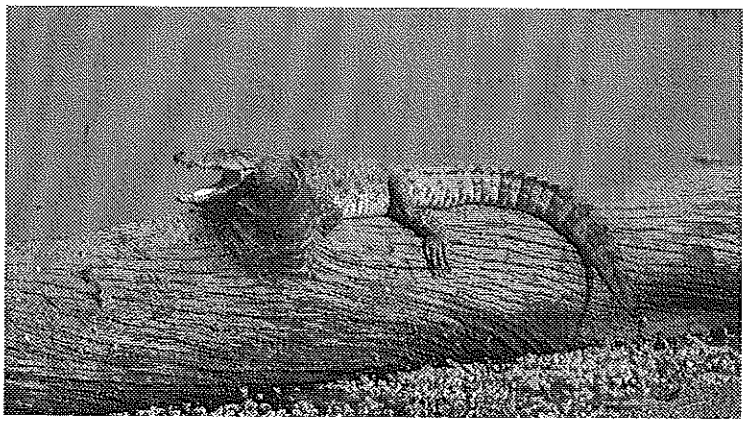

Figure 6: Crocodile inside the National Park

Tourism in Chitwan started 30 years ago and places a significant place for itself on the tourism map of Nepal. Yet the district is not yet fully utilizing its potentials. The tourism in Chitwan is mostly based on the National Park in which people go on elephant- and jeep safaris. There is also occasional rafting on the Rapti and Narayani rivers and the Tharu culture has been a focus of tourism to some extent.

Sauraha is the main tourist place in Chitwan. This village exists of hotels, lodges and tourist shops. Sauraha lies on the border of the CNP so wildlife safaris start from here. The peak tourist season of Chitwan is from October to December and from February to April. According to the district development committee (DDC) the average length of stay of tourists is 3.5 days.

The TRPAP (Tourism for Rural Poverty Alleviation Programme) has been implemented in the 4 northern remote VDCs of Chitwan. These VDCs are Kaule, Shaktikor, Siddhi and Korak. TRPAP is a programme that focuses on intensifying the role of local people in tourism activities. The programme is aimed at extending tourism to new areas, thereby providing more prospects of equitable distribution of tourism benefits. The Chitwan-Chepang Hills Trail has been developed and promoted as a new tourism product in the district.[16]

Community Forests in Chitwan

Forests of Chitwan

Chitwan has two different kinds of forests. The first and major one of them is the Sal Forest which covers 70% of the forest area in the district. The second, The Terai-Hardwood Forest covers 22%, and in 8% of the total forest area these two types of forest are mixed. 100% of the forest area is mature forest. There are no areas of sapling trees.

In Chitwan there is the natural forest: the CNP, and there are forest blocks. These blocks are production forests for firewood and fodder and they are managed by the local communities under supervision by the government. [17]

[16] Source: Tourism Resource Mapping Profile of Chitwan District.

[17] Source: Department of Forestry Nepal (1998).

Community Forests

According to the National CF Database (July 2004), there now are more than 13.238 CFs in Nepal with 952 (7.2%) found in districts defined as Terai. These Terai CFs cover 132.570 ha (12,3% of CF) and involve 206.509 households. This means only 5% of Terai forests are handed over, while 23.4% of forests have been handed over in the hills. There is still an enormous area of forest in the Terai not yet under any effective management. Forests are mainly confined to the Churia hills and the Bhabar zone immediately to the south of these hills. The Terai plain it self, is dominated by fertile agricultural land and settlements, while large forest blocks are the minority. This is in contrast to Hill districts, where forest areas are distributed evenly in comparison with agriculture land and settlements.

The forests in the Terai are of high value and the fertile land that they grow on also is. The Terai is a heterogeneous area; there is a lot of variety with both the inhabiting people and the nature in the area. It is frequently stated that most of those who now live closest to the forest are the most recent settlers, and are often in fact illegal encroachers. Deforestation in the Terai is estimated to be 1.3% annually. This is higher than in Mahabharat or Himalayan districts. It has been estimated that during recent decades 70.256 ha of forest has been cleared in 25 Terai districts.

The Terai has an open border with India. Nepali's can cross the border to India just like Europeans can go from the Netherlands to Germany.

Community Forestry's in the Terai districts do not exist from traditional users of the local forests, because of migrants from hill districts; some of whom have settled illegally in the area. Migrants from many sources, especially nearby hill districts and other parts of the Terai, and also from India, Burma, and the Kathmandu Valley moved to the Terai to lay claim to its huge agricultural potential when the risk of malaria receded in the 1950-1960. Because of this mixed group of users the government of Nepal has initiated the Collaborative Forest Management in 5 districts of the Terai. The Collaborative Forest Management enables people who live further away from the forest also to share in the benefits.

Some communities have been completely left out of the process of handing over the forests even though in some cases they live very near to the forest and are surrounded by users of CFs.

Many Terai CFCs have invested significant effort and resources in forest management. It has increased employment, it resulted in an increase of forest products and it provided investment in community development. The value of the Terai forests make CF highly relevant in this region as an engine for improving livelihoods, and contributing to the Millennium Development Goals.[18]

Community Forestry and the National Park

During the 1980s and 1990s, CNP experienced a wave of poaching and illegal forest clearing, linked to the desperate economic situation in the villages around the park. Army patrols were able to drive off the poachers, but fuel wood gathering continued, until the creation of community forests of Baghmara and Kumrose. These two areas bordering the national park were replanted with fast growing trees to provide villagers with an alternative source of fire wood and fodder. Ownership and responsibility for the forests was then handed over to local committees with representatives of every family in the area. Forest clearance inside the park has fallen dramatically and the community forests have provided new economic avenues for local people in terms of nature management and eco-tourism.

Between them, the two community forests now cover 2500 ha, providing fuel, fodder and tourism opportunities for more than 2000 local people. Canoe and elephant safaris in Kumrose community forest can be arranged in Sauraha and most of Chitwan's signature species have been spotted in the reserves.[19]

[18] Source: Bampton J., B. Vickers, B. Rana and J. Statz (2004).

[19] Source: Mayhew B., J. Bindloss and S. Armington (2006).

The Research Area: Siddhi VDC

Siddhi VDC

Siddhi VDC (Village Development Committee) is an area in the north of Chitwan District. It has 9 wards. A ward is an area roughly the size of one or two small settlements. Our research area is in ward 6, which is located in the centre of the VDC.

Siddhi has a loamy skeletal soil texture. The area is very mountainous, with slopes of 30%. This makes agriculture difficult and the people have to work hard for their food. The area almost completely exists of forest. On the flat plots of land there is some agriculture.

Location of Siddhi

Siddhi is located between the Prithivi Highway in the north, which goes from Kathmandu to Pokhara, and the Mahendra Highway in the south, which finds its way from the east to the west of Nepal trough the Terai. Most parts of Siddhi are not accessible by road. The nearest relatively easy to reach village is Shaktikor. From here a path leads to Tindobahn and further to Majhbang and other villages. There is also a path that goes north, to the Prithivi Highway and the Trisuli River (see map on page 115). VDCs that border Siddhi are Kaule, Shaktikor, Lothar, Korak, Birendra Nagar & Chainpur.

Transport to Siddhi VDC is difficult. A bus leaves every day from the Mahendra Highway at Tandi and its final stop is Shaktikor. From Shaktikor it is about 15 minutes walking to the border of Siddhi VDC and another 3 hours walking and climbing to the village of Majhbang.

The nearest phone is available in Shaktikor and the nearest post office can be found in Tandi.

Population of Siddhi

There are 3358 people living in Siddhi. These people are living in 539 households so the average household size is 6,23 persons. 51% of the population is male and 49% is female. The population density is 63 persons per square kilometer where the population density of Bharatpur, the biggest city of the district, is 1282 persons per square km. Siddhi is the least densely populated area of Chitwan district. There are 2436 Hindu people in Siddhi, 659 are Buddhist and 263 are Christian. There are no other religions. Most people in Siddhi belong to the ethnic group 'Chepang' but in ward 1 and 2 there are some 'Tamang' people as well. A sub-health post can be found in Tindobahn and Shaktikor. The nearest hospital is located in the city of Bharatpur, to which traveling takes about two hours. [20]

Chepang[21]

85% of the people in Siddhi VDC are Chepang. The Chepang are an indigenous people living in the upper hills of the central region of Nepal. The total population amounts 55.000, and they are living across Chitwan, Dhading, Ghorka, Makwanpur, Lamjung and Tanahun districts. They are a highly marginalized indigenous nationality. In addition to economic impoverishment, the Chepang have also confronted cultural discrimination since the 'Mulki Ain' (Civil Code) in 1854 has defined the Chepang as addicted drinkers. The high caste migrants thought they had the right to treat them as 'third class' citizens, and so they did.

The Chepang often owned no land, or more importantly, were not really interested in the low-land areas since their main traditional interest was in the forest where they could harvest natural resources. So the migrants easily settled and took ownership of the best quality land in the low-land areas. The Chepang were pushed out to live on marginal lands higher up the slopes. Later they recognized the importance of plain and fertile land when they became more interested in farming. The Chepang became know as the Prajas (King's subjects), because of the wishes of the late king Bihendra. He recognized the miserable conditions that they lived in and started the "Praja Vikas Programme" (PVP) for the upliftment of the Chepang.

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[20] Source: Deo B.P. (2006)

[21] Source: Chepang G.R. (NCA) and H. Heijdra (SNV) (2008)

As an indigenous group, Chepang have an own unique language and spiritual beliefs. Nowadays the Nepali language is dominant. The traditional knowledge and values of the Chepang are pushed to the background.

In 1998 the "Nepal Chepang Association" (NCA) was established by young Chepang activists working for Chepang communities to promote and preserve their culture, religion and language. The NCA is one of the Indigenous Peoples Organizations (IPO's), which are related to the Nepal Federation of Indigenous Nationalities (NEFIN), with individual and organizational members in six districts.

> *"The Chepang came a long way along the path to empowerment through establishing their own organization, NCA, and involving themselves in various programmes".*

The Praja Cooperation (Chepang are also known as Praja) was established in 1999. Its office is located in Shaktikor and the cooperation has 365 members from 5 Chepang VDCs in Chitwan district. Their goal is to develop more facilities, like drinking water access, irrigation systems, roads, and schools for local people.

Education in Siddhi

Primary schools can be found in almost every village in Siddhi. The nearest secondary school is in Shaktikor. This means that students have to walk for about 5 hours a day to go to school. Colleges can be found in Tandi, Bharatpur and some other town in the district.

Tourism in Siddhi

Around the year 2004 the Chitwan Chepang Hills Trail (CCHT) has been developed under the TRPAP (Tourism for Rural Poverty Alleviation Programme), in cooperation with different organizations.

A path goes from Shaktikor (see map on page 115) via Tindobahn and Majhbang, (the two major villages of Siddhi), to the Chitram Waterfall which is located in Siddhi and promoted as a tourist attraction in the area. After visiting the falls, tourists have to walk the same path back so not many tourists actually walk this path.

> *'The Chepang Hills Trail takes 5 days and offers a rare combination of cultural and sightseeing experience, a stay in the beautiful homes of the villagers as quests and sharing their meals is a journey of discovering itself. The unique culture, in this area, bird watching and other natural attractions add to the experience'*[22].

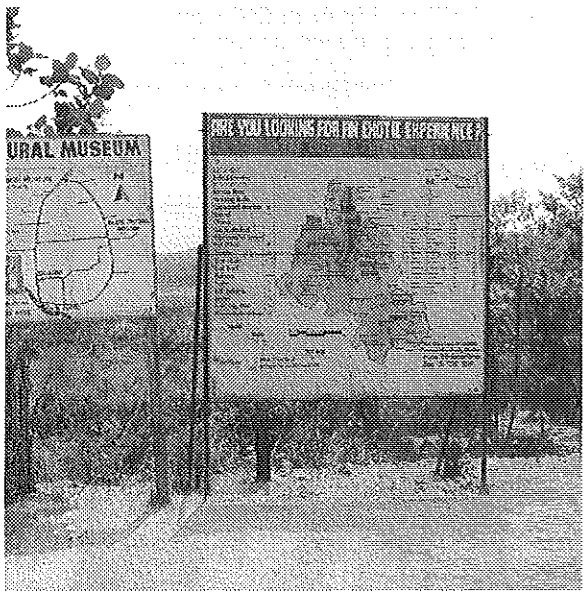


Figure 7: Chitwan Chepang Hills Trail Sign in Sauraha

Ward 6

Our research area ward 6 has 518 inhabitants spread over 75 households. The "Kayar" River is flowing through ward 6 which merges with the "Shakti" River, just before the city of Shaktikor. The merged stream continues south to merge with the "Rapti" River, which flows from the Chitwan National Park to the "Ganges" River in India.

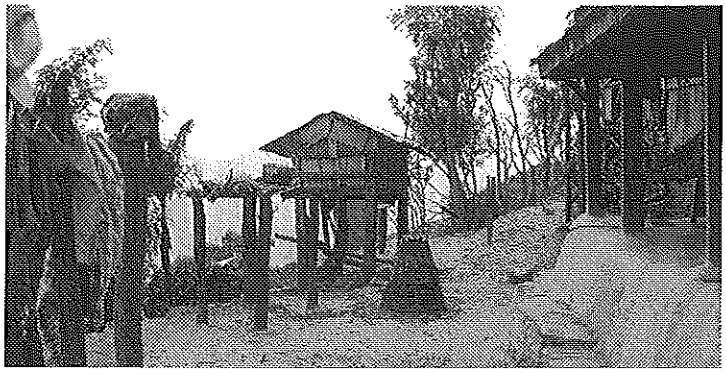


Figure 8: House in Majhbang

There is only one settlement in ward 6, called Majhbang. There a few accommodations; 6 lodges (12 beds) and 6 'home-stays'. In these home stays, the tourists or visitors live together with the locals and they will eat the local food. The owners of the home-

stays don't speak English, so communication is difficult, but they are very welcoming and friendly.

There are some facilities for tourists in ward 6 like toilets and water taps, and there is 1 teashop, but it is a remote area so no luxuries can be found. In ward 6 there are: 47 toilets, 60 safe drinking, water taps, 1 electricity point, 2 ICS (telephone), 2 bio-gas and there are 2 solars.

Compared with the other wards of Siddhi, it can be said that ward 6 is highly developed. The other wards don't have any accommodation at all; no lodges and no home-stays. There are only 2 wards that have access to electricity; wards 2 and 6. Ward 2 is located near Shaktikor VDC, and near the village Shaktikor itself, so it gets the benefits from it. Shaktikor VDC is more developed, as it is located on plain land, just in front of the hills. They have good infrastructure and good access to markets in Tandi and Bharatpur. Shaktikor is the main market and trading place for many VDCs in the hilly area. So the fact that there is an electricity point in ward 6, which is relatively far away from Shaktikor, is a sign of development. The path of the Chepang Hill Trail; a 5 day trekking route, is going through ward 2, 6 and 5. That can be the reason why ward 6 is more developed than the other wards. In ward 5 the path ends, and the tourist have to go back to Majhbang, for spending the night, because there are no facilities for tourists in ward 5.

Community Forests

Some community forests can be found in Siddhi. In total there are 5 CFs: Indreni (ward 1 & 6), Dauger (ward 7), Bhattauli (ward 8 & 9), Nebuwatar (ward 2) and Chitram Kaminchuli (ward 5). Nebuwatar and Indreni are the biggest ones. Indreni Community Forest is partially located in ward 6. This CF is located to the south of the village of Majhbang. The size of this forest is 454.15 hectare. The CFC has 13 members and the CF has 75 members. The community forest was founded in 1995. When they started the CF they had no money and all the members saved 5 rupees (€0,05) each month to develop the forest. After 10 years, the forest started to make some money because the CFC started to sell the wood. The main goal of the CFC is to conserve the forest and keep the forest healthy. The secondary goal is to improve the livelihood of local people by developing the area with the money earned from the forest.

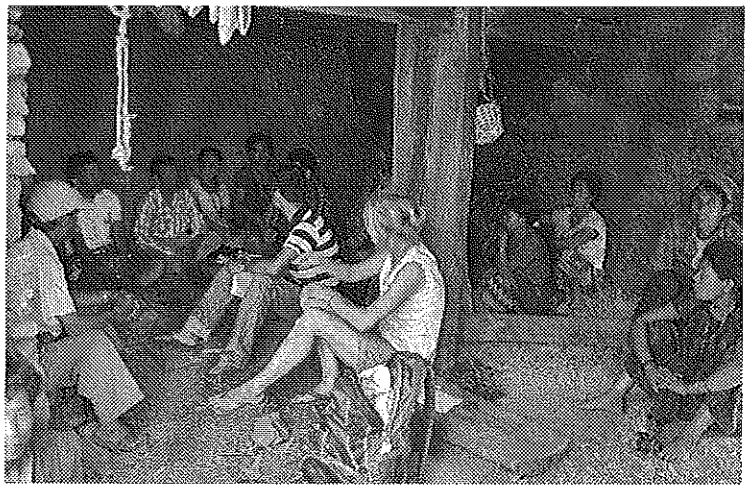


Figure 9: Indreni Community Forest Committee Meeting

To become a member of the CF a price of 100 rupees must be paid. Poor people, who cannot afford this, can become a member for free. The CFC sells wood, and with the money they earn they build roads, invest in agriculture, drinking water facilities or plantations. Also they give loans to poor people.

Next year they want to make a Chiuri plantation because this is the most important tree in the community. They want to use a blank area for this that is currently not in use and they want to plant 1500 new plants. In the current forest, there are already 2500 Chiuri trees. There is no harvesting in the CF because the seeds are of low quality. The Chiuri production is decreasing. Seeds are falling to the ground before they are ripe. People think that this is because of the increased bee-keeping. Bees consume the juice of the Chiuri and as a result the seeds fall down. In the CF there is no permission needed to harvest Chiuri products as long as people are a member of the CF.[23]

[23] Source: Interview with Indrendri Community Forest Committee

NTFPs

The following NTFPs are harvested in Majhbang and sold to Praja Co-operative (PC).

NTFP	Buying (PC)	Selling (PC)	Harvesting Season	Yearly amount
Amala	45 Rupees/kg	55 Rupees/ kg	November	200 kg
Harro	15 Rupees/ kg	20 Rupees/ kg	November	900 kg
Barro	13 Rupees/ kg	16-20 Rupees/ kg	November	1500 kg
Gurjo	12 Rupees/ kg	15-20 Rupees/ kg	May	3000 kg
Kurilo	150 Rupees/ kg	170 Rupees/ kg		500 kg
Ritha	20 Rupees/ kg	25 Rupees/ kg	November	1500 kg
Tejpat	20 Rupees/ kg	25 Rupees/ kg	May	500 kg
Honey		175 Rupees/ kg	June	
Chiuri	50 Rupees/kg	See page **61**	July-August	

Below is some additional information about these NTFPs.

Harro

The Terminalia Chebula, or "Black Myrobalan", is a species native to southern Asia from Nepal & India to southwestern China and south to Sri Lanka, Malaysia and Vietnam. It is a deciduous tree growing to 30m tall. The fruits can be used as a food and as Ayurvedic medicine. It is reputed to cure blindness. Sometimes the fruit is used to prepare black salt.

Barro

Barro, also known as the "Bastard Myrobalan" or "Terminalia bellirica (Gaertn.) Roxb.", is a large deciduous tree common on plains and lower hills in Southeast Asia, where it is also grown as an avenue tree. The leaves are about 15 cm long and crowded toward the ends of the branches. It is considered a good fodder for cattle. In traditional Indian Ayurvedic medicine, Barro is known as "Bibhitaki". This species is used by some tribes in the Indian subcontinent for its mind-altering qualities; they smoke dried kernels. Too much of this can cause nausea and vomiting.

Amala

Amala, or *"Phyllanthus Emblica"*, has been used in folk medicine to treat a wide number of diseases. It is also called *"Indian Gooseberry"*.

Gurjo

"Tinospora cordifolia", also called Guduchi is an herbaceous vine indigenous to the tropical areas of India, Myanmar and Sri Lanka. It is used in Ayurvedic and Jamu herbal medicine as a hepatoprotectant, protecting the liver from damage that may occur following exposure to toxins, as well as in Thailand, Philippines. Recent research has demonstrated that a combination of *"Tinospora Cordifolia"* extract and Turmeric extract is effective in preventing the hepatotoxicity which is otherwise produced as a side effect of conventional pharmaceutical treatments for tuberculosis using drugs such as Isoniazid and Rifampicin.

Kurilo

Kurilo is also called Wild Asparagus or *"Asparagus Racemosus"*. It is used in Ayurvedic medicine. The main tradable part is the tuber (root), which is used medicinally as a refrigerant, demulcent, diuretic, aphrodisiac, antispasmodic, anti-diarrhoeatic and anti-dysenteric.

Ritha

The *"Sapindus Mukorossi"* tree is one of several that bear fruits that are commonly referred to as soap nuts. Of them the soap nuts from the *"Sapindus Mukorossi"* tree have the highest saponins content. Saponin is a natural detergent commonly used for cleaning and many other things. Soap nuts have been used medically as an expectorant, emetic, contraceptive, and for treatment of excessive salivation, epilepsy, psoriasis, head lice and migraines. Soap nuts are among the list of herbs and minerals in Ayurveda. They are a popular ingredient in Ayurvedic shampoos and cleansers. Soap nuts have long been used in the Western world for soap production, usually together with chemical additives.

Honey

Honey is produced locally. Since a few years the honey production is increasing due to the fact that more people purchase bee hives.

Tejpat

The scientific name of Tejpat is *"Cinnamomum tamala"*. The leaves are used as a spice. Leaves and bark also yield an essential oil which is used in perfuming soap and in medicine. The plant protects surrounding soil from erosion. With an evergreen canopy Tejpat is an important provider of shade.

Jasmin

Jasmine is a genus of shrubs and vines in the olive family. The leaves can be either evergreen or deciduous. Jasmine is used for producing perfumes and incense. In China it is used to make tea. In India, Egypt, China and Morocco, Jasmin is used to create an essential oil. The jasmine has to be gathered at night because its odor is stronger after dark.

The Chiuri

General Chiuri

The Chiuri tree is a broad leafed, medium sized tree native to Nepal, which grows in the sub-Himalayan hilly area at altitudes from 400 to 1400 meters. It is commonly found within the sub-Himalayan belt from Uttar Pradesh in India and further eastwards into Nepal through North Bengal, Sikkim and Bhutan at altitudes of 700 to 1500m. The trees are often found outside the forest near farms. By planting new trees, people have them close to their home. It is a light-demanding species with some tolerance to frost. Even on poor stony soils survival has in most places been fairly good, but on such sites its growth is slow.

The botanical name is *"Diploknema Butyracea Roxburn"* or *"Bassia Butyracea"*. It is also called the "Indian Butter Nut Tree" but the Nepalese name is Chiuri. The main product of the tree is "Ghee", or butter, that is extracted from the seeds.[24]

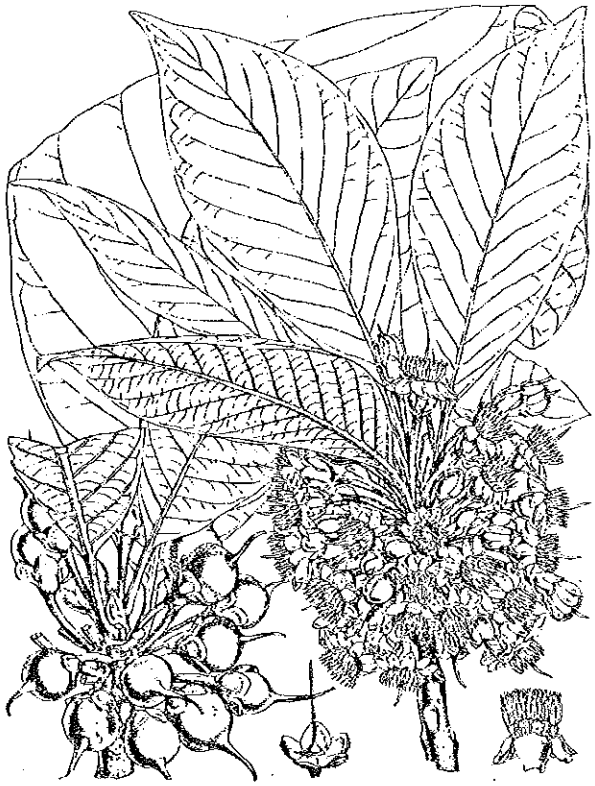


Figure 10: Bassia Butyracea. Roxb.

Leaves, Flowers and Fruits

The Chiuri tree has a slow growth rate when it's young but once the tree is full-grown it bears a lot of fruit and seeds which are highly valued by rural people of Nepal. The leaves are crowded near the ends of the branches, tapering to the stalk, rounded at the apex, with prominent veins. Flowers are white, 1.2-2.5 cm cross, in clusters below the leaves. The fruit is fleshy and its shape is ellipsoid and about 2 cm long.

The fruit ripens between June and August. The ripe fruit is yellow in color. Loss of viability is hastened if the pulp is removed, so when reproducing the tree this should be done immediately before the seed is sown. The germination percentage of fresh seeds is high, between 50 and 80. Germination begins in 1-2 weeks and may continue to 4 weeks.

Nursery Treatment

When reproducing the Chiuri tree in a nursery, the seeds should be sown immediately after collecting, after removing the flesh. It is sown directly into poly pots at the rate of 2 per container. The seedlings benefit from shade, during the germination, but the shade should be removed once they are 2-3 cm tall. However in frosty areas shade may be needed in night to protect the seedlings. They develop strong taproots and regular root pruning is necessary. This should begin before winter, and continue after winter and monthly intervals. The pots should be spaced out with 5-10 cm between the rows, after winter. Growth in nursery is rather slow. Below 1000m one year in the nursery is required to produce plantable seedlings, which should than be between 25 and 40 cm high. Above 1000m 2 years in the nursery will be needed.

[24] Source: Jackson J.K. (1994)

The Uses of the Chiuri

The Chiuri tree is used in multiple ways, as all the parts of the tree are being used, in that way the locals gain as much efforts from it as possible. The uses of the tree can be divided into six aspects: the fruits, flowers, leaves, resin, timber and seeds. The seeds are the most important product; they can be processed into Ghee and have a large economic potential. A lot of different products can be made from Chiuri Ghee. People drink the fruit juice while harvesting the seeds and the residue is sometimes fed to the pigs. Flowers produce sweet nectar and this is used to make sugar and syrup. The leaves can be used as an animal fodder. People also bake bread in between two leaves. Resin is used to make glue and incense and timber is used for firewood and sometimes for construction and furniture making though Chiuri wood is not really suitable for timber.

For a more detailed explanation of the uses of the Chiuri (in our research area), see the next chapter.

Overview of all Chiuri uses

Fruits	Residue	• Feeding Pigs
	Juice	• Drinking while harvesting
Flowers	Nectar	• Syrup • Mix with Tobacco; Hooka (Hubble-Bubble) • Jaggeree (Sugar)
Leaves		• Feeding cattle • Baking bread between two leaves • Plates to serve food
Resin		• Glue • Incense
Timber		• Construction • Furniture Making • Firewood

Seeds	Ghee	• Cooking
		  o Curry
		  o Bread
		  o Porridge
		• Chocolate
		• Soap
		• Illuminant
		• Candles
		• Candy
		• Confectionery
		• Margarine
		• Medicinal (Rheumatism, Stomach Problems, Cramps, Burning wounds)
		• Additive in Animal Ghee

	Pina	• Manure • Fish Poison • Insecticide (Paddy fields & Banana plantations) • Source of Saponin • Feed in Poultry Farming

Chepangs and Chiuri

The Chepang and the Chiuri are strongly connected to each other; they almost belong to each other. Chepangs are known for their immense knowledge about the forest and the harvesting and preparation of forest products. They do have a lot of knowledge about the Chiuri too. The Chepang have got 15 different words to express the flowering phases of the Chiuri and they are used to harvest the Chiuri for over many generations. They even have songs about the Chiuri; these songs provide a lot of information about the Chiuri, the seeds, the colors, the fruits and the flowering periods.

The Chepang give Chiuri sapling as a dowry to their daughters. The consumption of Chiuri Ghee in the ward 6 is around 60 kg per year per household.

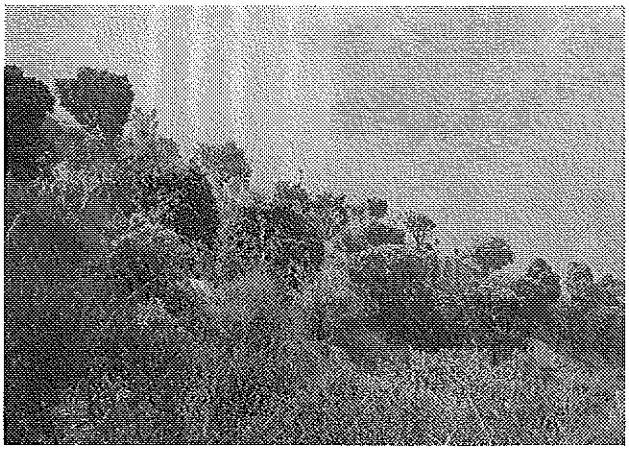
Chepang names given to varieties of the Chiuri

Characteristic	Varieties and its Names
Flowering time	**Tomyo, Wayo, Langhyo, Jayo/Crokiyo**
Fruit and seed colour	**Futiyo** (whitish fruit and seed), **Malbayo** (yellow in ripening), **Meringyo** (smoky fruit and seed)
Leaf colour	**Hpatyo** (yellowish)
Colour of trunk/branches	**Galiyo** (dark trunk, branches and leaf)
Shape of fruit and seed	**Bhantyo** (round like tomato), **Newayo** (elongated - pointed), **Bopyo** (flattened), **Rithayo** (like Ritha fruit - flattened horned top)
Shape of tree and branches	**Lagangyo** (branches like vines), **Lauranyo** (big handsome round canopied), **Nachangyo** (bi-forked trunks), **Jhapalayo** (Looking like a bush), **Clamyo** (panicle - horizontally spread branches), **Shrungkayo** (upwardly branched)
Size of the fruit	**Pechiriyo** (smaller fruits and seeds), **Godoryo** (big fruits)
Texture of fruit	**Smayo** (velvety)
Taste and smell	**Hykayo** (bitter), **Khatayo** (tasting like nut meg), **Mattiteltiyo** (smelling like kerosene)
Productivity	**Marchamani** (growing like yeast), **Raniyo** (giving most fruits - the queen), **Tharayo** (not giving fruits)
Location of the tree	**Dhabliyo** (grown in low even land), **Bangyo** (grown in cliffs)
	(**Yo=Chiuri** in Chepang Language)[25]

[25] Source: Bhattarai T.R. and others (2003)

Production

The production of Chiuri products is a small-scale production. Mostly people use the products for themselves and they sell what they have left. Some small-scale trading has been developed in Nepal. The Chiuri is found on steep and difficult slopes. Climbing the tree is difficult so it is dangerous to harvest the Chiuri fruit and seeds. This task is usually done by the men while the women and children gather the seeds that have fallen to the ground. [26]



[26] Source: Interview Dal Bahadur & Mahendra Chepang

Chiuri in ward 6

Ward 6 of Siddhi VDC has 75 households. Every household here owns 15-20 Chiuri trees. There are 2500 Chiuri trees in ward 6, including the community forest trees.

The table below is the same as the one previously shown but this time all the possibilities that are not used in ward 6 are crossed. The people ward 6 of Siddhi VDC use the Chiuri in these ways;

Fruits	Residue	• Feeding Pigs
	Juice	• Drinking while harvesting
~~Flowers~~	~~Nectar~~	~~Syrup~~ ~~Mix with Tobacco; Hooka (Hubble-Bubble)~~ ~~Jaggeree (Sugar)~~
Leaves		• Feeding cattle • Baking bread between two leaves • Plates to serve food
Resin		• Glue ~~Incense~~
Timber		• Construction ~~Furniture Making~~ • Firewood

Seeds	Ghee	• Cooking
		  o Curry
		  o Bread
		~~Porridge~~
		~~Chocolate~~
		~~Soap~~
		• Illuminant
		~~Candles~~
		~~Candy~~
		~~Confectionery~~
		~~Margarine~~
		• Medicinal (Rheumatism, Stomach Problems, Cramps, Burning wounds)
		~~Additive in Animal Ghee~~

	Pina	• Manure ~~Fish Poison~~ • Insecticide (Paddy fields & Banana plantations) ~~Source of Saponin~~ ~~Feed in Poultry Farming~~

Value Chain of the Chiuri

In chapter 4, information is given about the research area; ward 6, and in chapter 5 about the Chiuri tree and its uses. In this chapter those two parts are combined; the people, the products and the processes are creating the value chain together. The different links of the value chain will be thoroughly described and mapped in a flow diagram. In the flow diagram it becomes visible which trail the Chiuri seeds take from harvesting to selling. After the diagram all the actors and the part that they play in the process will be described.

Uses of the Chiuri tree in Ward 6

The Chiuri tree is used in multiple ways (see also chapter 5). Below you can find a description of the uses of the Chiuri in ward 6. The Seeds, Ghee and Pina are the most important products, while fruits, leaves, resin and timber can be seen as are secondary uses.

Seeds

The most important parts of the Chiuri tree are the seeds. The seeds of the Chiuri are used in multiple ways. The people from ward 6 extract edible oil out of the seeds and this oil will turn into 'Ghee' (a soft kind of butter).

Ghee

This Ghee is used in cooking; especially as in curry, which is an ingredient of "Dal Bath", a typical Nepali dish, and in bread. The Ghee is also used as illuminant; it burns very well. Chiuri Ghee has also medical applications; it is used against stomach problems, cramps, burning wounds and even against rheumatism. When the Ghee is extracted from the seeds, there is a waste product (the crushed seeds) called Pina.

Pina

Pina is a cake which is used, like the leaves of the Chiuri, as manure and farmers use it as insecticide. The seeds, and thus also the Ghee and Pina, contain saponins. Saponins are found in many plants, and derive their name from the *Saponaria* plant, the root of which was used historically as a soap. Saponins are often bitter to taste and data makes clear that some saponins are toxic to cold-blooded organisms and insects at particular concentrations. This makes it useful for farmers when they have problems with insects on their lands.

Figure 12: Chiuri Pina

Fruits, Leaves, Resin and Timber

The people in Majhbang usually don't harvest the fruits to extract juice. They just drink the juice when they are thirsty while harvesting the seeds. The juice is situated in between the fruit shell and the seed. The nectar of the Chiuri flowers is not used by the people; only by bees, birds and bats.

The people use the leaves of the Chiuri as natural plates to serve food on, to bake bread in; the unbaked bread is put between two leaves and put between the coals of a fire. After the bread is ready, the leaves are peeled off and thrown away.

Another use for the leaves is to use them as manure. They are put on the floor in the animal shed and after a while the dung and leaves are put on a dung heap. This mixture, the manure, is used as a fertilizer for farming, as it improves the soil structure and enables it to hold more nutrients and

water and become more fertile. It also contains some nitrogen and other nutrients itself which help the growing of plants.

The resin of the Chiuri tree is used as a glue to catch bats and houseflies. This resin has to be mixed with other resins, to make it stickier.

The timber of the Chiuri tree is used for construction and firewood. The people do mostly use Sal (*Shorea Robusta*) trees for firewood; only when a Chiuri tree has a disease, people will use it for firewood.

Flow Diagram of the Value Chain

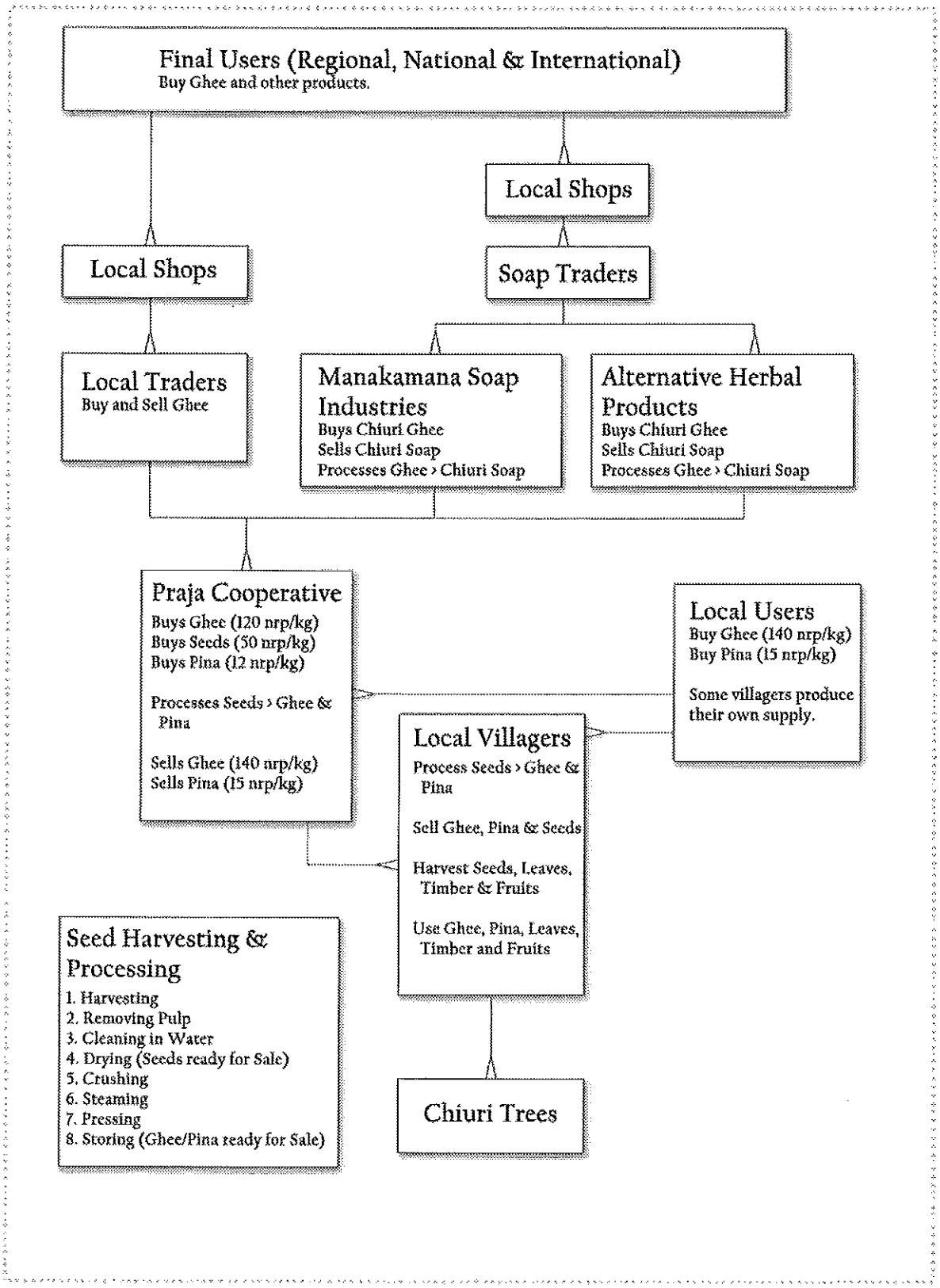


Figure 13: Chiuri Value Chain

Local villagers

Harvesting and Processing

The people from ward 6 are harvesting and processing the Chiuri seeds, these activities take place in July and August. There can be 8 links divided in the process of making Ghee from Chiuri seeds. The different links are described on the following topics: the method, the materials which are needed, the season in which it is done, the amount of working hours it takes and location of the activity.

1. Harvesting seeds
The seeds of the Chiuri tree are harvested in the Nepali months "Asar" and "Bhadra", which is the period of July/August. The people use a basket, a "Doko", to carry the seeds. They also use a Rome (Basket), Jabi (Bag), Dali and Kore. Men climb into the trees to pick the seeds while women stay on the ground and get the seeds that have fallen to the ground. It takes 5 to 6 working hours per day and they are harvested on private land ("Khoriya") or in the Community Forest.

2. Removing pulp
Before the seed is put into the Doko, the people remove the pulp by hand. After they removed the pulp they throw it away or they gather it and feed it to the goats and pigs. Sometimes they drink the juice that is also in the fruit.

3. Cleaning in water
Directly after the harvesting and removing pulp, the seeds are cleaned in water. The people use a basket and a lot of water for the cleaning. This is usually done at the riverside or at a tap in the village but sometimes people do it at home as well. The cleaning takes about 30 minutes for 1 kg.

4. Drying
Directly after the cleaning the seeds are dried in the house above the fireplace. It takes 15 minutes to install a mat for the seeds, which is placed above the fire. The seeds need to be dried on it for one week. The people use a Mandro (mat) and a Jhapra. The seeds are now ready to be sold to Praja Co-operative for 20-25 rupees per kilo.

5. Crushing
If the people don't want to sell the seeds, but make Ghee out of them, they will crush the dried seeds. This is mostly done after the drying in the end of Asar. They are using a Dong, Dhalei or Musal; these are all different local tools for crushing. It takes 2 working hours to crush 12,5 kg seeds. Seeds can be stored for three years, so the crushing can be done at any time.

6. Steaming
Directly after crushing, the seeds are steamed for 1 hour, using a Dikchi, water and fire.

7. Pressing
To extract the Ghee, the crushed and steamed seeds are pressed using a Chepuwa. This is a local machine made by the log of a tree. They put the seeds in a special basket and put the basket between the logs. Then they tie the logs together very tightly, with a Kokcing (stick) and than the Ghee is squeezed out. It takes 15-20 minutes to squeeze one basket of seeds and it is done by 2 people at the Chepuwa machine. The Pina (the waste product which remains in the basket) is sold for 12-15 rupees per kilo.

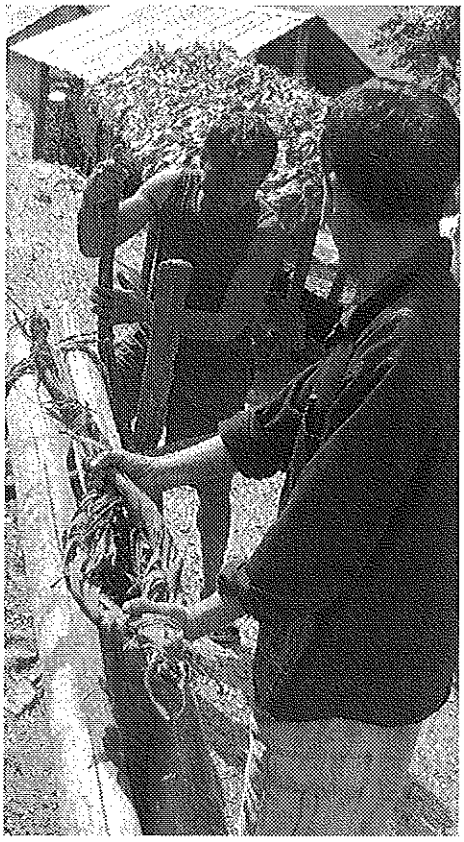


Figure 14: Ghee Processing with the Chepuwa

8. Storing
After 12 hours, the liquid Ghee will become solid, so before this happens the people store it in pots. They use different types of pots for this: Silver pots, wooden pots, plastic pots and even the crown of a banana tree or a piece of bamboo. The process takes 10 minutes and they store the Ghee in a corner side of their house.

Use

The people from Majhbang sell the seeds or process Ghee for their own use. One household approximately uses 60 kg Ghee per year. The Ghee that is extracted with the Chepuwa has a good taste. This is why most of the Chepang people use this Ghee for consumption, and not the Ghee processed by a machine. The Ghee processed by the machine in Shaktikor has a more bitter taste.

Sale & Distribution

The villagers, from Majhbang, sell their Ghee or Pina to other villagers and to Praja Cooperative. When a household need some extra Ghee supply, they can buy it from their neighbors or from other villagers. When they want to sell it to PC (in Shaktikor), they have to transport the seeds and the Ghee from Majhbang (uphill) to Tindobahn (downhill) by foot; which takes approximately 45 minutes. And from Tindobahn to Shaktikor they use a bus or tractor. This happens only once in a year, in September when the seeds harvesting & drying, and Ghee processing is finished. The people from Majhbang sell 3000 kilo of seeds per year to Praja Cooperative and 200 kilo of Ghee.

The people don't sell much Ghee because it takes them a lot of time to process the seeds and they get no extra money for it. Explanation: They get 50 rupees for one kilo seeds, and 120 rupee for one kilo Ghee. The Chepuwa is extracting 35 % oil / Ghee from 1 kilo seeds, so there is 2.85 kg seeds needed for 1 kilo Ghee (100/35). For 2.85 kilo seeds, the people get 142.5 rupee (2,85*50), and they only would get 120 rupee for the Ghee they processed. One thing we forget is the possibility to sell the Pina as well; the mashed Chiuri seeds which stays behind in the pressing-basket. Praja Cooperative is buying Pina for 12 rupees per kilo, is 2.85 kilo seeds are pressed, there will be 1,85kg Pina (2.85*0.65). They will get 22.2 rupees for it (1.85*12). So if the locals press the seeds into 1 kilo Ghee, they can earn 142.2 rupees (120+22.2), and if they sell the same amount of seeds, they can earn 142.5 rupees. So the people do not get extra money if they process the seeds into Ghee, and it takes them a lot of time.

Praja Co-operative

The Praja Co-operative (PC) is a Chepang organization which buys products from villagers and sells these products to locals and other traders. They are the only organization to which the locals from Siddhi VDC can sell their Ghee. Their office is located in Shaktikor and they have members in 5 VDCs.

Praja Co-operative was founded when NTFP activities in Lothar VDC drew the attention of SNV and the School of Ecology, Agriculture and Community Works (SEACOW) was invited to work on extending an action research to four adjoining VDCs. SEACOW's experience on working with NTFPs encouraged people to become organized for the marketing and sustainable management of NTFPs. It was agreed that the business organization for the implementation of the business plan should be a co-operative and named Praja Co-operative Ltd. Its main function is the sustainable and equitable management of NTFPs in the area. It is registered as a co-operative with the District Co-operative Office in Bharatpur.

Most of the initial activities were funded by 'EcoNepal' of Belgium and 'Stichting EcoSchool Nepal' of the Netherlands. Some activities were also funded by Oxfam-UK for some time. From 1998-2000 scaling there was funding by the SNV under their Praja Community Development Programme (PCDP). Due to some theoretical differences, this funding relationship could not be extended. Part PC is still funded through SEACOW and SNV though efforts are being undertaken to make the enterprise a self-supporting activity. SEACOW and PC together are supplying some of the herbs to fair traders such as the 'Body Shop' and 'Oxfam-Belgium'.

Buying

Praja Co-operative buys seeds, Ghee, pina and some other NTFPs from local villagers. In one year PC buy 4000 kg seeds (50 rupees per kilo), 2000 kg Chiuri Ghee (120 rupee per kilo).

The people from Majhbang sell 200 kg of Chiuri Ghee and 3000 kg Chiuri seeds per year to Praja Cooperative. Below, an overview of the names, amounts and prices of the products.

Name	Buying price (per kilo)	Selling price (per kilo)	Total amount per year	Total amount per year from ward 6
Chiuri Seeds	50 Rupees		4000 kg	3000 kg
Chiuri Ghee	120 Rupees	140 Rupees	2000 kg	200 kg
Pina	12 Rupees	15 Rupees		
Honey	130 Rupees	175 Rupees	5000 kg	1200 kg
NTFPs[27]				
Amala	45 Rupees	55 Rupees	200 kg	
Harro	15 Rupees	20 Rupees	900 kg	
Barro	13 Rupees	16-20 Rupees	1500 kg	
Gurjo	12 Rupees	15-20 Rupees	3000 kg	
Kurilo	150 Rupees	170 Rupees	500 kg	
Ritha	20 Rupees	25 Rupees	1500 kg	
Tejpat	20 Rupees	25 Rupees	500 kg	

[27] A description of these NTFPs can be found on page 48.

Processing

PC has a processing machine which extracts 1kg Ghee out of 2.5 kg of Chiuri seeds. This means the yield of this machine is between 40% and 50%. The yield of the authentic machine that the Chepang people use, the Chepuwa, is between 30% and 40%. The taste of this 'original' Ghee is better; the machine produces a more bitter Ghee. It is said that the Ghee from the machine contains more saponins (see page 56). The taste of the Ghee is not really important for PC, as the Ghee they sell is mostly used for the making of soap, cream or medicines.

Sale & Distribution

Main products

The main products of the Praja Co-operative are local honey, Chiuri Ghee and some medicinal NTFPs. The honey produces more money than the other products. In one year they sell 4000-5000 kg of honey for 175 rupees per kg. This means with the honey they make about NRP 780.000,- rupees in one year. They buy it from local people for 130 rupees so they make a profit of NRP 200.000,- rupees (€ 2000,-) every year. 25% of the honey comes from Majhbang. Chiuri Ghee is the second product. PC sell 2000 kilo of Chiuri Ghee per year for 140 rupees, so they make 280.000 rupees per year. The costs of the seeds are 200.000 rupees, so the profit is 60.000 rupees (€600). This is without the processing costs.

Selling

The Praja Co-operative has a store, near there office in Shaktikor, where they sell their products: honey, Ghee, mustard, etc. to local users.

Praja has some contract with organizations who buy Chiuri Ghee; some of them buy large quantities (than they can get 5% discount). They sell it to: Local shops in Shaktikor and to "Manakamana Traders" in Kathmandu, to Ghorka Ayurvedic Company and to Herbal Alternative in Kathmandu.

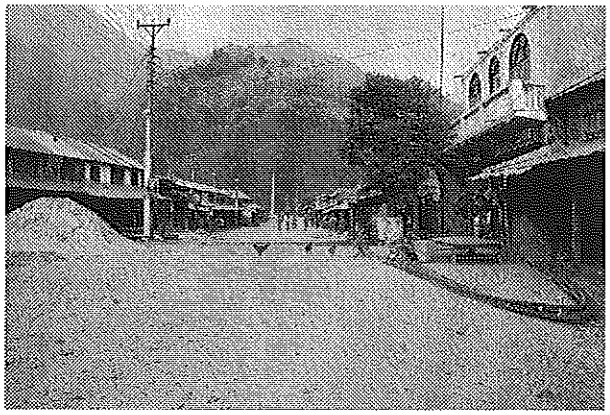


Figure 15: Shaktikor Market

Sales manager

The one responsible for buying and selling the products is the manager; Dal Bahadur Chepang. There are 5 staff members and their monthly salary is 3000 rupees each. Dal Bahadur is working for the cooperative for 8 years now so he know many people and makes phone calls to ask them how much products they need. This means he doesn't have to visit them on which saves time.

In one year they process 3000 kg of Chiuri Ghee and 200 kg of this comes from ward 6 of Siddhi VDC. There is no limit to the amount of seeds PC will buy. PC will buy everything the villagers bring, if the quality is good enough. If there is staff and there is time, they directly process the seeds into Ghee. The seeds can be stored for maximum three years.

Markets

Two years ago, in 2007, Praja had bought too much seeds and they had too much Ghee; they couldn't sell it all. Chiuri Ghee was a 'new' product; it was not known by many people, and so there were very few clients for Praja. Nowadays the Ghee is becoming more popular and the market is better. PC never has problems with selling their supplies, they even could sell more. Praja wants to increase the Ghee production slowly.

Distribution

PC can transport the Ghee they sell, but they don't do this often. If there is an agreement with the buyer they also discuss the transportation and often the buyer will transport it themselves as it will cost them extra money to let PC transport it.

Local Users

Local users can be defined as people from ward 6 of from other wards, who use Chiuri products.

Buying

Local users are buying Chiuri products for household consumption. Most of the households in ward 6 of Siddhi VDC have their own Chiuri trees so they can produce their own Ghee, pina, leaves, etc. but some people don't have any trees. They buy the products from other villagers or from the Praja Co-operative shop in Shaktikor.

They can buy Ghee from the PC for 140 rupee/kg. The price that they have to pay locals who do own a tree is 120 rupee/kg. The average household consumption is 60 kg/year.

The only Chiuri products they buy are 'raw products' like Ghee, Pina and Fruit. They don't buy Chiuri soap or any other processed product.

Manakamana Soap Industries, Kathmandu

"Manakamana Soap Industries" (MSI) is an organization which produces different kinds of soap. They are located in Kathmandu and the organization has been founded 3 years ago by Youkta and Deepak Dhakal.

Main Products

MSI is making 4 different kinds of organic soaps: one of them is "Chiuree Soap" which contains Chiuri Ghee. The others are:

- Rose Face wash
- Jadjbutj Soap
- Neems Soap

In one year they process 20.000-30.000 pieces of Rose- and Jadjbutj soap. And they produce 15.000 pieces of Neems soap per year; there is a big market. There are no chemicals in the soaps; they are fully organic. They didn't receive any complaints from customers, so that proves the good quality.

Processing

The Chiuri Soap is the only soap they produce that contains Chiuri Ghee. They also buy other natural oils; Coconut oil, Lemon Grass oil and Camo oil. The last 2 are very expensive; lemon grass oil cost 16.000-18.000 rupee per liter and Camo oil is even more expensive, 1 liter oil cost 40.000 rupee. These oils are used as a fragrance. The Chiuri Ghee is the cheapest ingredient in the Chiuri soap and, together with coconut oil, used as a soap base.

They buy the Chiuri Ghee at 2 different places: Praja Cooperative in Shaktikor and a local trader in Nepalganj. There is no difference in quality of the Ghee between those two suppliers. Manakamana needs 500 liters Chiuri Ghee per month, (60.000 liter per year) and they are a medium sized factory.

There are 8 staff members (excluding Youkta and Deepak), and they get different salaries; between 2500 and 3500 rupees per month.

Figure 16: Chiuri Soap Production

They work 8 hours per day from 09.00 till 17.00, 6 days a week (Saturday is their holiday). If full manpower and materials are available, they can produce 3000 pieces of soap in tree days. So the maximum capacity is 1000 pieces of soap per day. They only sell 100 per day, so they are not using the full potential of the factory. The factory cost a lot of money, the machinery cost £ 1000,00-. There is a lot of capacity, but they have to expand their markets. The office of Manakamana Traders is in Kathmandu

Praja Cooperative

They visit Shaktikor 4 to 5 times per year; it depends on the demand for Chiuri soap. Last time they bought 150 liters of Ghee and it cost 140 rupee per liter. They got a discount of 10%, but they also had to buy the bottles, where 17 liters of Ghee are put in. Those bottles cost 60 rupee, but can be re-used. Shaktikor is a small area; Manakamana can only buy 300 liters from them. It is a new client for PC, (from 2066 BS, or 12th April 2009).

They have a small machine and they can only provide Ghee in June-July. If Praja Cooperative produced more liters of Ghee, Manakamana would buy more of it. Manakamana is also buying other

products from Praja. They buy honey, (100kg per year; 150 rupee per kg), Holdie (yellow color masala), mustard oil (200 kg per year; 180 rupee per kg) and Ritha (250 kg per year).

Nepalganj

There is not an organization like Praja Cooperative in Nepalganj, production and sale of Chiuri Ghee is done individually, there are more than 50 people who are selling Ghee. But the person who is the main collector and seller of the Ghee is: *Ram Chantra Tharu.* He is using the processing machine and is selling large quantities of Ghee. Manakamana buys 1000 liter of Chiuri Ghee per year from Nepalganj. They pay 125 rupee per kg Ghee, and they go twice a year to Nepalganj to do business.

Transport

They transport the Ghee by their own. Sometimes they hire a truck and sometimes they use the local bus; it depends on the amount they have to transport. The transportation costs for the local bus from Shaktikor to Kathmandu are: 300 rupees. The total transportation costs are 600 rupees, which means 4 rupee per liter Ghee if they buy 150 liter.

When they have to go to Nepalganj, the total transportation costs are 2000 rupees, but it means 2 rupees per liter Ghee because they transport more.

Sale & Distribution

The market price of the Chiuri soap is 120 rupee and the wholesale price is 115 rupees. Production costs are 90 rupee for the raw materials. In the end MSI has a profit of 5 rupees for 1 piece of soap. The amount of clients increased a little bit compared to last year (2008); last year they had 20 clients, and they sold 1000 pieces of soap. Those clients sell a lot of soap and they distribute it. This year Manakamana predicts that they will sell 20.000 pieces of soap. The demand is increasing, due to marketing; the people know the product and its good quality.

Mostly the soap is sold to local traders, who sell the products to local shops. Only 10% of all the soap they sell stays in the Kathmandu valley. The rest is exported to the rest of Nepal.

There are some developments regarding export to foreign countries. Deepak is working in a Cargo company as well and there he is also doing some marketing for Manakamana. Businessman from; Russia, Spain and Thailand already have samples soap pieces (22-30 pieces) for trying, they seemed to be very interested. Youkta and Deepak say that they put a lot of efforts in marketing; they go into the field and they provide good quality and personal service. They however do not have a website.

Herbal Alternative Kathmandu

Main Products

Alternative Herbal Products is a company which sells 17 different kinds of products. They sell organic spices like cardamom, garlic, coriander, turmeric, chili, cinnamon, ginger and mustard. They also sell organic coffee and honey. "Berry berg" is a fruit juice made of Seabuckthorn. Their most sold product is "Marmelous"; a bael fruit squash and Aloe Vera juice. They also sell "Mero Herbal Soap" which contains Chiuri Ghee.

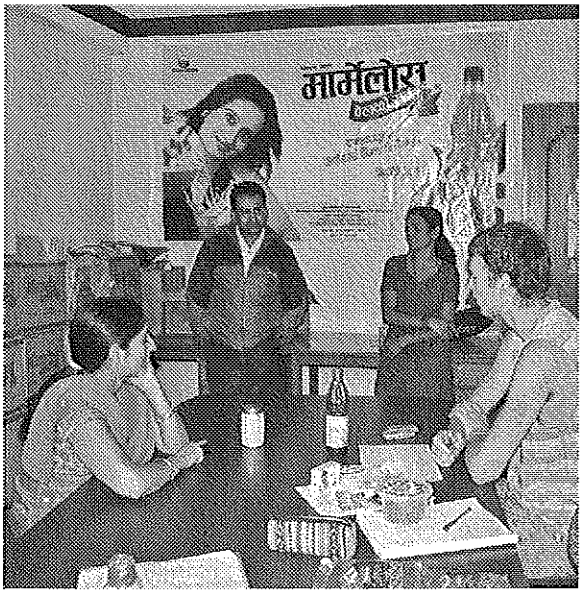


Figure 17: AHP Meeting in Kathmandu

The organization is growing. Last year they had a total turnover of 40.000.000 rupee but this year (Nepalese year: April 2008 until April 2009) it was 60.000.000. 10-12% of this amount is net profit. The organization was founded 8 years ago, in 2058 (2001), by Mr. Govindra Ghimire. It was founded with the help of SEACOW and the last three years it has functioned fully without the support of SEACOW. The organization processes Chiuri Ghee for 4/5 years. When the company was founded they only sold "Marmelous Juice".

The average salary is 7000/8000 rupee for one month. Of course the managing level earns a different salary than the processing level employee. The working hours of the employees are 10.00 to 17.00 from Sunday to Friday. The company has 9 shareholders, including Govindra Ghimire.

Future plans

In 2010 they want to start the sale of Chiuri Cream. They already have the raw materials and production machines; they will start production in the winter of 2009/2010. The raw materials for this cream are Chiuri Ghee and other fragrances.

Processing

All products are produced with appropriate technology; no industrial or chemical processes. Impact on environment is nearly zero in processing. Especially Bael and Seabuckthorn juices promote forest conservation.

The factory where the soap is made is located in Bhaktapur. The organization has 14 staff members, the shareholders not included. Other products are made in other factories. AHP has one office but multiple factories (in Bhaktapur, Kausaltar, Lahan and Bardiya

Praja Co-operative

The raw materials that AHP needs for their products are from all over Nepal. They also buy other products from PC, like lemongrass, harro, barro, and others. They don't buy honey because there is a quality problem. They transport everything by bus or by truck, depending on the amount. They buy the Ghee for 110-90 rupee/kg. 5000 kilo of Chiuri Ghee is needed yearly for the production of Mero Herbal Soap. 1000 kg of this comes from Shaktikor. There is also Ghee imported from Lothar VDC, Baglung and Jajarkot district. The average price for 1 kg of Ghee is 85-90 rupee. Ghee is bought in the month of September, after the harvesting season.

Products that AHP buys from Shaktikor are transported by PC and supplied at the factory gate in Kathmandu. AHP pays for the transportation.

Sale & Distribution

There is a lot of competition from other companies; they try to market their products by improving the quality and service. They market the product, not only by making phone calls but also by going into the field and convincing wholesalers and other customers to buy their products. Chiuri Ghee is exported internationally and the other products are sold all over Nepal. AHP sells the Chiuri soap for 58 rupee. They can offer this price because they have good processing machines which can produce a lot of soap without a lot of staff costs. AHP sells over 1000 pieces of soap every month. This means they sell about 12.000 to 15.000 pieces in one year.

Local Shops

Local shops are shops which sell the final products of the Chiuri directly to the customers.

Main Products

These shops can vary from pharmacies to cold stores. They sell a wide variety of different products.

Sale & Distribution

They buy the products for the wholesale price and sell it for the consumer price, which means they make a profit of 10% to 20% if they sell 1 piece of a product.

SWOT Analysis

SWOT of the Process

This chapter is about the SWOT analysis of the value chain of the Chiuri tree. A SWOT analysis is a method to extract the Strengths, Weaknesses, Opportunities and Threats out of complex processes and situations. Our research is aiming for development, and the SWOT analysis is an instrument to map all the aspects which are related to and which have influence on the development. The analysis is also showing which influence those aspects have on future developments.

First, we will show a list of all the strengths and weaknesses we defined. The relation between the most important strengths and weaknesses, and the opportunities and threats is shown in a relation-matrix. Consequently an explanation of the relations is given, and recommendations are given related to each opportunity. A detailed description of the method we used within our SWOT analysis can be found in the Method (see page 29).

Strengths and Weaknesses

Below an overview of the strengths and weaknesses of the Chiuri value chain. The strengths and weaknesses are based on the information which is given in the previous chapters. And they are formulated from the perspective of the locals in Majhbang and Praja Cooperative. The strengths and weaknesses are sorted on 5 different sub-topics; the tree, the Ghee, the people, the market and other. The underlined strengths and weaknesses are the most important and they are used in the relation matrix.

Strengths

The Tree

- Chiuri seeds can be stored for three years.
- There are a lot of Chiuri Trees in ward 6.
- The tree is self sustaining: little or no manure necessary.
- Multiple uses of different parts of the Chiuri.
- The fruits are tasty.

The Ghee

- Chiuri Ghee has many applications.
- The seed processing machine produces 10% more Ghee than the Chepuwa.
- The Ghee processed by the Chepuwa has a better taste than the Ghee processed by the machine.
- Chiuri Ghee can be conserved for one year.
- Majhbang is relatively near to Shaktikor; the Ghee, Pina and seeds can be transported by foot. Transportation costs are low for locals who harvest the seeds.

The People

- Locals from ward 6 are interested in external knowledge
- The forest is managed by Indreni CFC.
- The Chepang people have a strong relationship with the Chiuri.

The Market

- Praja Co-operative sells local products.
- There is not much competition in the Chiuri market.
- Higher demand for Chiuri Ghee from MSI.

Other

- There is land available for a new plantation.
- Local availability of processing equipment; it is mostly made by wood and bamboo.

Weaknesses

The Tree

- The Chiuri seeds quality and quantity is decreasing.
- The Chiuri tree is growing slow
- Harvesting time is in rainy season; dangerous to climb in the tree

The Ghee

- Chiuri Ghee is not a common product in the average Nepal household.
- The local people from ward 6 have no knowledge about other applications of Chiuri Ghee.
- The Chepuwa extracts less Ghee per kilo seeds, than the machine
- Animal Ghee is more used than Chiuri Ghee, Chiuri Ghee is not sweet.

The People

- Locals from ward 6 have no money for development.
- Lack of knowledge about falling of seeds and other problems like decrease of quality.

The Market

- There is little marketing of the product.
- Few organizations who buy the Ghee from Praja Cooperative.
- No cooperation with other organizations like Praja Co-operative.
- The market for Chiuri products is small.

Other

- The trees are getting old.
- Chiuri is not a priority NTFP for NGOs that work with NTFPs.
- The packaging of the Chiuri Ghee is not attractive.
- The locals are cutting the forests.

Opportunities and Threats

The main goal of our research is to improve the value chain of the Chiuri in order to generate benefits for the local inhabitants. With an improved value chain the local inhabitant will earn more money with their product which allows them to save money for investments or other technological improvements. Our project aims to create new jobs, more product value and a more efficient way of processing and harvesting the Chiuri.

In order to formulate opportunities we defined ways to achieve the main goal of our research, with taking the situation in our research area in account. Economic development can be seen as the main goal. We defined four opportunities to improve the economic situation in Majhbang:

- Increase Marketing of Chiuri
- Increase Product Diversity
- Increase Production Quantity
- Expand group of Clients

There are also some points that constrain economic development. These form our threats:

- Limited Market
- Over-harvesting of the Resource

Relations between opportunities and threats

The opportunities and threats are strongly related to each other. For example: 'Increasing the product diversity' is related to increasing production quantity, because when more products will be made out of the Chiuri Ghee, there is also more Ghee needed, so the production has to increase as well. And if Praja wants to sell the increased amounts of Ghee and new products, they probably need to expand the client group (opportunity). Marketing (another opportunity) is a way to reach those clients. If the harvesting of production increases, there is a risk of over-harvesting (threat) and if there is not enough marketing of the product the market will be small (threat). So recommendations are based on certain scenarios, as they are depended and related to the other opportunities and threats as well.

SWOT Matrix Explanation

On the next page, a table is given in which the opportunities and threats are combined with the strengths and weaknesses. The number in the boxes display the amount of impact the strength or weakness is considered to have on the opportunity or threat. Impact means that the utilization of the Strength, or improvement of the Weakness, can contribute to the development of the Opportunity, or protects against the Threat.

- 1. Little / Non-existing impact
- 2. Little impact
- 3. Average impact
- 4. Strong impact
- 5. Very strong impact

Where there are no numbers, there is no impact. We will describe the issues which have the most impact. Only the ratings 4 and 5 (the highlighted ones) will be described. The numbers between the parenthesizes after the strengths and weaknesses is the average impact it has on all the opportunities and threats. The number below the opportunities and threats is the total sum of all the impact from the strengths and weaknesses.

SWOT Matrix SW -> OT Relationships		Goal: Economic Development					
		Opportunities				Threats	
		Increase Marketing of Chiuri *(19)*	Increase Product Diversity (23)	Increase Production Quantity *(30)*	Expanding group of Clients *(30)*	Limited Market *(23)*	Over-harvesting *(23)*
Strengths	Chiuri seeds can be stored for three years. *(1.6)*	1			3	1	
	There is not much competition in the Chiuri Ghee market. *(3.5)*				4	3	
	The seed processing machine produces 10% more Ghee than the Chepuwa. *(3)*			3			
	The forest is managed by Indreni CFC. *(4)*		3	4			5
	There is land available for a new plantation. *(5)*			5			5
	There are a lot of Chiuri trees in ward 6. *(4)*			4			4
	Locals from ward 6 are interested in external knowledge. *(4)*		5	5	1		5
	Praja Co-operative sells local products. *(3)*	3	4		2		
	Ghee processed with the Chepuwa has a better taste than Ghee processed with the machine. *(2)*	2	1		3		
	The Chepang people have a strong relationship with the Chiuri. *(3.3)*	5			3		2
	Chiuri Ghee has many applications. *(4.5)*	4	5		4	5	
	Higher demand for Chiuri Ghee from MSI *(4.5)*			4		5	
Weaknesses	The packaging of the Chiuri Ghee is not attractive. *(4.3)*	5			5	3	
	Chiuri Ghee is not a common used product in the average Nepali household. *(4)*			4	4	4	
	Locals from ward 6 have no money for development. *(3)*		4	2	3		3
	The local people from ward 6 have no knowledge about other applications of Chiuri Ghee. *(3.6)*		5		4	2	
	The Chiuri tree is growing slow. *(2.5)*			3			2
	The quality and quantity of Chiuri seeds is decreasing. *(3)*	3		4	2	2	4
	There is little marketing of the product. *(4.6)*	5			5	4	
	The market for Chiuri products is small. *(4.5)*				4	5	

Explanation of Combinations & Recommendations

In this paragraph an explanation is given of the relations between the strengths and weaknesses (with rating 4 or 5) and the opportunities and threats. First the opportunity or threat is described, and then the strengths and weaknesses which are related to the opportunity or threat are given.

After that, the relations between them are described.

This description of the relations is based on the table on the right, so they are pointing out how the strengths can be applied to make use of the opportunity, and how the weaknesses have to be strengthened. In case of the threats a description is given on how the strengths can be used against the threats, and how the weaknesses can be strengthened to use them against the threats. Those descriptions are however globally written, is does not exactly explain how to execute the strengths and weaknesses, as that will be done in the next chapters about implementation of the improvements.

	Opportunities	Threats
Strengths	*How can the strengths be applied to make use of the opportunities?*	*How can the strengths be used against the threats?*
Weaknesses	*How can the weaknesses be strengthened to make use of the opportunities?*	*How can the weaknesses be strengthened to use them against the threats?*

The recommendations are based on description of the relations; they give an explanation on how to use the relationships to execute the opportunities or threats. The opportunities and threats cannot be separated and that's why recommendations are often affecting more than one opportunity or threat.

1. Increase Marketing of Chiuri

Increasing the marketing of a product can lead to economic development, because it expands the group of clients and therefore the demand of the product. That consequently will lead to a higher selling rate, and to more production. When you convince clients to buy your products, by stressing the unique selling points (USP) and qualities of it, they might be convinced to buy it. If clients are not aware of the existence of a product or if they're not really convinced about its qualities, the right marketing can be the key factor to increasing the market and the economic development.

The strengths and weaknesses related to the marketing of the Chiuri in the research area are:

- The Chepang people have a strong relationship with the Chiuri ***(5)***
- There is little Product Marketing ***(5)***
- The packaging of Chiuri Ghee is not attractive ***(5)***
- Chiuri Ghee has many applications ***(4)***

Relations

The Chepang and the Chiuri have a strong relationship (see page 52). This relation can be used to create marketing strategies, because it can be seen as a unique selling point. The product is unique because of its local origin and because of the history of the Chepang people.

Chiuri Ghee has many applications and it can be used for multiple purposes; that is a strong marketing aspect.

The packaging of Chiuri Ghee is not attractive. For a good marketing the packaging should be appealing to the customer. Then it looks like the product is professionally made and a lot of clients and customers will like that and prefer your product over others.

Recommendations

Praja Cooperative needs to put more efforts in marketing of Chiuri Ghee. The process works in two directions; if there is more production then new clients should be found to sell the product to. Also, if the amount of clients increases because of marketing then the production could be increased.

It is important to have a lot of different clients; than the network will be enlarged and that contributes to making the product more commonly known. It also is decreasing the risk of lack of clients, because the market is spread over multiple clients, so if a company (a customer) went broke; it will not have a really strong impact on the economic situation and income of Praja.

It is difficult for PC to start a marketing campaign on Chiuri Ghee, because of the fact that the Ghee is just an ingredient which is used to make final products. There however are possibilities to market Chiuri Ghee as well. The unique selling points have to be stressed like; the possibility to buy Ghee which is processed by the Chepuwa; the Chepang-Chiuri relationship and the attractive packaging, personal service, central location of Shaktikor (low transport costs). More research should be done about Chiuri Ghee to determine all the qualities of the resource. These qualities can be promoted and a label can be created. This label can be used by processing industries to indicate that their product contains a natural/herbal product which is harvested by local people.

2. Increase Product Diversity

By increasing the product diversity, more market segments can be reached. PC will attract new clients if they increase their product assortment. This increased market will lead to more production and sale of the different products. And when the demand increases, a higher price can be asked.

- Locals are interested in external knowledge ***(5)***
- Praja Co-operative sells local products ***(4)***
- Chiuri Ghee has many applications ***(5)***
- Local people don't have money for developments ***(4)***
- Local people have no knowledge about applications of Chiuri Ghee ***(5)***

Relations

The locals are interested in knowledge; with information about how to produce different products they can start processing new products and sell them. With knowledge about how to find new markets and how to market the new products, the locals and PC can increase their turnover of the sales of Chiuri Ghee in the end.

Praja Co-operative is an important stakeholder in the research area; they sell the local products, harvested by the people from Majhbang. They have money and a network which enables them to start developments. Praja Co-operative will be an important actor in the development of new processing possibilities. They could own the machine which might be needed to process the new products. Because of its financial situation, network and location they are the perfect 'spider in the web' to facilitate and manage the production of new Chiuri products.

There can be made a lot of different products out of Chiuri Ghee, like soap, shampoo and candles, so there are possibilities to increase the product diversity, based on one natural resource.

Local people have no money for developments; they rely on their land and the little income they get from selling NTFPs for their daily lives. If they would have more money, they could initiate investments related to the processing of new products, they will earn more money with the selling of these new products and their financial situation will increase even more.

Local people have no knowledge about applications of Chiuri Ghee; the lack of knowledge is causing lack of development. The locals don't know how to process other products out of the Chiuri Ghee. When they are taught about how to process other products out of the Chiuri Ghee; they will be able to add more value to the products they sell. If materials are available they might start to process it.

Recommendations

There are possibilities to process other products out of the Chiuri Ghee, like soap. Praja is now selling the Ghee as a raw material to processing industries, but they also can process other products by themselves. There are many ingredients for soap available in the area, like Ritha, Amala and Lemon Grass. If the soap is processed, than Praja is expanding her product diversity and there can be made a Chiuri-Chepang brand; which contains a variety of products. This will increase employment and it opens new markets and therefore new ways to earn money and to economic development. The people from Majhbang will benefit from it as well, as they are the suppliers of the resource; they can sell more Chiuri seeds to PC. And they should be involved in the marketing of the new Chepang-Chiuri products.

3. Increase Production Quantity

With an increased production quantity the total turnover will be higher, and so more money will be earned. There consequently is more money available for direct and future investments regarding to local developments.

- The forest is being managed by Indreni CFC ***(4)***
- There is land available for a new Plantation ***(5)***
- There are a lot of Chiuri trees in Ward 6 ***(4)***
- Higher Demand for Chiuri Ghee from MSI ***(4)***
- Locals are interested in External Knowledge ***(5)***
- Chiuri Ghee is not a Common Product in the Average Nepali Household ***(4)***
- The quality and quantity of seeds is decreasing ***(4)***

Relations

There are already a lot of Chiuri trees in ward 6, and the people don't harvest from all the trees. So the seed production can be increased by harvesting from more trees.

There is land available for a new plantation; the amount of Chiuri trees in the area can be increased and in this way the production quantity can be increased.

Manakamana Soap Industries is increasing their soap production and need therefore more Chiuri Ghee. So if Praja Co-operative could produce more Ghee per year, MSI will buy it. In other words; there is market for an increased production quantity.

The local people are interested in external knowledge. So if the locals know about the increasing demand of the Chiuri Ghee, they might be motivated to harvest more Chiuri seeds and to increase there production. And there can be given knowledge about sustainable and optimal use of Chiuri trees, especially regarding the harvesting of seeds.

The forest is being managed by Indreni CFC. The harvesting of Chiuri seeds can be managed by the committee; they make the policy. Within this policy they also can integrate sustainability on harvesting forest products as well.

Raw Chiuri Ghee is not a common used product in the average Nepali household. When more efforts are put into marketing of Chiuri Ghee for cooking, (as an organic replace of animal Ghee), the client group and the demand of Ghee will increase; so the market is expanding and the production of the Ghee can be increased.

There is a decreasing trend in the quality and quantity of the Chiuri seeds. It is important to investigate the causes of this trend, because when those causes are clear; there also might be solutions or maybe treatments to increase the quality and quantity again. And so the production will increase as well.

Recommendations

Manakamana Soap Industries has a larger demand for Ghee than Praja can provide them, so if Praja would process more Ghee, then more Ghee can be sold, and more money can be earned. Therefore more seeds need to be harvested by the locals. This will require more working hours for the harvesting and processing. In approximately 6 years, seeds can also be harvested from the Chiuri trees out of the new plantation, prior to that, the locals have to find a sustainable way to harvest from the existing Chiuri trees. This opportunity aims for the economic development of local people; they will be the ones to profit from an increased production. Praja also makes profit because they are the link from locals to processing industries.

4. Expanding Group of Clients

The popularity and demand of products can be increased by marketing efforts. If more people are interested in buying the product the client group will consequently expand. When the client group becomes larger, the demand of the product increases and so more production is needed. There will be earned more money with the sales of the products, and so economic development is achieved.

- There is not much competition in the Chiuri Ghee market ***(4)***

- Chiuri Ghee has many applications *(4)*
- The packaging of Chiuri Ghee is not attractive *(5)*
- Chiuri Ghee is not a common product in the average Nepali household *(4)*
- The locals from ward 6 have no knowledge about other applications of Chiuri Ghee *(4)*
- There is little marketing of the product *(5)*
- The market of Chiuri products is small *(4)*

Relations

There is not much competition in the Chiuri Ghee market; local people from Majhbang can sell their Ghee only to one organization: Praja Co-operative. PC also does not have many clients either; they sell their Ghee to three different companies which process the Ghee into other products. Expanding of the group of clients is not necessary for the locals; they get a good price for the seeds from PC. However, if PC would have more clients, the locals could sell more seeds and in this way their income would increase.

Chiuri Ghee has many applications, so if more products are made out of the Ghee, Praja Co-operative can offer multiple products to his clients. When Praja Co-operative is selling new products, they consequently open new markets; other companies are interested in the new products and so the client group will increase.

The packaging of the Chiuri Ghee is not attractive, but if there are efforts put into making the products look more attractive than more clients will buy it.

Chiuri Ghee is not a common used product in the average Nepali household, but if it would be marketed better, more Nepali people will buy the Ghee as a multipurpose-ingredient.

The locals in ward 6 have no knowledge about other application of Chiuri Ghee, but if they would have this knowledge than they might start to produce it. Than the product diversity is increasing and the client group will expand due to new markets.

If there would be more marketing in Chiuri Ghee products than the client group will expand; more people get in touch with the Ghee and there are more chances to increase its popularity.

The market of Chiuri Ghee is small; so there should be put as much efforts taken in marketing as possible in order to be sure to use the small market optimally.

Recommendations

Praja Co-operative should take an active role in finding new customers. Prior to that, it should be discussed and communicated with the locals from Majhbang; they have to agree with increase the amount of seeds they have to harvest. This will increase the social support, and than everybody is informed about the activities and new developments of Praja.

5. Limited Market

The market of Chiuri Ghee is limited, as there are not many companies who are trading or using Chiuri Ghee. The stability of the Chiuri Ghee market in the future is unsure and not guaranteed. There are some companies that want to increase their production, and therefore also their demand for Ghee will increase but there is no data on this topic.

- Chiuri Ghee has many applications *(5)*
- Higher demand for Chiuri Ghee from MSI *(5)*
- Chiuri Ghee is not a common product in the average Nepali household *(4)*
- There is little marketing of the product *(4)*
- The market of Chiuri products is small *(5)*

Relations

Chiuri Ghee has many applications, so if more of those products are processed and sold, then the market will be broader; more target groups and other client; than you do not totally rely on the sales of the Ghee itself, but you have other alternatives for income generation.

Manakamana Soap Industries is a growing company; its soap production is increasing and therefore they need more Ghee supply as well. The demand and market of MSI is limited and Praja Co-operative can sell more Ghee to MSI the coming years.

Chiuri Ghee is not a common product in the average Nepali household, the product as a cooking ingredient is not popular, but if more efforts are put into marketing, then the market could grow slowly. Than you make sure that the market of the Ghee for cooking is not decreasing.

There is little marketing done for Chiuri Ghee. However if the popularity of the Chiuri products increases due to marketing, than consequently the marketed will enlarge and less limited.

The market of Chiuri Product is small Ghee is small; when you want to increase your production of Ghee you should also be sure about the carrying capacity of the market. There should be a balance between the demand and your supply.

Recommendations

Although there are signs of an increasing market, impact of market fluctuations should not be underestimated. If there is no demand for Chiuri Ghee, there is no income either. To have only three customers is not a strong position. If 2 of them go elsewhere to buy their Ghee the whole sales of PC will collapse and then they won't be able to pay the locals for their Ghee supply. Searching for new clients is an activity which should be done structurally and regularly. If PC has a lot of clients, the sales will be spread and the impact of one or two clients falling away will be minimal.

If it is presumed that the market will increase enough resources should be available if there turns out to be no growth of demand of Chiuri Ghee.

6. Over-harvesting

Over-harvesting of the natural resource can lead to a decrease in quantity and quality of it. When too much Chiuri seeds are harvested, the tree loses its vitality and its productivity will decrease rapidly within a few years.

- The forest is managed by the Indreni CFC ***(5)***
- There is land available for a new plantation ***(5)***
- There are a lot of Chiuri trees in Ward 6 ***(4)***
- Locals are interested in External Knowledge ***(5)***
- The quality and quantity of Chiuri seeds is decreasing ***(4)***

Relations

The forests in ward 6 are managed by the Indreni CFC; they are making the policy on forestry. If plans are made to increase the production of Chiuri Ghee, than more seeds need to be harvested as well. The CFC can make a policy on the sustainable harvesting of Chiuri seeds, and the risk to over-harvesting will decrease.

There is land available for the realization of a Chiuri tree plantation; when those trees are planted, the natural resource will increase and the risk to over-harvesting will decrease, because there is more resource than demand.

There are a lot of Chiuri trees in Ward 6; and the locals do only harvest from a small amount of trees. This means that not all the resources are being used to the full extent, but also that over-harvesting is not an immediate danger. However, the risk should be considered when planning to increase the production quantity.

Locals are interested in external knowledge; so they can be informed about sustainable use of forest products and about over-harvesting. Then they will be educated about how to deal with the harvesting of Chiuri seeds, and in this way ensure a sustainable harvesting.

The quantity and quality of the Chiuri seeds are decreasing; so more trees need to be used for harvesting and more seeds are needed to get the right quality and amount of Ghee.

Recommendations

To prevent the risk of over-harvesting strict rules should be made for harvesting seeds. There should be a limited amount of harvesting yearly. These limits could be defined by the Indreni Community Forest Committee in a 'Chiuri Management Plan' which is made in cooperation with Praja Co-operative and the local people. Due to the decrease of the quality and quantity of seeds on one tree, seeds from more trees will be harvested to reach the same amount. Policies about harvesting of the Chiuri seeds should be defined by the CFC.

In a workshop about sustainable harvesting locals could learn about how to harvest without damaging the viability of the trees.

By planting new trees, the risk of over-harvesting can be decreased. If there are more trees there the harvesting of the seeds can be spread over more trees.

Implementation of Developments

Introduction

In this chapter, we will describe the improvements of the value chain of the Chiuri. There are two major improvements extracted from the recommendations of the SWOT analysis; 'Increase product diversity' and 'Increase product quantity.' In this chapter a description will be given about the implementation of those improvements. And the requirements and steps, which are needed to be able to start the process of development towards execution of those improvements, will be described in detail. And there will also be a description of the role the stakeholders have to play in order to support the improvement.

First some background information about value chain improving, and consequently the description about the implementation of the two improvements.

Value Chain Improving

Value chains of NTFP can be improved in multiple ways; below some examples of improvements, quoted by Carr M. and others (2008);

> *There are different suggestions on how value chains can be improved. There are four major ways in which upgrading or improvement of value chains can benefit poor rural producers.*
>
> *The first one is process upgrading- to increase the efficiency of production within or between stages of the value chain. Typically, forest dwellers accumulate larger quantities of the product or use a new technology, supported by access to credit and training.*
>
> *Product upgrading, to improve quality or introduce new products using the same raw materials is another way towards improvement. This is particularly common in NTFP value chains and can enable producers to gain access to a more specialized 'niche' market and protect themselves against product substitution.*
>
> *A third one is about functional upgrading, to change the mix of activities carried out within a value chain. For example a woman's production cooperative taking on new functions such as export marketing, or woman taking on new and more lucrative roles within the value chain. Improvement can also be reached by chain upgrading – to move a new product supply chain*
>
> *There are four types of involvement; actors, integrators, partners and co-owners. The actors simply gather and handle NTFPs, with no involvement in processing the product or in managing the value chain. The integrators do some processing of their product, but still have no say in management of the chain and rely on intermediaries to reach markets. Partners are people who do no processing of their product, but do have say in management of the chain. People who both add value and influence management thus increasing both return and power, can be called co-owners. This is an important form of analysis, as far too many projects and interventions concentrate only on raising income, without concern for increasing ownership and empowerment.*[28]

Our improvements 'Increasing product quantity' and 'Increasing product diversity' do fit within the first and second improvement, which is mentioned above. It seems that those improvements are commonly used in upgrading NTFP value chains.

[28] Source: Carr M. and others (2008)

Increasing Production Quantity

Description

An increase of the production quantity, will lead to more sales of the product and to a higher total turnover. In this way more money will be earned. This extra money can be used for investments for developments in the area.

Benefits & Income Generation
When the local people and Praja decide to increase the production quantity of Chiuri Ghee they will both generate more income. Local people will earn more money by harvesting and selling more seeds to Praja Co-operative. Praja Co-operative pays them 50 rupees for every kg they produce. When Praja Co-operative has a higher supply of seeds, they can sell more Ghee in which way they also earn more money. At present, PC sells 2000kg Ghee to 3 major clients. We cannot forecast how much the production will and can increase, because therefore specific knowledge about some factors is necessary. See 'requirements' for the factors which the increase of production quantity is depending on.

Stakeholders
There are tree major stakeholders involved in the Chiuri value chain, Manakamana Soap industries, Praja Cooperative and the Local people. They all have a different position and influence on the value chain. Below a description of the role those stakeholder can have in supporting the opportunity; increasing product quantity.

- Manakamana Soap Industries is already a client of Praja Co-operative; they buy 300 liters of Chiuri Ghee per year. They, however, have a larger demand for Ghee than Praja Co-operative can supply them at the moment. So they can guarantee Praja of market availability, when Praja increases the production quantity.
- Praja Co-operative is processing and selling the Ghee, they are the leading party in within the new development. They have to manage the process and have to make sure that the increased production can and will be sold.
- Local people from Majhbang are harvesting the Chiuri seeds, their role and support is important; they are the ones who really have to increase the production (amount of Chiuri seeds). Therefore have to spend more time on harvesting of Chiuri seeds, time which they now spend on other activities.
- When the production of Ghee increases, other processing companies might also become interested to buy (more) Ghee from Praja Co-operative, (if the quality level will remain high).

Requirements

- To produce more Ghee, more seeds need to be harvested by locals. There are enough Chiuri trees to harvest from, so there is enough natural resource. It requires more working hours for the local people, to harvest and process the increased quantity.
- PC has to put more working hours in the processing of the seeds, and they might need extra employees.
- PC needs to put more time into communication with clients and marketing.
- Harvesting should be done in a sustainable way to decrease the risk of over-harvesting. Rules should be defined for the harvesting amounts. These can be written down in a management plan by Indreni CFC.
- Enough space to store all the seeds/Ghee.
- Praja Cooperative needs to have more clients, or the existing clients need to increase the amount they buy from PC.
- Support from the involved stakeholders.

Steps to start the implementation process

Within the implementation of new development; there can be divided a lot of processes; they automatically come along when people have to deal with a development. Those processes should be managed, in order to increase the chances towards a successful implementation of the development. There is no fixed time planning; the steps can be executed within one month, but also within 6 months; the involved people have to decide by themselves which planning will be most suitable. We recommend not to take too much time between the steps; it will weaken the enthusiasm and support which is generated among the participants.

Below a detailed description of the steps which can be dived in the process towards development of the opportunity: 'Increasing the production quantity'.

1. Choose the external discussion leader

An external, neutral person should lead the meeting. If one of the participants would lead, that person cannot really participate in the meeting, and then an important stakeholder is missing in the discussion process. It would be an advantage if this external person had knowledge or experience about production, sales and marketing.

2. First meeting; orientation and decision making

Goal of the meeting:

Orientation on the subject; *'local economic development by increasing the product quantity and, or the product diversity'.*

Participants

- The discussion leader
- Praja Co-operative
- Indreni CFC
- Local people from different wards of Siddhi VDC.

Required Materials

- Information from our research report; the SWOT analysis and the recommendations
- Summary of recommendations in Nepali
- Flap-over papers
- Black Markers
- A meeting room

Preparation:

All the participants need to be prepared for this meeting; so some homework has to be done previously. The participants have to write down their vision on the subject; they have to define their opinion and they have to determine the constraints and successes they foresee within the new developments. They have to come up with 2 visions; one about the increasing product quantity and one about increasing product diversity. Every single participant has to prepare homework; when for example, more people from Praja are joining the meeting; they all have to prepare their own vision. In this way they are able to express their own opinions; and there will be a broader input for the discussion.

The meeting

a. Introduction

The external discussion leader will start the meeting with an introduction about the topics and the goal of the meeting; and the way it will be executed. He can find this information in our research report.

b. Present visions

After the introduction, every participant has to inform the others about their vision on the topics. The leader has to write down visions of the participants, on a big piece of paper. One paper for increase product quantity and one about increase product diversity. When everybody has

explained their vision, the discussion leader should start an open discussion. Now the participants can give reactions on the visions of each other.

c. Strengths and weaknesses about product quantity and product diversity

Than the discussion leader has to ask the participants to select the strengths and the weaknesses (first about the increase of production quantity, and secondly about the increase of product diversity). The participants have to select those from all the information which is already written down on the paper; or they can come up with new ones. The discussion leader will write the strengths and weaknesses down.

d. How to strengthen the weaknesses

When the strengths and weaknesses are defined, the discussion leader has to ask if there are ways to make the weakness stronger, or less weak. The ideas to make the weaknesses stronger have to be written below the weakness it is concerning to. The participants may interrupt each other, if they don't agree with the idea of one person.

e. Decision making

After some time the discussion leader has to change the subject into a question; "Do we want to increase our production quantity and is it possible in a sustainable way?" The participants have to discuss about this question and have to come to an answer together. And secondly "Do we want to increase our product diversity in order reach economic development?" Then a new discussion will start and the participants have to come to an answer on this question as well.

3. Workshop on: Sustainable Harvesting of Forest Products

A workshop about sustainable harvesting of forest products should be organized by somebody who has experience and knowledge on this topic. The participants of the meetings and other interested people can join it. The workshop will be about the risk of over-harvesting of Chiuri trees; as this concerns the participants and because it is a threat (see chapter 7). The workshop should be conducted with an interactive approach and its outcome will be a list of ways how to decrease the risk of over-harvesting.

Method: External Knowledge Exchange

Lack of knowledge is a significant problem which blocks the path to local developments in the research area. There is a lack of knowledge about the applicability of Chiuri Ghee, the decrease of quality and quantity of Chiuri seeds, sustainable harvesting of NTFPs, the markets and the impact of marketing.

The fact that the people are interested in external knowledge is however very positive. When they are willing to learn, there will be chances for development. Knowledge is contributing to every opportunity, so it has a lot of potential. Knowledge about the different topics can be combined in one workshop or training. It is important to find the right facilitator; one who can really focus on the situation in the research area and who can give the right support to the people. The people cannot benefit from general information; so real efforts have to be put into searching for the right facilitator. The approach of the workshop should be bottom-up; the locals have to point out the subjects which they want to gain information about. And they should be able to come up with problems; they also have to think about solutions by themselves. In this workshop some special attention has to go to some members of the community forest committee; they are writing a new management plan, and it would be profitable if they could get external support. This support should be about sustainable harvesting of NTFPs the management of the new Chiuri tree plantation and about other applications of Chiuri Ghee.

4. Creating a global management plan

If the decision is made to increase product quantity, or to increase product diversity (or maybe both the opportunities), there need to be organized a meeting to discuss rules, regulations and responsibilities.

Goal of meeting;

To discuss how the new developments should be managed and executed, and to create a global management plan.

Method: Making a Management Plan on Chiuri Ghee

The making of a management plan on Chiuri Ghee is a method to really focus on the subject and it forces people to think about all the aspects. The goal of the management plan is to make a future plan on how to deal with initiating and maintaining developments of Chiuri Ghee production, processing and marketing.

Important stakeholders are; Praja Co-operative, Indreni Community Forest and the local people (of Majhbang). They should work together to make a management plan which should contain the following topics:

- Regulations
- Harvesting amounts
- Cooperative harvesting & processing of seeds
- Transport
- Marketing of Chiuri products
- Supplying and Packaging

There are plans for a new plantation of Chiuri trees. Rules and regulations about this plantation should be considered in the management plan. Therefore a close collaboration with the Indreni CFC is necessary. Who is harvesting the trees in the new plantation? Who is caring for the trees? Where are the seeds sold? Etc. Harvesting amounts and limitations should be defined to minimize the risk of over-harvesting.

Collaborative harvesting of the seeds and selling/processing them is a way to generate a community profit which can be divided over the households who participate in the harvesting process. A certain amount of the money can be used for the development of facilities in the village. Agreements should be made about this.

It is important to involve al different relevant actors in the process of writing the management plan. In this way everybody feels like it is 'their' plan and they will keep to the rules defined in the plan.

Participants

- The discussion leader
- Praja Co-operative
- Indreni CFC
- Local people from different wards of Siddhi VDC.

Materials needed

- Information from our research report; the SWOT analysis and the recommendations
- Summary of recommendations in Nepali?
- Flap over papers
- Black Markers
- A meeting room
- List of topics of content of management plan

Preparation

The participants have to prepare ideas on how to initiate the new development(s). They have to think about how they think the opportunities should be managed and executed. This should be done as specific as possible, like they are the manager; and the one who is responsible for the development. They participants will get the list with topics of the content of the management plan, so they can base their ideas on those topics.

The meeting

a. <u>Introduction</u>
   The discussion leader will start this second meeting with an introduction.
b. <u>Ideas</u>
   Every participant has to present his or her ideas on executing the opportunities. The discussion leader will write those ideas down (in keywords) on a big pieces of paper.
   If the participants have chosen to execute both the opportunities; (product quantity and product diversity), the ideas can be divided on two pieces of paper, based on those two topics. Increasing product quantity and increasing product diversity are however related to each other; so ideas integrating those two developments can be written down as well.

c. Open discussion and reaction on ideas
After everybody expressed their ideas; there should be time for reactions and discussion. The participants can give reactions on each others ideas, and they should be critical about each others work.

d. Link the best ideas to topics of management plan
The participants have to decide which ideas are most suitable for executing and, or managing the opportunity. The discussion leader should now show the topics of the content of the management plan. And together the participants have to select the best ideas and link them to the different topics of the management plan. Now there is already made a global management plan, which contains a mixture of input from different stakeholders.

e. Discussion about the content of the global management plan
The discussion leader should check if every aspect has been covered and ask if everybody agrees with this plan. If not, the participants can have a discussion about it and try to convince each other.

5. *Writing final plan*

The final management plan has to be written by 2 or 3 people; from Praja Cooperative or Indreni. They have to include the outcome of the meeting into the plan and if they finished the plan, they have to present it to all the involved people.

6. *Contact and agreements with MSI*

PC & MSI should make business appointments about the amount of Ghee which will be sold in the coming years. MSI is having a higher demand for Chiuri Ghee; so Praja should take this chance and create a strong business relationship with them. Than a certain guarantee is given on the market availability of the increased Chiuri Ghee production.

7. *Execute the plan*

The plan can be executed now; the people can start to increase there seed harvesting and Praja has to start to increase the Ghee production.

Management

Because Praja Co-operative plays an important role in the process, they should be the actor to manage the process and should organize and facilitate meetings with all stakeholders.

The area of Majhbang could be a pilot project in which increased production is tested. If the benefits for the locals are high, other wards and VDCs can start the same process. However, agreements with processing companies should be made first. It has to be assured that there is a market for the increased amount of Ghee which is produced.

Increasing Product Diversity

Description

By increasing the product assortment of Praja Co-operative they will attract new clients. The demand for Ghee will increase and locals can sell more, which increases their income.

Other Products

There are possibilities to process other products out of the Chiuri Ghee, like soap. For a full list of these products see page 52. Praja is now selling the Ghee as a raw material to processing industries, but they also can process other products by themselves. Soap is a well known Chiuri Ghee -product with high potential. It is made by using fat (Ghee) and ash. Extra oils can be added to add some flavors to the soap to make it more pleasant to use. The process needs relatively little extra machinery or ingredients. And there are already many ingredients for soap available in the area, like Ritha, Amala and Lemon Grass.

Candles (how)

Benefits and income generation

When the decision is made to increase the product diversity, out of Chiuri Ghee, more Ghee will be needed, and so more seeds need to be harvested. The people from Majhbang are the suppliers of the resource, and they will earn more money by selling more seeds. Local people can participate in processing of the new products; they can assist in processing the soap. In this way employment would be generated for some locals. If they participate strongly within the new products; than the social support among the locals will increase and the project will be more successful. It will also lead to empowerment of the Chepang people. The locals can and should be involved in the marketing of the new Chepang-Chiuri products as well. If Praja does increases her product diversity there can be made a Chiuri-Chepang brand; which can contain a variety of products. This will increase employment, because the new products have to be processed, and it opens new markets and therefore new ways to earn money and to economic development.

Stakeholders

There are tree major stakeholders involved in the Chiuri value chain, Manakamana Soap industries, Praja Cooperative and the Local people. They all have a different position and influence on the value chain. Below a description of the role those stakeholder can have in supporting the opportunity; increasing product quantity.

- Manakamana Soap Industries is buying other products from Praja Co-operative. They buy honey, (100kg per year 150 rupee), Holdie (yellow-colored spice), Mustard oil (200 kg per year; 180 rupee per kg) and Ritha (250 kg per year). They use these products in their soaps. Manakamana has the knowledge about how to process soap; so maybe they are willing to exchange their knowledge with Praja Cooperative and the local people from Shaktikor.
- Praja Cooperative will own the machinery which is required for the processing of the new product. So they will also have the overall management. And they have to find the new markets to sell to products to.
- The local people have to harvest a higher amount of the seeds; and they can participate within the processes.

Requirements

- To process other products, different (natural) resources are necessary.
- Money to buy tools and machinery which are necessary to start processing other products.
- Knowledge & skill about the processing of the products.
- Clients whom will buy the newly processed products.
- The local people have to harvest more Chiuri seeds

Steps to start the implementation process

Within the implementation of new development; there can be divided a lot of processes; they automatically come along when people have to deal with a development. Those processes should be managed, in order to increase the chances towards a successful implementation of the development. There is no fixed time planning; the steps can be executed within one month, but also within 6 months; the involved people have to decide by themselves which planning will be most suitable. We recommend not to take too much time between the steps; it will weaken the enthusiasm and support which is generated among the participants.

Below a detailed description of the steps which can be dived in the process towards development of the opportunity: 'Increasing the product diversity'.

1. First Meeting; Orientation on the Subject

The first meeting can be the same as the meeting of 'increasing of production quantity'. This will be a general meeting in which the participants discuss the possibilities they have related to increasing the product diversity of the Chiuri Ghee. See also Step 2 of Increase Production Quantity.

2. Making a Management Plan

See Step 4 of 'Increase Production Quantity'.

3. Execute the plan

The management plan should contain some steps that should be taken, in order to initiate developments and how to make them sustainable on a long term basis. A planning should be made in which these steps are integrated. According to agreements about responsibility the steps should be executed by the actor which is responsible for the step.

Rules and regulations that are defined in the management plan should be checked by the responsible actor. This will most likely be Praja Co-operative or the Indreni Community Forest Committee.

4. Find clients

There is no use in producing products when there is no market for them. Before the processing starts PC should search for a number of clients which is interested to buy soap from them. They can also sell the products locally.

There are different ways to search for new clients. The network of PC can be used to enquire about the possibilities for selling products like soap and candles. Also other processing companies can be asked where they sell their products to. As it is difficult to sell the soap to a lot of different little shops, Praja should look for wholesale traders whom will buy large quantities.

5. Buy required tools, materials & ingredients

In the management plan the required tools, materials and ingredients are defined. These should be bought before the production can be started. Which tools they are depends on which products have been decided to make.

6. Educate staff

Staff should be adequately trained to be able to make quality products. This training does not have to be conducted in Shaktikor. Praja Co-operative will most likely be the company that will process the products. Their staff can visit other companies which process the same products to learn from them. A few staff members should go to other companies and they can teach what they've learned to other people in Shaktikor and to local people from Siddhi and other VDCs.

7. Start processing

The processing of soap, candles or other products can be started.

Management

Praja Cooperative will be the leading partner; as they will own the required machinery. PC has to do the overall management, but that need to be done in cooperation with the local people who are involved.

Discussion

In this chapter we will describe some points of our research that are not 100% sure and scientifically proven. Sometimes it was hard for us to gain information and we used whatever information we could gain about the subject. There should be more research done on these topics, but that didn't fit into our research's scope and timeframe.

Benefits for Local People

We have done a research and analysis of the value chain of the Chiuri in Majhbang. The main goal of our research is to describe a way to reach economic development for the local people from Majhbang (ward 6 of Siddhi VDC). The outcome is not based on a specific problem; the problem is the fact that these people are poor and every development and that improves their livelihood is useful for them. However, our opportunities, and therefore our recommendations, are not aiming for direct benefits to the people in Majhbang. Increasing the production and increasing the product diversity are more general improvements, which will have to be led and facilitated by Praja Cooperative. PC is processing the seeds in to Ghee and they are responsible for the sales of the products, so they will do the overall management. That is why most of the benefits these improvements bring will probably end up with PC. The local people will also have benefits from increasing the product quantity; they will earn more money, by selling more seeds to PC. But PC will probably earn relatively more money by selling the Ghee to their clients, than the local people will earn by selling more seeds. It was not possible for us to formulate opportunities only for the locals from Majhbang, because other stakeholders are also strongly connected to the value chain.

The input of the local people has also been little; we just had one interview with the people from Majhbang. We gained most information from Praja Cooperative, because the manager could describe the (local) situation very well and the most important processes were taking place there.

If a pilot of the implementing the improvements would be done in Majhbang, the local people will have the first benefits from it. And the local people will participate in the process towards the implementation of the developments; they will join the meetings and workshops and in this way they can express their opinion and the can have influence in process. Local people from Majhbang and the Indreni Community Forest Committee are important stakeholders for PC because most of their Ghee comes from Siddhi.

No implementation without support

Implementation of the recommendations defined in this report can be achieved by local stakeholders, but would be more successful with the support of external (international) NGOs. They could play a managing role in the processes and can easier arrange contacts with organizations and potential clients outside the region. With the right support and knowledge exchange, the developments can be executed in a successful way. If the local stakeholders are totally responsible for the implementation of the recommendations, there is a huge risk that they get stuck on a certain point and that would be very disappointing for everybody.

No developments should be implemented without the social support of the local inhabitants, the Indreni Community Forest Committee and Praja Co-operative because they are important stakeholders, and they have to ensure the long term sustainability of the project.

Our information is gained in three visits

We visited the research area only tree times, but it provided enough information for our SWOT analysis. It might be better if we stayed for a longer time in the research area, but in our opinion we better did not spoil time if a few efficient interviews gave the same information. And there was a practical problem as well, the language. We were depended of a translator; he is of course not always available for us. Therefore it was also better to do a few short visits.

Communication with SNV

The communication with SNV could have been more intensive, we asked them a few times to give feedback on our chapters, and they did. But we did not really include them in our research. We did not really have the need, because we were still making progress and we just continued, without intensive communication.

Market information based on 2 organizations
We based our results concerning the Chiuri market only on the interviews we had with MSI and AHP. Therefore the market information could be incorrect. The facts about these organizations in this report are correct though.

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- Chairman of Community Forest in Pang, Pang.

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Appendix A: Reactions on final poster-presentation

We gave the final presentation in Nepal to 10 people; including the chairman of the Indreni Community Forestry Committee, the manager of Praja Cooperative and local people. There is a strict hierarchy in Nepal. The most important people speak; and the other ones just listen. But during our presentation we asked explicit for reactions, also from the local people. And suddenly more people, even locals interacted. That is important, as they are just as important for the implementation of development as the 'headpersons'. The people recognized our description of the situation in the area, and they agreed with our strengths and weaknesses we had defined. They were also aware of the improvements; 'increase production' and 'increase product diversity'. They also have thought about that and they have plans to develop the area; they just don't know how to. So the people were very thankful that we provided them the right information. Especially the fact that there is a higher market demand for Chiuri Ghee; was very eye-opening for them. It gives them a certain guarantee that they should continue and increase there Ghee production. Dal Bahadur (the manager of Praja Cooperative) said that we opened his eyes again; he knew that he had to search for new clients, but now he again sees the importance of it. And when he saw the photos, and heard our explanation of the soap processing of Manakamana Soaping Industries, he immediately understood the opportunity and said: "we can also process it by ourselves!' Why should we only sell the raw material, we should gain more benefits out of it!" "We have to write a project plan, than a NGO can fund and facilitate us within one of their programmes." He also told us that Laxmi Bhatta of SNV Nepal visited Praja Cooperative last week. And Laxmi also stressed that they have to start thinking on how to start developments. So our input with our poster-presentation was fitting very well in the situation. Our presentation and our stimulation have got the right timing.

Appendix B: Minutes

Date:	**15 January 2009**
Location:	Leeuwarden, Van Hall Larenstein
Persons present:	Sjouke Bakker, Ben Helming, Martin Jansen, Mirjam Oosting

Tijdens deze bespreking werd ons eerste concept projectvoorstel besproken. Er waren vrij veel opmerkingen en het belangrijkste is dat we ons moeten bedenken WAAROM we dit onderzoek doen, en voor WIE.

Wie is de opdrachtgever? Bishnu's organisatie of SNV? Literatuurverwijzingen in het projectplan moeten meteen goed gedocumenteerd worden om chaos te voorkomen. Als iemand meer over ons of over Plattelandsvernieuwing (PLV) wil weten kan hij/zij contact opnemen met Ben Helming. We moeten goed duidelijk krijgen voor onszelf wat het eindproduct wordt en voor wie we dat schrijven. Hoe we dat gaan bereiken kunnen we handig weergeven in een 'flowschema'.

Waarom kiezen we drie gebieden? We kunnen beter 1 gebied goed onderzoeken, en in de andere 2 alleen maar een klein aspect bekijken om dat te kunnen vergelijken.

We moeten ook in ons projectplan zetten hoe we thuis (ouders) te bereiken zijn.

We moeten een concreet onderwerp kiezen waar we ons op kunnen toespitsen, als Beni het te ontwikkelen gebied is kunnen we ervaringen uit de andere gebieden meenemen.

We moeten nog meer andere organisaties hebben die ons kunnen helpen aan informatie in de vorm van literatuur en natuurlijk begeleiding.

Wat wordt ons eindverslag? Een inventarisatie? Aanbevelingen voor iets? Waar wordt lokaal of door gespecialiseerde organisaties om gevraagd?

Date: **5 February 2009**
Location: Appelscha
Activity: Telephone Call with Mr. Heijdra of SNV Nepal

On Thursday the 5th of February we had a conversation by telephone, with Mister Hans Heijdra of SNV Nepal. We were asking for research opportunities in ongoing forestry projects of SNV.

SNV is mainly an advisory organization, but it does have a few implementation projects as well. One of them is a forestry project in the neighborhood of Chitwan (in the Terai) . The project is about how to implement a concept like the 'community forestry concept' in the Terai.

The community forestry concept in Nepal is an approach towards participatory forest management by local people. It is already implemented in the some hilly areas of Nepal, were the locals now have the responsibility of their own forest. The locals of the hilly areas can be seen as the regional 'indigenous' people, they have lived there all their lives and there is a minimum influence of migration. The community forestry concept is based on the 'indigenous' user group.

There is al lot of forest in the Terai zone, and a community forestry concept should be profitable here. But there has been a lot of migration in this zone, a lot of farmers from the hilly areas, for example, had to migrate to the south in order to survive and to get some farmland. The population in the southern regions is very diverse and exists from people with different backgrounds, due to migration. There are no regional 'indigenous' groups, and the forest they will be responsible for has not always been 'their' forest. So the basic variant of the community Forestry concept, which is used in the hilly area, cannot be applied in the Terai.

SNV Nepal attempts to implement an adapted variant of the community forestry concept in the neighborhood of Chitwan: a "collaborated forestry management group". Therefore they first have to create a framework, in which all aspects are taken into account.

Maybe we can participate in this project, but we have to wait for an approval.

Date:	**9 February 2009**
Location:	Leeuwarden, Van Hall Larenstein
Persons present:	Sjouke Bakker, Ben Helming, Martin Jansen, Mirjam Oosting

On Monday the 9th of February we had the third appointment with our supervisors at the Van Hall Larenstein. We discussed the responsibilities of SNV, the organization which we will do our research for. The final assessment is 100% the responsibility of the Van Hall. They decide whether we graduate or not.

We also discussed the theme we have picked: Community Forestry Management. We explained the concept and our supervisors proposed some methods we could use in our research. First we will have to analyze some areas; we need to know what Community Forestry means. After that we can research our pilot area to analyze whether Collaborated Forestry is possible there and what adjustments would be necessary in the concept.

We have to mail SNV, Hans Heijdra, with specific goals that we want to reach and targets that we are aiming for. We also are going to send him information about the process in the Netherlands. (We need to have a definitive project proposal within 2,5 weeks. We need to think about the measurability of our research. (Methods). The email to Hans Heijdra will also be sent to Ben and Martin.

Date:	**13 march 2009**
Location:	Hetauda, Office SNV
Persons present:	Sjouke Bakker, Mirjam Oosting, Leela Rasaily

On Monday Laxmi and Vijay will be in Hetauda for a portfolio meeting so that will be the best time to decide on the NTFP and research area. Maybe it is also possible to meet on Sunday. A possible area is the Chepang area. SNV has 15 years of experience with the Chepang people. Good sources for information are the DFO, district forest office, DFCC, district forest coordination center, and FACOFUN, an organization for Community Forestry Committees. The institute of forestry is also in Hetauda so we could also visit there. There is a recent draft of a timber value chain analysis done by SNV. We could use that to study the value chain analysis method. There also have been analyses of the Asparagus (Kurilo) and of Lemon Grass. A 'portfolio' of SNV is a regional office.

On Sunday afternoon we made an appointment with Leela and Vijay to discuss which research area to choose and which non-timber forest product. We also can visit the FACOFUN and see some forest products with them. Sunday at 11.00 AM we can visit the DFO of Makwanpur District. There is also the District Development Office (DDC) and this could also be a good source of information.

Date:	**13 march 2009**
Location:	Hetauda, FACOFUN Office
Persons present:	Sjouke Bakker, Mirjam Oosting

Every district in Nepal has its own FACOFUN. It is an association of collaborated forest users. Forest Committees become a member of FACOFUN to take a stronger position when they have certain problems. For example they played a big part in lowering the income taxes. There is also a central FACOFUN which is based in Kathmandu. This office has 54 members and there are special rules of becoming a member, to make the organization representative. They have members from every ethnic group in Nepal. There is 1 meeting in the month. Only the permanent members attend this meeting. FACOFUN is the only organization for and by User Groups in Nepal. The biggest problem of CFC is the distribution of resources. People don't know how to divide the cooperative income. There is a lack of knowledge. FACOFUN tries to promote a market by improving price and production. They improve awareness of the product and the quality of it. That is difficult because there is too little technology.

Value chain: Making a link to as many different markets and sectors as possible for the biggest benefit.

We made appointments to go into the field tomorrow to see Kurilo, Bamboo and Bio-briquettes.

Date:	**14 march 2009**
Location:	Surroundings of Hetauda
Persons present:	Sjouke Bakker, Mirjam Oosting, Trishna, Preshpa.

Chuhga Khola Community Forest

First community forestry committee in this district 2041 BS, In earlier days the people were only the caretakers of the forest, but after 2047 (forest law) they could also profit from it. The forest is 279 ha. The kurilo now died because of the lack of water. In the community forest cattle grazing is not allowed. Locals can collect grass and wood, but there are some rules and restricted areas and everybody knows. They also collect leaves which they use for natural plates. Kurilo is used as a medicine, but they don't know for which illness. Water is coming from a pipeline, which was developed 35 years ago. It provides drinking water. Each month the calculation is done. On the following topics: what they sold, date, document number, particular name of product, how much money, categories from where money comes, waste part (also used as fuel), lone from outside, income, advanced money. Everybody is presented when the members pay, it is lead by the office secretary.

In former days it was just bare land, because people cut the small plants in order to gain more grassland. Floods caused then large problems and were a danger, the people were almost forced to replace there settlement, but than they decided to preserve the forest. The committee made the people aware to preserve the land. So after many years the problem was solved and replacement was not needed anymore. The VDC has 900 households, and they are all members of the Community Forestry. It is not a city area, and the economic status is not equal. CF make it equal, to work with reasonable prices, and they provide goods. The community welfare poverty alleviation programme, is providing small constructions, like bridges and they give goats to the poorest people (is the goat have given birth, they have to give the young goat back to CF. So the treatment of the poorest people is very well organized. The CF also supports environmental education (bioplant / gas).

Chitrai Pani Community Forestry

The chairman, secretary, and member were presented.

Their main product is bamboo, they have a plantation. Bamboo has 2 functions; protection and production. The bamboo is planted along the riverside and it holds the soil together, when floods occur. When you once plant a bamboo plant, you don't need to do it again. IN former days it was bare land with a lot of floods. When it was handed over to the community, they protected it with bamboo. The CF is selling the bamboo to village people, so only for local use (building houses or constructions). One bamboo piece costs 12 rupees and the CF has got an income of 12000 rupees per year. There are 500 households. The locals also are making handicrafts from forest products. There are rules about the amount of bamboo people can sell from the CF; it has to be based on their needs, the have to give application first. And for example; for poultry farmers the maximum is 100 pieces. There are a few other forest products; the Sala plant provides juice which becomes a warm medicine, and can be sold. They earned 35000 rupees from this liquid this year. The CF has got future plans to develop the area and preserve the environment at the same time. They want to improve their production (increase forest land with 7 ha, supported by BISEP), try some new plants and develop a tourist area (picnic place etc.), so they don't need to go outside to earn money. There is also the programme for poverty alleviation, which includes different trainings for women groups, like tailoring and making handicraft, supported by BISEP. Resin is used in various ways (raw or candles) but they only earn 5 rupees for one kilogram.

Briquettes

The women burn bushes in a trunk and then the mass is pressed into coal, after that it is grained. And than the substance need to exist of 1% mud and 3% coal, it is pressed is a special form and baked off in the sun. They sell it in there local depot for 8 rupee, but they also sell it in Kathmandu, then for 10-15 rupee. The briquettes replace firewood, and are in that way a sustainable product.

Date:	**17 march 2009**
Location:	Shaktikor, Multipurpose Visitor Centre.
Persons present:	Sjouke Bakker, Mirjam Oosting, Dal Bahadur Chepang, Bishnu Bahadur Tamang.

There are a lot of Chiuri plants growing in Siddhi VDC. 85% of the people in Siddhi are Chepang. We could stay a few weeks in the area. There are sleeping accommodations. It takes 1,5 hour to go from Tandi to Bharatpur (to visit the DFO). The office of the Chepang Organization was established in 2055 BS. It has 365 members and tries to develop more facilities for the local people. For example honey and other products are bought from the locals and the organization sells these products to other people. In July the Chiuri seeds are ripe and people will harvest them. We could do the Chepang Hill Trail trek and visit the Chepang museum next time we will be in Shaktikor.

Date: **13 April 2009**
Location: Bharatpur, DFO Chitwan Office
Persons present: Sjouke Bakker, Mirjam Oosting, Bishnu Paudel

We had a meeting with Bishnu Paudel, the district forest officer. He told us that there are 46 community forests in Chitwan. There are also some leasehold forestries, these are forests given by the government to local (poor) people for a time of 30 - 40 years. In this way they can earn some money with the forest and develop facilities or other things to improve their livelihood. Bishnu also advised us to go to the Department of Forestry in Kathmandu. He gave us some names and addresses.

Date:	**15 April 2009**
Location:	Shaktikor
Persons present:	Sjouke Bakker, Mirjam Oosting, Bishnu Bahadur Tamang.

In Siddhi VDC, in ward #6, is a village called Majhbang. In this village is a home stay and there are a lot of Chiuri trees. It is a 5 hour walk from Shaktikor and from Majhbang it is 3 hours walking to the big 'Chitram Waterfall'. There are 6 community forests in Siddhi VDC. We will need a local guide to translate for us because the Chepang people don't speak English. We made an appointment to hold a meeting on the 17th of April with local people to learn how they use the Chiuri.

Date:	**13 April 2009**
Location:	Bharatpur, DFCC Chitwan
Persons present:	Sjouke Bakker, Mirjam Oosting,

The DFCC has been set up in cooperation with SNV. The DFCC is coordinating governmental and non-governmental organizations related to forestry. They could not provide us with information however. They advised us to hire a junior forester that could translate and find information for us.

Date:	**17 April 2009**
Location:	Majhbang
Persons present:	Sjouke Bakker, Mirjam Oosting and others.

Majhbang has 75 households. Every household is the owner of 15 to 20 Chiuri trees. The harvesting season of the Chiuri is in July. After harvesting the seeds are spread out and are being dried for one month. Then they are stamped and water is added. The remains are being squashed between 2 long trees and that way the Ghee is extracted. There are a lot of different uses for the Chiuri tree. It is used for medicine, when people have stomach problems and cramps. The Ghee is used in curry, bread and porridge. The people use the Ghee locally but they also sell it in Shaktikor and Tandi. The entire village of Majhbang sells about 200kg of Ghee. They sell 1 kilo for 150 rupee.

The also sell the unprocessed seeds for 50 rupee per kilo and the fruits for 25 paisa (0,25 rupee) per kilo.

The people transport the Ghee from Majhbang to Tindobahn by foot and from Tindobahn to Shaktikor they use a bus or tractor. This happens only once in a year, in September when the Ghee production has finished. The Praja Cooperative in Shaktikor buys the products from the locals and resells them. They sell to Kathmandu and to Ghorka (in Ghorka is another organization which also sells internationally). The Chiuri also produces juice but people don't know how to use this. They only use it when they are thirsty while harvesting.

The Chepang Hill Trail was set up 3 to 4 years ago in cooperation with different organizations.

The locals sell 200 kg and keep 15-20 kg for themselves.

Date: **10 May 2009**
Location: Shaktikor, Praja Co-operative Office.
Persons present: Sjouke Bakker, Mirjam Oosting, Dal Bahadur Chepang, Bishnu Bahadur Tamang, Mahendra Chepang.

Products (from Majhbang)	Price to villagers (1 kg)	Sale to	Price (1 kg)	Transportation	Amount in 1 year
Ghee	100-125 Rupees	Locals	130-140 Rupees		2000 kg in total.
		Manakamana Traders in Kathmandu	130 Rupees	The MKT transports it themselves.	
Honey	130 Rupees	Locals and local traders	175 Rupees		5000 kg in total.
Pina	10 Rupees	Locals	12 Rupees		??
Tejpat	20 Rupees		25 Rupees		300 kg
Amala	45 Rupees		55 Rupees		200 kg
Harro	15 Rupees		20 Rupees		900 kg
Barro	13 Rupees		16-20 Rupees		1500 kg
Gurjo	12 Rupees		15-20 Rupees		3000 kg
Kurilo	150 Rupees		170 Rupees		500 kg
Ritha	20 Rupees		25 Rupees		1500 kg
Tejpat	20 Rupees		25 Rupees		500 kg
Seeds???	50 Rupees	Only processing	See Ghee.	-	??
Fruits	25 Paisa (0,25 Rupee)				

The Praja Cooperative has a machine for extracting oil from seeds. They use this for Chiuri, mustard and other products. 2,5 kg of Chiuri seeds delivers about 1 kg of Ghee. This means the yield of this machine is between 40% and 50%. The yield of the authentic machine that the Chepang people use, the Chepuwa, is between 30% and 40%. The taste of this 'original' Ghee is better; the machine produces a more bitter Ghee. The machine is driven by a 15 horsepower electromotor.

Praja cooperative sells the Chiuri Ghee mostly to locals and local businessmen. They sometimes have a contract with a bigger organization. At this time they have a contract with 'Manakamana Traders' from Kathmandu and they buy large quantities of Ghee. Traders who buy bigger quantities can have a 5 rupee discount per kg.

They only buy Chiuri seeds from local people and then they process it into Ghee. They also don't buy the Chiuri flowers because there is no use for them. They sell the Pina to local farmers who have problems with insects on their lands. The Pina works as a pesticide.

The main products of the Praja Cooperative are local honey, Chiuri Ghee and some medicinal NTFPs. The honey produces better money than the others. In one year they sell 4000-5000 kg of honey for 175 rupees per kg. This means with the honey they make about NRP 780000,- rupees in one year. They buy it from local people for 130 rupees so they make a profit of NRP 200000,- rupees (€ 2000,-) every year. The one responsible for buying and selling the products is Dal Bahadur Chepang. There are also other staffs that are at the office when local people come to buy or sell their products. There are 5 staff members and their monthly salary is 3000 each. Dal Bahadur is working for PC for 8 years now so he know many people and makes phone calls to ask them how much products they need.

Ward 6 of Siddhi produces 700 kg of Chiuri Ghee (2000 in 5 VDCs) so this is very much.

The CFC is not only conserving the forest but with the money they earn from selling the products they are making roads, plantations, taps, irrigation systems and others things. A member of the CFC has the position for 2 years and then someone new will take his place.

On school there is some education about the environment. The school in Shaktikor (& Majhbang?) is fully in Nepali except for 1 class, which is in English. From class 6 – 10 they have environment education.

Date:	**7 may 2009**
Location:	Indrendi Community Forest Committee Meeting
Persons present:	Sjouke Bakker, Mirjam Oosting, Dal Bahadur Chepang, Bishnu Tamang, Indrendri CFC

Name of the CFC: Indrendi

Location: Ward 1 and 6 of Siddhi.

People Present;

Gayasing Chepang (Chairperson)

Debjung Tamang (Vice-chairperson)

Kaji Chepang (Founder)

Chandra Bahadur Tamang (Secretary)

Milan Chepang (Vice-secretary)

Man Kumari Chepang

Man Mahyah Chepang (Monitoring)

Buddhima Tamang

Junmahjah Chepang

Ritula Tamang (Accountant)

Jit Bahadur Tamang (Advisor)

Man Bahadur Praja (Advisor)

The Indreni Community Forestry was established 14 years ago. Before it became a community forest, it was a national forest. The area was selected to become a community forest and when the 13 member management committee was founded, they started to make a management plan, together with DFO. In starting time they had no money, but all the members of the community saved 5 rupee each month. And than after 10 years they could sell wood. And 4 years ago it is transferred to the community. When a new family is moving to the area, they have to pay 100 rupees to become a member of the community forestry. In the beginning the conservation was easily; only grass and wood. The committee has got 4 staff, 3 for conservation and 1 secretary. The sell wood from community forestry, with the earned money they build roads, invest in agriculture, drinking water or plantations. The committee gives loans to poor people. They also support old people. They have a plan to make a Chiuri plantation (1500-1600 plants) next year, in a blank area. The community forest area is 454.15 ha, and the borders are: Kalika community (forest is border), Daurali, Ambrit Tarapani Community Forest (west), Nibuata and Koerla. The Chiuri production is decreasing, and the local people think that is due to bee-keeping. The bees are brought from town in favor of the honey production, but they consume the juice of the Chiuri. As a consequence the seeds are falling down before they are ripe, and so there is less production. The bees also affect farming; especially the corn farming. There are 40 – 45 items harvested, but not for selling. They now are conserving it.

The District Forest office made the management plan; after the Indreni CFC handed in their first draft of the Forest management plan, the DFO made some changes and put extra information in and they finally approved it. It is a 5 year management plan; and it only valid for one more year now. People personally harvest Chiuri. In the community forest there are 2000-3000 Chiuri trees, those are not private. There is no Chiuri harvesting in the community, because of the low quality of the seeds, well some people do, they bring and sell it in Shaktikor. There is no permission needed on harvesting products. Only members are harvesting the products and they are free to harvest as much as they want. There is a lot of private land, too much. The most important forest products of Majhbang are; wood, grass, NTFPs (Amala, Gurjo, Tejpat, Jasmin). They sell the products to villagers and Praja Cooperative, the prices differ a little bit, Praja Cooperative is paying 5-10 rupees more per kilo. The flowers of the Chiuri are not processed or sold, some people consume the juice, but that's all. When it is flowering time, many animals, birds and bats (in night time) eat the nectar of the Chiuri flower.

The people use the leaves of the Chiuri, for fodder and for making roti (bread); they bake the bread between the coals of the fire within 2 Chiuri leaves. The Ghee of the Chiuri is used for curry, roti, pain on feet, pain on lips and fire wounds. One household is consuming 60 kg of Chiuri Ghee in one year. All the Chepang people use Ghee, if they finished their supply they will buy it from their neighbors. In other areas of Nepal people mostly use cow-Ghee, which is sweeter and easier to gain than Chiuri Ghee. The people who harvest and process Ghee do not need to pay the community forest.

When the Chiuri seeds are pressed in the Chepuwa, or in the machine, there is left a waste product in the basket; called Pina. Pina is used in farming as an insecticide and it is used with fishing as a fish poison.

The people don't try to make new products; because they don't have any knowledge about it.

The responsibilities of the CFC are; conservation of community forest, the new plantation, developing the awareness programme. The activities of the CFC are related to those topics, they for example have a cutting system; cutting worse branches out of trees.

Date:	**9 may 2009**
Location:	Praja Cooperative Office, Shaktikor
Persons present:	Sjouke Bakker, Mirjam Oosting, Shyam Hada, Armin Dieckmann, Flo Schmidt & 17 participants.

Training Sustainable Wild Harvest of Forest Products

Rishi was doing the introduction; he is working for 'Eco-Center', a NGO in Narayangadh. He was interacting with the participants immediately and asked them about with forest products were harvested 20 years ago. They wrote it down on a large piece of paper and the participants noticed that there were much more NTFPs harvested in the past. Now the plants are getting old, while the population is increasing; and taking the plants. Sometimes businessmen come to Shaktikor, to buy a specific product; Ghee, honey or a NTFP. The people sell it to them, but they don't tell them that they have much more products; so bad marketing. When the group was discussing about sustainable harvesting, one man said; "the selling and protection of NTFPs is the responsibility of the NGO's, not ours." The management has to be changed; the natural resources exploitation and the promotion of tourism. More development is leading to more spending; when modernization is taking place; people have to pay more. People have to follow organic system; in they end they can earn more money. One reaction of a participant: "there is a cooperative, located on the highway of Kathmandu, and they planned to organic farming a few years ago. But the vegetables were much smaller, than the non-organic ones, so the people did not sell the organic ones." It takes time for the soil to adapt to organic farming, it is long-term process. Another reaction from participant; "I started to use organic pesticide on my corn, and the corns are bigger than the ones I grew before!" Organic farming has got a constraint; the soil needs more and more organic nourishment; while with chemicals every year there is less needed.

Some guidelines on sustainable harvesting of forest products:

- Don't harvest from the first row of trees on the border of the forest; those trees are important, because their seeds are falling down on the new grounds and so the forest can expand naturally.
- Don't harvest the first plant of a species you see. It may be the last one and then it has the chance to reproduce. This is good for the biodiversity.
- Respect the nature, and worship when products are harvested. Thank the plants.
- Don't stand on the roots of the trees (the near surrounding of the tree) or plants; young saplings are growing there and too much walking will make the soil more compact which is not good for the roots.
- Harvest from the top to the bottom of the hill, so in case of landslides and bushfires not all the harvest will be lost.
- Don't take fruits of sick trees, in stead give protection to give opportunity to heal.

During our lunch break, the participants got the task to come up with a plan on how to do sustainable harvesting; with good benefits. An example; Farming on piece of land of the community forest could earn more money to develop the area. And change the land every two year; because of landslides.

After the break the plans were discussed and further benefits on organic sustainable harvesting were mentioned. The participants received a handout with all the information that was given to them so they could read it through and later teach their family and other people in the village what they had learned today.

Shyam later told us, when we were evaluating, that he hoped that one or two people had really understood the necessity of sustainable harvesting and that they would try to convince others. It is a process of years, and this is only one step in the good direction. But every step counts. Some time before the harvesting season (July-august) they will arrange a follow-up meeting to make the people remember the importance of not over-exploiting the forest.

Date: **2009**
Location:
Persons present: Sjouke Bakker, Mirjam Oosting

Activity	Season	Materials	Working Hours	Location	Value/Price	Buyers
Harvesting Seeds	Asar to Bhaday	Basket (Rome), Bag (Jabi), Doko, Dali, Kore	5-6 hours per day	Private land (Khoriya) or Community Forest	20-25 rupees per kg	Praja Cooperative
Removing Pulp	Asar to Bhaday	Hand		" "	0. They drink the juice and feed pulp to goat and pig	
Cleaning in Water	Asar to Bhaday, directly after harvesting	A lot of Water, Basket	30 minutes	River or tap, sometimes in house.		
Drying	Asar to Bhaday	Mandro, Jhapra	15 minutes and 1 week to dry	In home, over the fireplace		
Crushing	Last of Asar to any time, any year	Dong, Musal, Dhalei, Basket, Burning the seeds; dikeli, water and fire.	12,5 kg for 2 hours	House		
Steaming	Directly after Crushing	Dikchi, Water and Fire.	1 hour	House		
Pressing	Directly after Steaming	Chepuwa, Stick (Kokcing)	15-20 minutes	Near to the house.	12-15 rupee per kg Pina.	PC and Villagers
Storing	Within 12 hours after pressing. (before solidification	Plastic pot, Silver pot, Wooden pot. Crown of Banana tree and bamboo.	10 minutes	In cornerside of home	100-125 rupee per kg.	PC and Villagers

Men climb into the trees and women pick up the seeds from the ground.

Date: **23 May 2009**
Location: "Manakamana Soaping Traders"; Balaju, Kathmandu
Persons present: Youkta Dhakal, Deepak Dhakal, Sjouke Bakker, Mirjam Oosting

Youkta and Deepak Dhakal are the founders of Manakamana Soaping Traders, they founded it 3 years ago, and they supply to all districts.

"Manakamana Soaping Traders" is processing 4 different kinds of organic soaps: one of them is Chiuree soap.

- Rose Face wash
- Jadjbutj Soap
- Neems Soap
- Chiuree Soap

They only need Chiuri Ghee for the Chiuree soap (not for the others). Many companies who buy Chiuri Ghee also buy natural oil; coconut oil from India, lemon grass oil and camo oil. The last 2 are very expensive; lemon grass oil cost 16.000-18.000 rupee per liter and Camo oil is even more expensive, 1 liter oil cost 40.000 rupee. The Chiuri Ghee is the cheapest ingredient in the Chiuri soap.

They buy the Ghee at 2 different organizations: Praja Cooperative in Shaktikor and a local trader in Nepalganj. There is no difference in quality of the Ghee, compared to those two organizations. Manakamana needs 500 liters Chiuri Ghee per month, (60.000 liter per year) and they are a medium sized factory.

The market price of the Chiuri soap is 120 rupee (90 rupees without rent, 5 rupees profit). They sell it for 115 rupees to clients. The amount of client increased a little bit compared to last year; last year they had 20 clients, and they sold 1000 pieces of soap. Those clients sell a lot of soap and they distribute it. This year Manakamana predicts that they will sell 20.000 pieces of soap. The demand is increasing, due to marketing; the people know the product and its good quality.

There are some developments regarding export to foreign countries. Deepak is working in a Cargo company as well and there he is also doing some marketing for Manakamana. Businessman from; Russia, Spain and Thailand already have samples soap pieces (22-30 pieces) for trying, they seemed to be very interested so maybe it will work out. Youkta and Deepak say that they put a lot of efforts in marketing; they go into the field and they provide good quality and personal service. They however do not have a website.

There are 8 staff members (excluding Youkta and Deepak), and they get different salaries; between 2500 and 3000 rupees per month. The work 8 hours per day from 09.00 till 17.00, 6 days a week (Saturday is their holiday). If full manpower and materials are available, they can produce 3000 pieces of soap in tree days. So the maximum capacity is 1000 pieces of soap per day. They only sell a 100 per day, so there is overproduction and too less sale. The factory lost a lot of money; spent 1000 pounds on machinery. There is a lot of capacity, but they have to expand their markets. Per year they process 20.000-30.000 pieces of Rose soap and Jutabuti (together). And they produce 15.000 pieces of Rose soap per year; there is a big market. There are no chemicals in the soaps; no complains from customers, so that's the prove for the good quality. 5-10% of the soap goes out of the Kathmandu Valley, 90% is sold Pokhara Chitwan

Praja Cooperative

They visit Shaktikor 4 to 5 times per year; it depends on the demand for Chiuri soap. Last time they bought 150 liters of Ghee and it cost 140 rupee per liter. They got a discount of 10%, but they also had to buy the bottles, where 17 liters of Ghee are put in. Those bottles cost 60 rupee, but can be re-used. Shaktikor is a small area, Manakamana can only buy 300 liters from them. They have a small machine and they can only provide Ghee in June-July. If Praja Cooperative produced more liters of Ghee, Manakamana would buy more of it. Or if they sold direct materials; not Ghee; only 2 months (June July). Manakamana is also buying other products from Praja. They buy honey, (100kg per year; 150 rupee per kg), Holdie (yellow color masala), oil mustard (200 kg per year; 180 rupee per kg) and Ritha (250 kg per year).

Nepalganj

There is not an organization like Praja Cooperative in Nepalganj, it is done individually, there are more than 50 people who are selling Ghee. But the person who is the main collector and seller of the Ghee is: *Ram Chantra Tharu.* He is using the machine (rented) and is selling large quantities of Ghee. Manakamana buys 1000 liter of Chiuri Ghee per year from Nepalganj. They pay 125 rupee per kg Ghee, and they go twice a year to Nepalganj, for doing business.

Transport

They transport the Ghee by their own; the transportation costs for Shaktikor are: 250 rupees for the bus Kathmandu-Tandi, and 35-50 rupees for distance Tandi-Shaktikor. The total transportation costs are 600 rupees, which means 4 rupee per liter Ghee.

When they have to go to Nepalganj (200km far), the total transportation costs are 2000 rupees, that means 2 rupees per liter Ghee.

Date:	**25 May 2009**
Location:	"Alternative Herbal Products"; Anamnagar, Kathmandu
Persons present:	Sjouke Bakker, Mirjam Oosting, Ranjana Pathak.

Alternative Herbal Products is a company which sells 17 different kinds of products. They sell organic spices like cardamom, garlic, coriander, turmeric, chili, cinnamon, ginger and mustard. They also sell organic coffee and honey. "Berry berg" is a fruit juice made of Seabuckthorn. Their most sold product is 'Marmelous'; a bael fruit squash and Aloe Vera juice. They also sell "Mero Herbal Soap" which contains Chiuri Ghee.

The organization is growing. Last year they had a total turnover of 40.000.000 rupee but this year (Nepalese year: April 2008 until April 2009) it was 60.000.000. 10-12% of this amount is net profit. The organization was founded 8 years ago, in 2058 (2001), by Mr. Govindra Ghimire. It was founded with the help of SEACOW and the last three years it has functioned fully without the support of SEACOW. The organization processes Chiuri Ghee for 4/5 years. When the company was founded they only sold "Marmelous Juice".

The average salary is 7000/8000 rupee for one month. Of course the managing level earns a different salary than the processing level employee. The working hours of the employees are 10.00 to 17.00 from Sunday to Friday. The company has 9 shareholders, including Govindra Ghimire.

All products are produced with appropriate technology; no industrial or chemical processes. Impact on environment is nearly zero in processing. Especially Bael and Seabuckthorn juices promote forest conservation.

Buying of Ghee
All the Ghee that AHP buys comes from Shaktikor. The raw materials that they need for other products are from all over Nepal. They also buy other products from Chitwan, like honey. They transport everything by bus or by truck, depending on the amount.

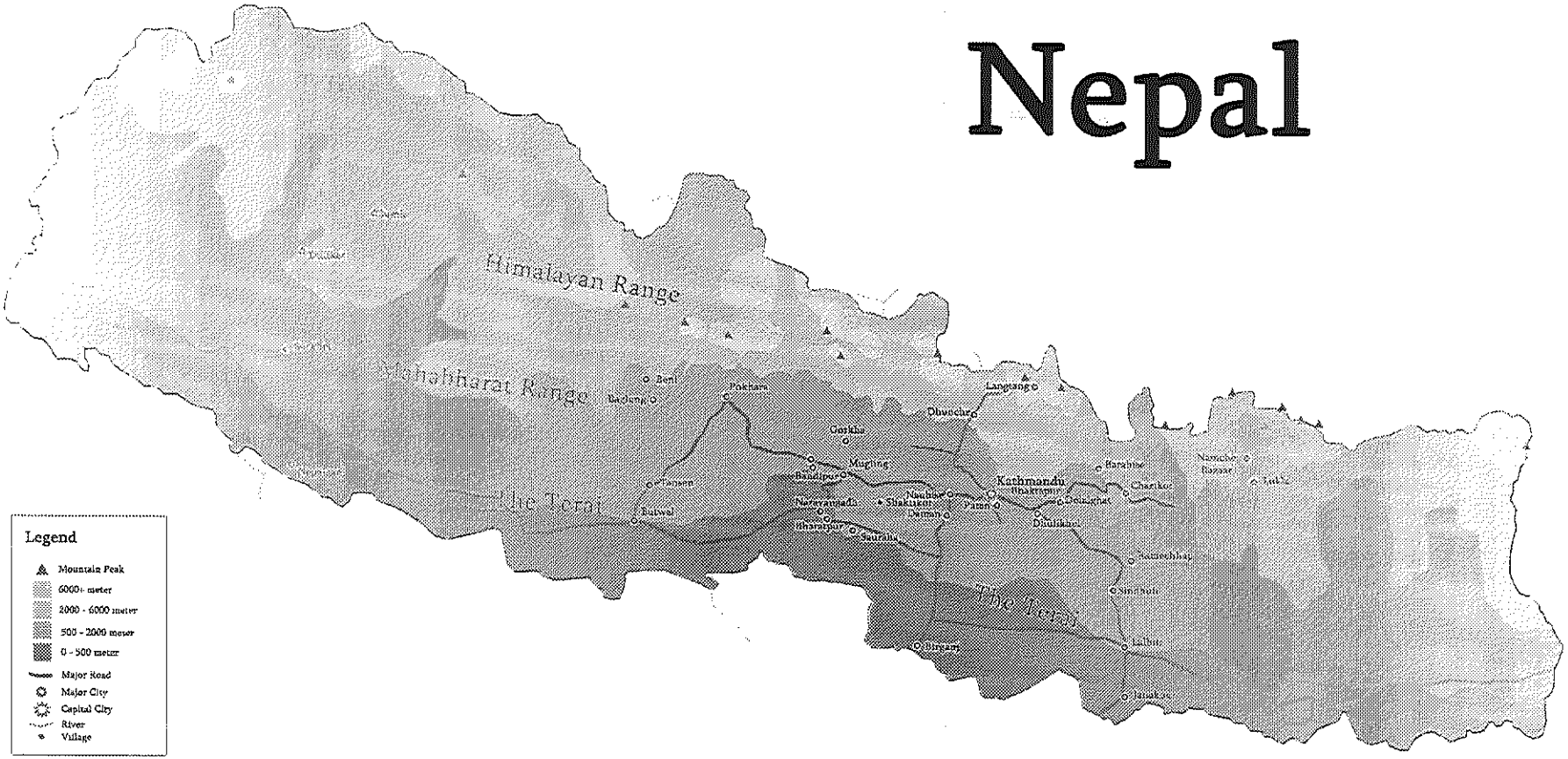
Processing
The factory where the soap is made is located in Bhaktapur. The organization has 14 staff members, the shareholders not included. Other products are made in other factories. AHP has one office but multiple factories (in Bhaktapur, Kausaltar, Lahan and Bardiya

Sale
There is a lot of competition from other companies; they try to market their products by improving the quality and service. They market the product, not only by making phone calls but also by going into the field and convincing wholesalers and other customers to buy their products. Chiuri Ghee is exported internationally and the other products are sold all over Nepal. AHP sells the Chiuri soap for 58 rupee. They can offer this price because they have good processing machines which can produce a lot of soap without a lot of staff costs. AHP sells over 1000 pieces of soap every month. This means they sell about 12.000 to 15.000 pieces in one year.

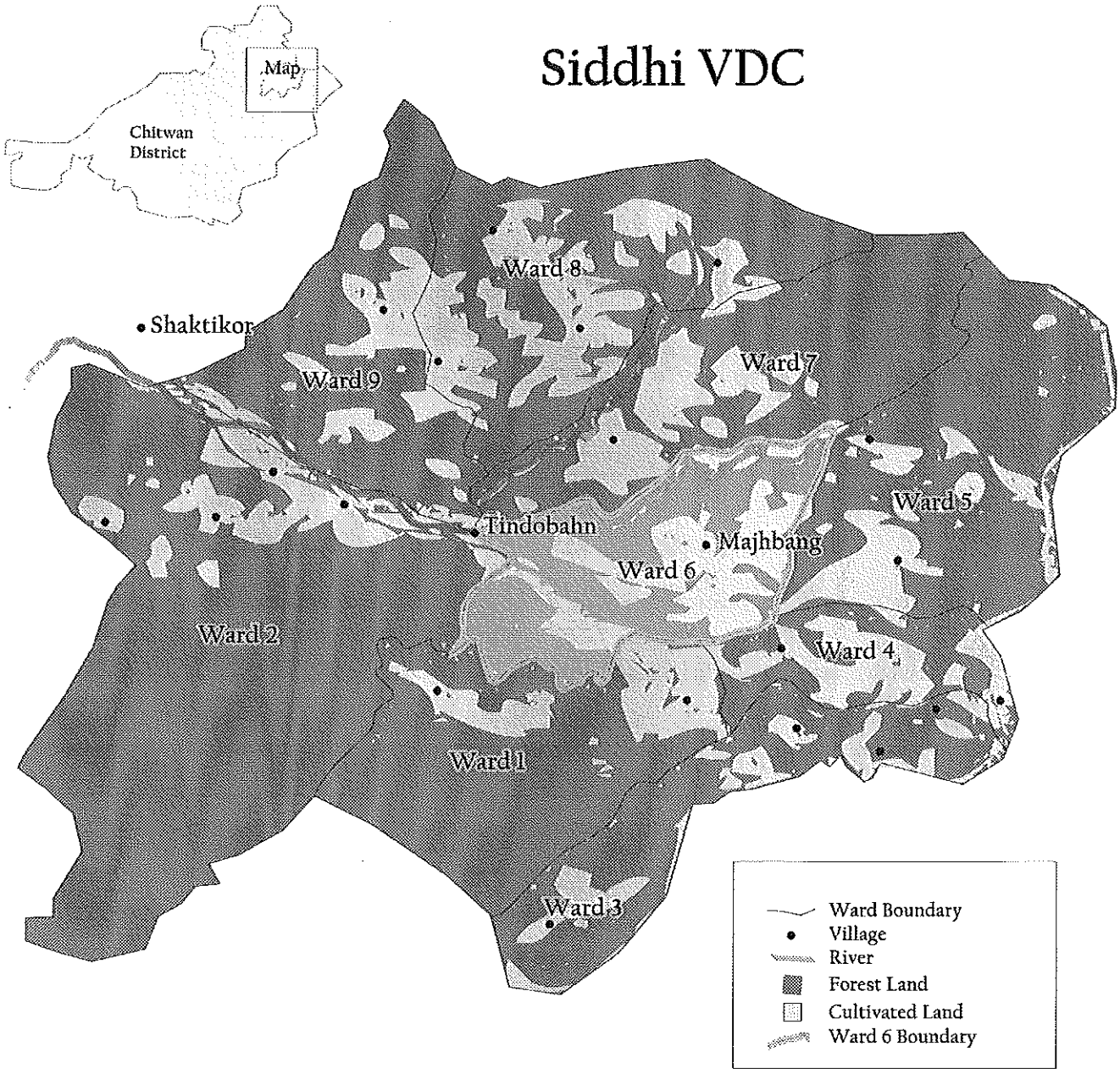
Future plans
In 2010 they want to start the sale of Chiuri Cream. They already have the raw materials and production machines; they will start production in the winter of 2009/2010. The raw materials for this cream are Chiuri Ghee and other fragrances.

Appendix C: Maps

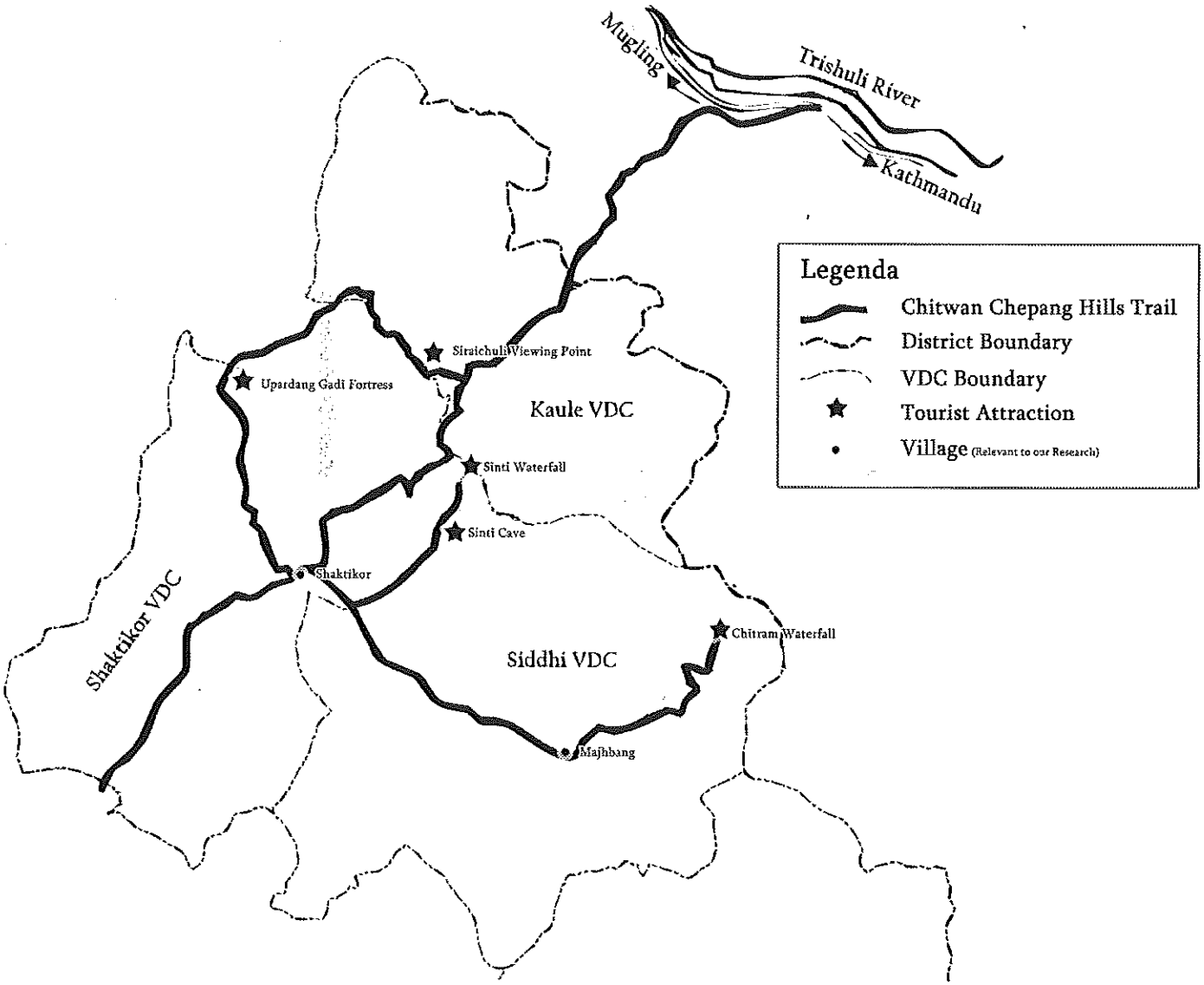
Nepal



Siddhi VDC


Siddhi VDC
Map
Chitwan District
Ward 8
Shaktikor
Ward 9
Ward 7
Ward 5
Tindobahn
Majhbang
Ward 6
Ward 2
Ward 4
Ward 1
Ward 3
Ward Boundary
Village
River
Forest Land
Cultivated Land
Ward 6 Boundary

Chitwan Chepang Hills Trail



Process report

Graduation Project; Value Chain of the Chiuri Tree

Authors	**Sjouke Bakker**
	Mirjam Oosting
Date	**26 August, 2009**
Supervisors	**Ben Helming**
	Martin Jansen
	Vijay Kesari (SNV Nepal)
	Leela Rasaily (SNV Nepal)

Keywords	**Chepang, Chitwan, Chiuri, Nepal, Siddhi VDC, Value Chain Analysis,**

Weekly Reports

Week 6 | 9 March – 13 March

On Friday 6 march we arrived in Kathmandu and we stayed the first 5 days with the Rijal family. We could slowly get used to the Nepalese culture and way of life. We also got a lot of new contacts from them in Sauraha and Pokhara. They offer us the possibility to stay with them and that allows us to get into the culture even better.

On the 12th of March we went to the headquarters of SNV in Nepal. We had an appointment with Hans Heijdra, the country director. We discussed our planning for the coming days and weeks and spoke about possible sources of information for us. Leela Rasaily, the regional coordinator of the office in Hetauda, will supervise us in a practical way. If we have any requirements, problems or questions we can contact her. On Friday we went to Hetauda. We had an appointment with Leela and she gave us some literature concerning our possible subject. She also planned some meetings for the next few days. That way we could already start to gain more practical information about the subject we could possibly pick. Fridayafternoon we already had an appointment with the FACOFUN, Federation for Community Forestry. We could speak with the chairman of that organization and we got a lot of useful information. On Saturday we went to see some community forestry's and their NTFP's. This was very interesting. We saw Bio-briquettes, Bamboo and Kurilo. The first one we visited was a forest in which Kurilo was harvested. This is a NTFP that grows in a lot of places in Nepal. After our conversation with the usersgroup about the way they work, we went into the field. Most of the Kurilo plants were dead because everything was really dry. There was also a piece of land in the forest that was called 'the Nursery'. Here they grew the plants and if they were big enough they planted them somewhere else. After the 'fieldwork' we returned to the village and we could see the administration of the Community Forestry Committee. They were really well organized and everything was written down in a big logbook. Everything was in Nepali ofcourse, but still it was very interesting to see.

Our second visit was to a user group that harvested Bamboo. They sold the products locally for 12 rupees for 1 piece. They had quite a big 'farm' and they wanted to expand it and even make it suitable for tourism activities.

The third visit was about Bio-briquettes. We didn't have much time anymore but we still made a visit anyway. The briquettes were made from burned sticks combined with mud. The briquette can be placed in a little stove and be used as a fuel for cooking. A very interesting initiative.

On Sunday we had an appointment with the District Forest Office of Makwanpur District, in Hetauda. The man we spoke with could only give us information about Makwanpur, this was logical, but we were much more interested in Chitwan. That will be our research area. But he understood the goals of our research very well and could tell us something about NTFP's and their value chains. They gave us the advice to visit the NGO BISEP. They might have some more documents in English (we requested that) but they didn't. In the afternoon we had an appointment with Vijay Kesari and Leela Rasaily. Together with them we picked our NTFP: the Chiuri, or 'Butter Nut Tree'. We also picked our research area: the Chepang area around Shaktikor, in the north of Chitwan. SNV worked with the Chepang for 15 years so they had good contacts there. The Chiuri would be the best choice for us because it has a lot of different 'final products'. The seeds can be used to make butter, Ghee, oil, candles etc. We asked about other possible alternatives but the Chiuri turned out to be the best choice. We promised to keep in contact on a regular basis and we also received some interesting literature about the Chiuri and the Chepang.

Week 7 | 16 March – 20 March

We traveled to Sauraha to explore the beauty of the area and to visit our research area. We had an appointment with our contact persons in Shaktikor on Wednesday. It was a flash-visit. We only were there for half an hour because they had another appointment that day, but we had enough time to talk about our research and what we would be expecting of them in the weeks to come. They were very enthusiastic about the research. Every development is welcome.

On Friday we left for Pokhara. On Saturday we explored the city and on Sunday we tried to find relevant NGO's in Pokhara that we could visit in the days to come. We also did paragliding, sailing on Phewa Lake and we enjoyed the tourist city of Pokhara.

Week 8 | 23 March – 27 March

The first half of the week we both were sick and not feeling well so we couldn't do much. We printed some information about the Chiuri to read through. On Friday we went to the campus of the Institute of Forestry in Pokhara. We wanted to gain some more information about the Chiuri and whether it grows in the area

in which we planned to trek. We spoke to the head of the teacher department but he couldn't help us much. The person who could be able to help us was in the field for some work so we left again and visited the District Forest Office. Maybe they had some info for us. It turned out they hadn't either.

On Saturday we went to Pang which is a remote village in Parbat district. We spoke with the chairman of a community forest. This man happened to have planted some Chiuri's on his private land to see if they would grow there. The plants were still young but it was the first time we saw the Chiuri! The committee had 11 members and there were 120 households using the forest. It was mostly a Sal (pine) forest. The trees were sold locally. The Chiuri grows very slow but can reach a height of 18 meters. The chairman planned to plant more Chiuri's and eventually use the seeds.

Week 9 | 30 March - 3 April
We stayed in Pang until Wednesday and tasted the real Nepalese life. On Wednesday our trekking started and we spoke with other tourists about our research. This gave us some new ideas. We also made a new planning for phase 2 which will start on the 13th of April.

Week 10 | 6 April - 10 April
We did a 5 day- trekking in the Annapurna mountain area.

Week 11 | 13 April - 17 April
On Sunday 12 April we prepared questions for our appointments on Monday. We went to Bharatpur because we had appointments with the DFO, the district forest office, and the DFCC, the disctrict forest coordination center. The DFO did not have much information in English. We saw some English reports in a closet so we had a close look and one of them was a 5-year-management plan from the government for the forests in Chitwan. This was very useful for us but we were not allowed to take it with us so we photographed the most important pages. They also gave us a small booklet (in Nepali) about forestry and community forests in Chitwan district. We also got the phonenumber of the DFO ranger that is based in Shaktikor. We could contact her for specific questions about the area. They also wrote a permission-letter for us in case we would need it during our fieldwork in the Chepang Hills. Consequently we visited the DFCC, this was a bit dissapointing because they did not have any information for us and the only advice they could give us was to search the internet for information and hire a forestry student to accompany us.

On tuesday we prepared our visit to the research area. We planned to stay there for at least a few days so we made a rough planning and a list of questions. Wednesday we travelled to Shaktikor, the main place in the Chepang Hills, and we met our contact persons there: Bishnu Bahadur Tamang and Dal Bahadur Chepang. We determined our research area. This will be ward 6 of Siddhi VDC. There are a lot of Chiuri trees there. Every household is the owner of 15-20 trees. We hired a personal guide who could speak English and the next day we walked to Majhbang (Siddhi VDC). We had a look around in the village and prepared some questions which we would ask the next day in conversation with the locals. On Friday we had a meeting with the local people and halfway the meeting Dal Bahadur and Bishnu also arrived so they could also provide some more information. We got lots of information about the seeds, flowers, product and problems. We asked if there existed a community forestr in Siddhi and there was. Their next meeting was on the 8th of May so then we will go back to go to that meeting. We also got a demonstration about how they squeeze the Ghee out of the chiuri seeds. Very interesting to see. On Saturday we went to the Chitram waterfalls (a touristic attraction related to the 'Chepang Hill Trail') and we saw some Chiuri trees on the way. We discovered that the bread we ate for breakfast was baked in between 2 chiuri-leaves and that the honey was also made from the chiuri fruits/flowers. On Sunday we travelled back to Shaktikor.

Week 12 | 20 April - 24 April
On Monday we travelled back to Sauraha. The next day we wrote a new blog and made an activity-list of things we have to do in Kathmandu, we will go there to gain specific information about the Chiuri's. We arranged a room in Tandi for the coming 2 months and updated our planning, logbook and process report. We also sent emails to our Dutch and Nepalese supervisors about our progress. We searched for relevant organisations in Kathmandu that we could visit but we did not find many. The organisations have no addresses, in Nepal there are only 'neighbourhood-names'.

On Friday we took the bus to Kathmandu to gain more information.

Week 13 | 27 April - 1 May
This week we went to Kathmandu to get more information about the Chiuri. We arrived on Friday the 20th of April and went to the department of forestry on Saturday. We found out that they were closed. Saturday is a free day in Nepal, we could have known. On Sunday we visited the Department of Forestry of Nepal again and they provided us with some good documents in English about community forestry, NTFP's of Nepal and other topics. We also went to visit the Forest Research department of the government

because we thought they would maybe have done some research about the Chiuri but they did not have anything for us.

On Monday we did some shopping and we also bought a laptop. This will make it easier for us to work on our report and presentation. We visited the 'Tourist Service Center' because we read that the TRPAP (Tourism for Rural Poverty Alleviation Programme) was also in that building but the programme was finished so we couldn't speak to anybody about it. We got a lot of general information about tourism in Nepal though. In the afternoon we tried to visit the Chepang Association Nepal but we could not find their office in Patan. We asked a lot of Nepali's but they did't know either. After searching for awhile we had to go back to Thamel.

On Tuesday we wanted to go back to Tandi but there were no more free seats in the bus so we had to stay for one day longer in Kathmandu. We spent the time by working on our report(s) and reading through the information we gained on Sunday and Monday. On Wednesday we travelled back to Tandi.

Thursday and Friday we worked on our reports and structured our information. We sorted the information based on the research questions and drafted the first chapters of our final report. We also updated the logbook, weekly reports and our minutes which also contain a lot of useful information. We sent an email to Ben Helming & Martin Janssen to inform them about our progress and ask how detailed we should work out the minutes in our final report.

Week 14 | 4 May – 8 May

On Monday, Tuesday and Wednesday we worked on our report. We were reading through our literature and we selected useful information related to our research questions. We also used information from our minutes. We called Bishnu Tamang; our contact person and translator in the research area, to organise our visit, in the end of the week. When we finished our first draft of Phase 1(research questions 1,2,3), we mailed it to our supervisors of our home school; Ben Helming and Martin Jansen. We also asked our supervisors about the way we have to report our method, how to deal with the minutes of the interviews related to the research questions. And we asked them to have a close look on our first draft of Phase 1; we are curious if we are on the right way. We made a large list of interview questions; as a preparation for the meeting we would have with the Community Forestry on Friday. We had a close look on our report, sources and minutes to define which information we already had and which we had to gain on Friday. We also came up with the idea to attempt to get the operational forest management plan, written by the CFC of Majhbang. On Thursday we travelled to Shaktikor; and we met Bishnu Tamang to discuss some practical issues and the planning for the following days. We also made a kind of overview (table); about the value chain of the Chiuri. The materials, prices, location, season, and buyers of the different activities which could be divided from the harvesting to the storing of the Ghee could now easily be filled in. We already had information about the harvesting and processing of the Chiuri seeds, so we could fill in the different activities. On Friday we went to the meeting of the Community Forestry Committee. Bishnu Tamang introduced us, and the chairman told us about the committee itself; when it was established, the future plans, the total surface of the area etc. We started our interview, and gained as much information as possible. After one and a half hour we had to end it, because the committee wanted to start there our meeting as well. We could interview one person (the chairman) from that moment on. The table we made earlier turned out to be very useful, the people understood the structure and we could fill it in very quickly. That evening we met two people (a German and a Nepali man) from 'One World', an eco-dynamic business company, and one German man who came to support One World in giving them advises about marketing and business management. The coincidence is that One World is also interested in the Chiuri; they maybe want to buy an amount of seeds and than try to make a new product from it, for there business. They also were looking on other NTFP's in the Chepang area; in favour of there company. One World is having an organic farm; were they growing medical plants, herbs, but also vegetables. The farm is also used as a training centre for local people. We talked about our research and we exchanged each others knowledge. Consequently we were invited to join the training they would provide to local people, about 'Sustainable Harvesting of Wild NTFP's, the next day. So on Saturday we joined this training; which was held in the Praja Cooperative Office. There were 17 participants (from 2 CF's) and the training took the whole day (from 10 till 5). It was a very interactive training; the person, who did most of the presentation, had good presentation skills. It was all in Nepali, but sometimes it was translated for us; so we could understand the topics the talked about, like organic farming, promotion of tourism, natural resource exploitation, marketing of NTFPs etc. The next morning we had our final interview with the chairperson, manager and account manager of Praja Cooperative. We gained information about, prices, amount of kg per year, markets of the Chiuri (the seeds, the Pina and the Ghee) and other NTFP's; from our research area and from the whole region. As a preparation again made a table compared to the one we used with our meeting on Friday. We considered our visit to the research as very successful; we gained a

lot of specific information and we also got the operational forest management plan of Majhbang. This plan is written in the Nepali language; but we will find somebody who can translate it for us. On Sunday we travelled back to Tandi.

Week 15 | 11 May – 15 May
On Monday we first of all started to report our minutes, and we closely analysed the information we gained. We sent an email to SNV; with the first draft of Phase 1, and some additional information about our progresses. The next day we made a first draft of a flow-diagram; which we want to use in research question 6. The making of the diagram also made us aware of the stakeholders involved, the processes and the products itself. It is a good way to deal with information. We also made a list on which information we wanted to gain from the internet; for example the SWOT method and photos of Nepalese materials used at the processing of the Chiuri seeds. And we updated out planning and logbook as well.

Week 16 | 18 May – 22 May
On Monday we worked on our report and arranged an interview with the Praja Co-operative to ask the questions that we still had. While working on our report we realised we were still missing some information. So on Thursday we interviewed the man from Praja, and on Wednesday we implemented it in the report. The Chapters 4 and 5 are as good as finished now and we are working on 6 and 7; the value chain and the swot. We started defining Strengths, Weaknesses, Opportunities and Threats. On Saturday we will go to Kathmandu to visit the Manakamana traders organization and maybe some other organizations. We prepared some questions in Nepali for these visits. On the 24th of June is our last day in Tandi; that is also the deadline for finishing our report. This means we have 1 month left to finish our research. On Friday we prepared our visit to Kathmandu; we were going to interview 2 different processing industries who deal with Chiuri Ghee from Shaktikor. We made a list of interview questions and printed them in the local Cybercafé. On Saturday we traveled to Kathmandu, we arrived around 15:00 pm and called our contacts to remind them that we would visit them the next day. On Sunday we went to "Manakamana Soap Industries" and interviewed them about the company. They provided us with a lot of information about how they made soap of the Chiuri Ghee and other ingredients.

Week 17 | 25 May – 29 May
On Monday we went to the Immigration Office of Nepal to get a new visa. On Tuesday we visited "Alternative Herbal Products", a company which's office is based in Anamnagar, Kathmandu. The director was not there, he was still in Joomla for business, but we could speak to a college who could provide us a lot of information about the company. She showed us all the products the company is processing and selling (17 in total); coffee, juices, spices, honey etc. The products are all organic and one of the products is "Mero Herbal Soap" which contains Chiuri Ghee from Shaktikor. We left a (short) list of questions for Govinda Ghimiry (the manager and founder of the company), as we had specific questions about the prices, amounts and transportation of the Chiuri Ghee from Shaktikor. He was not in the office, but he would answer it by email. On Wednesday we traveled back to Tandi and checked our email; we received positive and detailed feedback from our supervisor from our home school, so we had a close look on the recommendations and comments and we printed it out. On Thursday we started to report the minutes from the 2 new interviews in our report and we had a look on our planning. Our supervisor recommended us to point out the way we deal with subjective information and opinions, so on Friday we wrote a chapter about it. On Saturday we focused on the method of our SWOT analysis, and we put some efforts in the lay-out of the report. On Sunday we worked on the method of the SWOT again and on Chapter 7 in general.

Week 18 | 1 June – 5 June
On Monday we read trough our graduation guidebook; to be aware of what is expected from us, and to be aware of the criteria we will be evaluated on in the end. On Tuesday we finished the method of the SWOT worked on our report. Now we almost finished the chapters 6 and 7. But still some work has to be done for the recommendations. We worked on them on Wednesday. We also tried to find a way to communicate this with the community forest committee in Majhbang because we will go there on Sunday to discuss our results. On Friday we called Bishnu Tamang to ask whether he could meet us on Sunday to discuss the meeting of Monday. We could, and he would also go with us to the CFC meeting on Monday to translate for us. Great! Saturday we prepared a list of things that we want to tell and ask the CFC and PC. The family we live with warned us in the evening that there could be strike on Sunday. This turned out to be true when we walked the street on Sunday morning. That meant that there wouldn't be any buses going to Shaktikor and we were unable to reach our research area. We called Bishnu to say that it wasn't possible for us to come and told him that we would make a new plan, and call him when we knew how we were going to do it.

Week 19 | 8 June – 12 June
Because of the strike we could not discuss our SWOT with the locals and Praja Co-operative and therefore we started working on chapter 8 & 9. We merged these chapters, because they are about the same subject. We described the opportunities "Increase Product Diversity" and "Increase Production Quantity" as detailed as possible and we made a list of steps the involved actors should take to initiate the process of these developments. We decided that we will visit the research area only one more time; to present and discuss our results. This presentation will take place on the 17th of June. We asked Gunanidhi Sharma (our Nepalese friend, living in Holland) to translate chapter 8 for us. Chapter 8 is about how to implement the developments; a detailed description of the steps. We want to hand it over to the locals; than all the local Nepali people can read it. They however need a translator to be able to get to know the content of the rest of the report. On Sunday we started to make posters on which the outcome of our research would become clear. We wrote the titles and the other text in Nepali font, and we put a few photographs on it.

Week 20 | 15 June – 19 June
On Monday we worked on the posters and we wrote a discussion. On Tuesday we added pictures in our report and we went trough it to improve it some more. We also made a hand out for Bishnu Tamang; we wrote down which information he should tell at each poster. We printed the report and the hand-out and went to Shaktikor on Tuesday. We met Bishnu Tamang to speak through the plan for the next day; but Bishnu had very little time to prepare the presentation (to study the hand-out), so we decided to use the hand-out by ourselves, we would first tell the information in English and than Bishnu would translate it. On Wednesday we traveled to Tindobahn; were the presentation would take place. There were around 10 people, including the chairman of the Indreni Community Forestry Committee, the manager of Praja Cooperative and local people from Majhbang. We presented our posters in an interactive way, we showed them two examples of Chiuri Soap and after one hour we left again. We gave a hard copy of our report, the 2 pieces of Chiuri soap, and the posters to Praja Cooperative (Dal Bahadur would hang the posters in the office). On Thursday we traveled back to Tandi, and on Saturday we updated our process report and we emailed Chapter 8 and the discussion to our supervisors. We also made an appointment with Vijay Kesari from SNV, to meet them on Monday to present our report and to finish the research.

Week 21 22 June – 26 June - 8 July
On Monday we had our final meeting with SNV; we presented our results and we discussed our research. We pointed some strengths and weaknesses out and we talked about future plans concerning Siddhi VDC and the possibilities regarding the Chiuri. Vijay Kesari and Laxmi Dhuttha were very satisfied with the efforts we put in our project, and they were amazed by our research report. We now officially finished our research and we spend the remaining time in Nepal for enjoyment. On Tuesday we left Tandi and we traveled to Gorkha to visit an organic farm. On Sunday we went to the Kopan Monastry to start a course; a introduction in Buddhism and mediation. This took 7 days and on 8 July we took our flight back home to the Netherlands.

Logbook

Thursday 15 January
-Appointment with Ben Helming & Martin Jansen (Supervisors)

Friday 23 January
-Appointment with Gerrit Koopman

Monday 26 January
-Visited Gunanidhi and Manarupa in Oosterwolde (Netherlands).

Tuesday 27 January
-Went to Assen for our vaccinations.

Wednesday 28 January
-Went to Appelscha for our vaccinations.

Thursday 29 January

Friday 30 January

Saturday 31 January

Sunday 1 February

Monday 2 February
-Worked on Kaliningrad

Tuesday 3 February
-Worked on Kaliningrad

Wednesday 4 February
-Worked on Kaliningrad
-Ordered literature ("Don't let the goats eat the loquat trees" by dr. Hale)

Thursday 5 February
-Called Mr. Heijdra from SNV Nepal on the phone to discuss our project plan.

Friday 6 February
-Finished the Kaliningrad project with a presentation.
-Bought some materials.

Saturday 7 February

Sunday 8 February

Monday 9 February
-Appointment with Ben Helming and Martin Jansen about the specific theme we picked (Community Forestry).

Tuesday 10 February
-Visited Gunanidhi and Manarupa in Oosterwolde (Netherlands).

Wednesday 11 February
-Went to Amsterdam to get our Visa.

Thursday 12 February
-Got feedback from SNV (Leela Rasailly) about Forestry theme.

Friday 13 February
-Went to Gunanidhi in Oosterwolde.

Saturday 14 February

Sunday 15 February
-Wrote new version of project proposal based on feedback from SNV.

Monday 16 February
-Went to Leeuwarden for graduation form.

Tuesday 17 February

-Proposed new subject and methods to SNV (Leela).

Wednesday 18 February

-Worked on final version (Introduction).

Thursday 19 February

-Worked on final version (Goals & Research questions)

Friday 20 February

Saturday 21 February

Sunday 22 February

Monday 23 February

-Appointment with Ben Helming and Martin Jansen.

-Submitted graduation form at student administration.

Tuesday 24 February

-Appointment about former project; Minor Kaliningrad.

Wednesday 25 February

-Got our final vaccinations in Appelscha.

Thursday 26 February

-Visited Gunanidhi and Manarupa in Oosterwolde.

Friday 27 February

-Mailed our final research proposal to Ben Helming, Martin Jansen, SNV, Bishnu and other relevant contacts.

Saturday 28 February

Sunday 1 March

Monday 2 March

-Last appointment with Ben Helming and Martin Jansen before we leave.

Tuesday 3 March

-Preparations.

Wednesday 4 March

-Packed our backpacks.

Thursday 5 March

-Departure to Nepal!

Friday 6 March

-Arrival in Nepal.

Saturday 7 March

-Bought a Nepalese SIM-card.

Sunday 8 March

Monday 9 March

-Checked our email in an internet-café.

Tuesday 10 March

-Holi: National holiday.

Wednesday 11 March

Thursday 12 March

-Visited Hans Heijdra in Patan, Kathmandu. Spoke about our research plans.

Friday 13 March

-Travelled to Hetauda

-Visited Leela Rasaily (SNV) in Hetauda.

-Visited FACOFUN (Community Forestry Federation)

Saturday 14 March

-Visited 3 differents community forestries and their NTFP's.
-Studied some literature
-Checked our emails and prepared for the planned meetings.

Sunday 15 March
-Visited the District Forest Office of Makwanpur District.
-Visited BISEP (Biodiversity Nepal) Office.
-Visited SNV (Leela Rasaily and Vijay Kesari).
-Picked our product, research area and made plans for the next weeks.

Monday 16 March
-Traveled to Sauraha.

Tuesday 17 March
-Talked with staff of the resort about our research.

Wednesday 18 March
-Visited the research area: Shaktikor.
-Visited Bishnu Tamang and Dal Bahadur Chepang (contact persons).
-Got seeds of the Chiuri tree.
-Made next appointment with Bishnu and Dal Bahadur.

Thursday 19 March
-Made planning for the next days.
-Cancelled the DFCC appointment: Strikes and Illness.
-Read some literature about value chains.
-Wrote process report.

Friday 20 March
-Traveled to Pokhara.

Saturday 21 March
-Made planning for Pokhara/Pang/Trekking.

Sunday 22 March
Paragliding and Sailing: Being the tourist.

Monday 23 March
-Sick, read through Chiuri information.

Tuesday 24 March

Wednesday 25 March

Thursday 26 March

Friday 27 March
-Visited the Institute of Forestry in Pokhara.
-Visited the District Forest Office in Pokhara.

Saturday 28 March
-Traveled to Pang
-Spoke with the chairman of a Community Forestry.
-Saw the Chiuri tree.

Sunday 29 March
-Stayed in Pang.

Monday 30 March
-Stayed in Pang.

Tuesday 31 March
-Stayed in Pang.

Wednesday 1 April
-Started our trekking.

Thursday 2 April
-Trekking.

Friday 3 April
-Trekking.

Saturday 4 April
-Trekking.

Sunday 5 April
-Trekking.

Monday 6 April
-Trekking.

Tuesday 7 April
-Went Back to Pokhara.

Wednesday 8 April
-Updated our Planning.
-Made appointment with Gokul Rijal.
-Met Gokul Rijal and a friend (Forestry Students).
-Called Vijay to inform them about our progress.

Thursday 9 April
-Mailed to supervisors.

Friday 10 April
-Worked out a lot of written information in an internet-café.
Applied (Mirjam) for Forest and Nature Conservation at Wageningen University.
-Made interview-questions.

Saturday 11 April
-Traveled to Sauraha.

Sunday 12 April
-Prepared the appointments with the District Forest Office and District Forest Coordination Center of Chitwan District.

Monday 13 April
-Visited the DFO and DFCC in Bharatpur (got some information and titles of literature).

Tuesday 14 April
-Prepared to visit Shaktikor.
-Made a list of activities we want to do.
-Made a rough planning for our visit to Shaktikor.
-Made a list of questions based on the Chiuri.

Wednesday 15 April
-Traveled to Shaktikor.
-Met Bishnu Tamang and Dal Bahadur Chepang.
-Made a more specific planning.
-Decided which research area to pick.

Thursday 16 April
-Walked to Siddhi VDC (Majhbang).
-Explored the Majhbang village and the surrounding Chiuri trees.
-Made an appointment for a meeting on the 17th of April.

Friday 17 April
-Spoke with locals about the Chiuri.

-Got a ghee making demonstration.

Saturday 18 April

-Went to the Chitram Waterfall and saw Chiuri trees on the way there.

Sunday 19 April

-Traveled back to Shaktikor.

Monday 20 April

-Traveled back to Sauraha.

Tuesday 21 April

-Wrote a new blog.

-Made an activity list for Kathmandu.

-Arranged apartment in Tandi.

-Updated our process report.

Wednesday 22 April

-Worked on our process report.

-Mailed our supervisors about our progress.

-Searched for organizations and addresses in Kathmandu.

Thursday 23 April

-Moved to our apartment in Tandi.

Friday 24 April

-Traveled to Kathmandu to gain more information.

-Saturday 25 April

Tried to visit the department of Forestry (closed).

-Sunday 26 April

-Visited the Department of Forestry and the Forest Research and Survey Centre.

Monday 27 April

-Visited the Tourist Service Center of Nepal.

-Tried to visit the Nepal Chepang Association.

-Bought a laptop.

Tuesday 28 April

-Worked on our process report.

Wednesday 29 April

-Traveled to Tandi.

Thursday 30 April

-Worked on the report; question 1, 2 and 3.

-Sent an email to our supervisors about our progress.

-Read literature.

-Sorting our information based on the research questions.

-Made a list of references.

Friday 1 May

-Worked on our report.

Saturday 2 May

-Worked on our report.

Sunday 3 May

-Worked on our report.

-Put some efforts in the lay-out

Monday 4 May

-Worked on our Report.

Tuesday 5 May

-Worked on our report. (Finished concept of question 1, 2 and 3).

-Wednesday 6 May

-Worked on report & prepared visit research area.

Thursday 7 May

-Traveled to Shaktikor.

-Meeting with Bishnu Tamang.

Friday 8 May

-Joined the Community Forest Committee meeting in the neighborhood of Tindobahn.

Saturday 9 May

-Joined a training about Sustainable and Organic Forest Harvesting conducted by 'One World Learning Center'.

Sunday 10 May

-Interviewed Dal Bahadur Chepang and Mahendra Chepang about the Praja Cooperative.

-Traveled back to Tandi.

Monday 11 May

-Processed the information gained into our report.

-Send an email to our supervisors.

Tuesday 12 May

-Worked on our report.

-Searched for a SWOT method.

Wednesday 13 May

-Worked on our report.

Thursday 14 May

-Worked on our report.

-Searched for NTFP information on the internet.

Friday 15 May

-Worked on our report. (Chapter 4,5 and 6)

Saturday 16 May

-Worked on our report. (Methods & Value Chain)

Sunday 17 May

-Worked on report.

Monday 18 May

-Worked on report.

-Arranged interview.

Tuesday 19 May

-Interview with Dal Bahadur Chepang and Bishnu Tamang.

Wednesday 20 May

-Processed interview information into report.

-Updated logbook.

-Updated process report.

-Worked on report.

Thursday 21 May

-List Strengths, Weaknesses, Opportunities and Threats of the Chiuri value chain

-Selected S,W,O and T's and put them in a confrontation matrix

-Made a list of interview questions as preparation for the next appointments in KTM

Friday 22 May

-Improved the matrix

-Mailed chapters 4,5,6 (and the beginning of chapter 7,) and the method to our supervisors

-Called contact persons of 'Manakamana Soap Industries' and 'Alternative Herbal Products' and made appointments with them.

Saturday 23 May
-Traveled to Kathmandu

Sunday 24 May
-Interviewed "Manakamana Soap Industries"

Monday 25 May
-Issued new Visa.

Tuesday 26 May
-Interviewed "Alternative Herbal Products"

Wednesday 27 May
-Traveled back to Tandi
-Had a close look on the feedback from supervisor from Holland

Thursday 28 May
-Reported information from the interviews in Kathmandu
-Had a close look to our planning
-Wrote the explanations of the combinations (out of the SWOT analysis)

Friday 29 May
-Updated process report
-Worked on research question 6
-Wrote a chapter about how to deal with subjective information
-Worked on the SWOT matrix

Saturday 30 May
-Focused on, and reported the method of our SWOT analysis

Sunday 31 May
-Worked on the Method of our SWOT analysis
-Worked on Chapter 7 in general

Monday 1 June
-Read trough our 'graduation handbook'

Tuesday 2 June
-Worked on chapter 7; finished the method of the SWOT

Wednesday 3 June
-Updated process report
-Implemented the information, Govinda Ghimiry sent by email, in the report
-Put some efforts in the lay-out of the report

Thursday 4 June
-Worked out recommendations
-Prepared method on how to present our results to Community Forest Committee

Friday 5 June
-Finished chapters 6 & 7
-Mailed chapters 1 till 7 and the method to supervisors

Saturday 6 June
-Contacted Bishnu Tamang to arrange the last practical issues
-Thought of a way to discuss with the locals
-Last preparations on meeting

Sunday 7 June
-We wanted to go to Shaktikor but is was not possible due to another strike.
-Made a new plan on discussing the results and recommendations with the local people.

Monday 8 June
-We could not go to the Indrendi Community Forest Meeting due to the strike.
-Decided to merge chapter 8 and 9 together and worked on the content of it.
Tuesday 9 June
-Wrote steps for implementation of improvements.
Wednesday 10 June
-Had contact with Bishnu to arrange a new meeting on the 17th.
-Worked on chapter 8: steps for implementation.
Thursday 11 June
Friday 12 June
-Finished chapter 8 of our report.
Saturday 13 June
-Worked on Method (chapter 8)
-Called Gunanidhi to ask if he's able to translate chapter 8 before Tuesday.
-Received new feedback from Ben Helming.
Sunday 14 June
-Made posters (in Nepali) for presentation in Shaktikor.

Monday 15 June
-Prepared Visit Shaktikor
-Finished report
- Added pictures
- Wrote discussion

Tuesday 16 June
-Travel to Shaktikor
-Meet Bishnu Tamang; speak though planning for next day
Wednesday 17 June
-Poster presentation in Tindobahn
Thursday 18 June
-Traveled back to Tandi
Friday 19 June
-Emailed the discussion and chapter 8 to supervisors
-Made appointment with Vijay Kesari, SNV
Saturday 20 June
-Updated process report
Sunday 21 June

Monday 22 June
-Final meeting with SNV, in Hetauda; feedback and evaluation. _____Research Finished
Tuesday 23 June
-Travel to Gorkha: organic farm
Wednesday 24 June
-At Organic Farm Gorhka
Thursday 25 June
-At Organic Farm Gorhka
Friday 26 June
-Travel to Kathmandu: visit another organic farm
Saturday 27 June
-At Gamcha Organic Farm
Sunday 28 June

-Start Course in Kopan monastry

Monday 29 June
-At Kopan Monastry
Tuesday 30 June
-At Kopan Monastry
Wednesday 1 July
-At Kopan Monastry
Thursday 2 July
-At Kopan Monastry
Friday 3 July
-At Kopan Monastry
Saturday 4 July
-At Kopan Monastry
Sunday 5 July
-At Kopan Monastry

Monday 6 July
-Buying souvenirs in KTM
Tuesday 7 July
-Buying souvenirs in KTM
Wednesday 8 July
-Traveled back to the Netherlands.
Thursday 9 July
-Arrival at Schiphol Airport
Friday 10 July
-Meeting with Ben & Martin.

Monday 24 August
-Pre- presentation
Wednesday 26 August
-Official graduation presentation

Appendix C: Minutes

Date:	**15 January 2009**
Location:	Leeuwarden, Van Hall Larenstein
Persons present:	Sjouke Bakker, Ben Helming, Martin Jansen, Mirjam Oosting

Tijdens deze bespreking werd ons eerste concept projectvoorstel besproken. Er waren vrij veel opmerkingen en het belangrijkste is dat we ons moeten bedenken WAAROM we dit onderzoek doen, en voor WIE.

Wie is de opdrachtgever? Bishnu's organisatie of SNV? Literatuurverwijzingen in het projectplan moeten meteen goed gedocumenteerd worden om chaos te voorkomen. Als iemand meer over ons of over Plattelandsvernieuwing (PLV) wil weten kan hij/zij contact opnemen met Ben Helming. We moeten goed duidelijk krijgen voor onszelf wat het eindproduct wordt en voor wie we dat schrijven. Hoe we dat gaan bereiken kunnen we handig weergeven in een 'flowschema'.

Waarom kiezen we drie gebieden? We kunnen beter 1 gebied goed onderzoeken, en in de andere 2 alleen maar een klein aspect bekijken om dat te kunnen vergelijken.

We moeten ook in ons projectplan zetten hoe we thuis (ouders) te bereiken zijn.

We moeten een concreet onderwerp kiezen waar we ons op kunnen toespitsen, als Beni het te ontwikkelen gebied is kunnen we ervaringen uit de andere gebieden meenemen.

We moeten nog meer andere organisaties hebben die ons kunnen helpen aan informatie in de vorm van literatuur en natuurlijk begeleiding.

Wat wordt ons eindverslag? Een inventarisatie? Aanbevelingen voor iets? Waar wordt lokaal of door gespecialiseerde organisaties om gevraagd?

Date:	**5 february 2009**
Location:	Appelscha
Activity:	Telephone Call with Mr. Heijdra of SNV Nepal

On Thursday the 5th of February we had a conversation by telephone, with mister Hans Heijdra of SNV Nepal. We were asking for research opportunities in ongoing forestry projects of SNV.

SNV is mainly a advisory organization, but it does have a few implementation projects as well. One of them is a forestry project in the neighborhood of Chitwan (in the Terai) . The project is about how to implement a concept like the 'community forestry concept' in the Terai.

The community forestry concept in Nepal is an approach towards participatory forest management by local people. It is already implemented in the some hilly areas of Nepal, were the locals now have the responsibility of their own forest. The locals of the hilly areas can be seen as the regional 'indigenous' people, they have lived there all their lives and there is a minimum influence of migration. The community forestry concept is based on the 'indigenous' user group.

There is al lot of forest in the Terai zone, and a community forestry concept should be profitable here. But there has been a lot of migration in this zone, a lot of farmers from the hilly areas, for example, had to migrate to the south in order to survive and to get some farmland. The population in the southern regions is a very diverse and exist from people with different backgrounds, due to migration. There are no regional 'indigenous' groups, and the forest they will be responsible for has not always been 'their' forest. So the basic variant of the community Forestry concept, which is used in the hilly area, cannot be applied in the Terai.

SNV Nepal attempts to implement an adapted variant of the community forestry concept in the neighborhood of Chitwan: a "collaborated forestry management group". Therefore they first have to create a framework, in which all aspects are taken into account.

Maybe we can participate in this project, but we have to wait for an approval.

Date:	**9 february 2009**
Location:	Leeuwarden, Van Hall Larenstein
Persons present:	Sjouke Bakker, Ben Helming, Martin Jansen, Mirjam Oosting

On Monday the 9th of February we had the third appointment with our supervisors at the Van Hall Larenstein. We discussed the responsibilities of SNV, the organization which we will do our research for. The final assessment is 100% the responsibility of the Van Hall. They decide whether we graduate or not.

We also discussed the theme we have picked: Community Forestry Management. We explained the concept and our supervisors proposed some methods we could use in our research. First we will have to analyze some areas; we need to know what Community Forestry means. After that we can research our pilot area to analyze whether Collaborated Forestry is possible there and what adjustments would be necessary in the concept.

We have to mail SNV, Hans Heijdra, with specific goals that we want to reach and targets that we are aiming for. We also are going to send him information about the process in the Netherlands. (We need to have a definitive project proposal within 2,5 weeks. We need to think about the measurability of our research. (Methods). The email to Hans Heijdra will also be sent to Ben and Martin.

Date:	**13 march 2009**
Location:	Hetauda, Office SNV
Persons present:	Sjouke Bakker, Mirjam Oosting, Leela Rasaily

On monday Laxmi and Vijay will be in Hetauda for a portfolio meeting so that will be the best time to decide on the NTFP and research area. Maybe it is also possible to meet on sunday. A possible area is the Chepang area. SNV has 15 years of experience with the Chepang people. Good sources for information are the DFO, district forest office, DFCC, district forest coordination center, and FACOFUN, an organisation for Community Forestry Committees. The institute of forestry is also in Hetauda so we could also visit there. There is a recent draft of a timber value chain analysis done by SNV. We could use that to study the value chain analysis method. There also have been analyses of the Asparagus (Kurilo) and of Lemon Grass. A 'portfolio' of SNV is a regional office.

On sunday afternoon we made an appointment with Leela and Vijay to discuss which research area to choose and which non-timber forest product. We also can visit the FACOFUN and see some forest products with them. Sunday at 11.00 AM we can visit the DFO of Makwanpur District. There is also the District Development Office (DDC) and this could also be a good source of information.

Date:	**13 march 2009**
Location:	Hetauda, FACOFUN Office
Persons present:	Sjouke Bakker, Mirjam Oosting

Every district in Nepal has it's own FACOFUN. It is an association of collaborated forest users. Forest Committees become a member of FACOFUN to take a stronger position when they have certain problems. For example they played a big part in lowering the income taxes. There is also a central FACOFUN which is based in Kathmandu. This office has 54 members and there are special rules of becoming a member, to make the organization representative. They have members from every ethnic group in Nepal. There is 1 meeting in the month. Only the permanent members attend this meeting. FACOFUN is the only organization for and by User Groups in Nepal. The biggest problem of CFC is the distribution of resources. People don't know how to divide the cooperative income. There is a lack of knowledge. FACOFUN tries to promote a market by improving price and production. They improve awareness of the product and the quality of it. That is difficult because there is too little technology.

Value chain: Making a link to as many different markets and sectors as possible for the biggest benefit.

We made appointments to go into the field tomorrow to see Kurilo, Bamboo and Bio-briquettes.

Date:	**14 march 2009**
Location:	Surroundings of Hetauda
Persons present:	Sjouke Bakker, Mirjam Oosting, Trishna, Preshpa.

Chuhga Khola Community Forest

First community forestry commitee in thi district 2041 BS, In earlier days the people were only the caretakers of the forest, but after 2047 (forest law) they could also profit from it. The fores is 279 ha. The kurilo now died because of the lack of water. In the community forest cattle grazing is not alloud. Locals can collect grass and wood, but there are some rules and restricted areas and everybody knows. They also collect leaves which they use for natural plates. Kuriloo is used as a medicine, but they don' t know for which illness. Water is coming from a pipeline, which was developed 35 years ago. It provides drinking water. Each month the calculation is done. On the following topics: what they sold, date, document number, particular name of product, how much money, categories from where money comes, waste part (also used as fuel), lone from outside, income, advanced money. Everybody is presented when the members pay, it is lead by the office secretary.

In former days it was just bare land, because people cut the small plants in order to gain more grassland. Floods caused then large problems and were a danger, the people were almost forced to replace there settlement, but than they decided to preserve the forest. The committee made the people aware to preserve the land. So after many years the problem was solved and replacement was not needed anymore. The VDC has 900 households, and they are all members of the Community Forestry. It is not a city area, and the economic status is not equal. CF make it equal, to work with reasonable prices, and they provide goods. The community welfare poverty allevation programme, is providing small constructions, like bridges and they give goats to the poorest people (is the goat have given birth, they have to give the young goat back to CF. So the treatment of the poorest people is very well organized. The CF also supports environmental education (bioplant / gas).

Chitrai Pani Community Forestry

The chairman, secretary, and member were presented.

Their main product is bamboo, they have a plantation. Bamboo has 2 functions; protection and production. The bamboo is planted along the riverside and it holds the soil together, when floods occur. When you once plant a bamboo plant, you don't need to do it again. IN former days it was bare land with a lot of floods. When it was handed over to the community, they protected it with bamboo. The CF is selling the bamboo to village people, so only for local use (building houses or constructions). One bamboo piece costs 12 rupees and the CF has got an income of 12000 rupees per year. There are 500 households. The locals also are making handicrafts from forest products. There are rules about the amount of bamboo people can sell from the CF; it has to be based on their needs, the have to give application first. And for example; for poultry farmers the maximum is 100 pieces. There are a few other forest products; the Sala plant provides juice which becomes a warm medicine, and can be sold. They earned 35000 rupees from this liquid this year. The CF has got future plans to develop the area and preserve the environment at the same time. They want to improve their production (increase forest land with 7 ha, supported by BISEP), try some new plants and develop a tourist area (picnic place etc.), so they don't need to go outside to earn money. There is also the programme for poverty alleviation, which includes different trainings for women groups, like tailoring and making handicraft, supported by BISEP. Resin is used in various ways (raw or candles) but they only earn 5 rupees for one kilogram.

Briquettes

The women burn bushes in a trunk and then the mass is pressed into coal, after that it is grained. And than the substance need to exist of 1% mud and 3% coal, it is pressed is a special form and baked off in the sun. They sell it in there local depot for 8 rupee, but they also sell it in Kathmandu, then for 10-15 rupee. The briquettes replace firewood, and are in that way a sustainable product.

Date:	**17 march 2009**
Location:	Shaktikor, Multipurpose Visitor Centre.
Persons present:	Sjouke Bakker, Mirjam Oosting, Dal Bahadur Chepang, Bishnu Bahadur Tamang.

There are a lot of chiuri plants growing in Siddhi VDC. 85% of the people in Siddhi are Chepang. We could stay a few weeks in the area. There are sleeping accomodations. It takes 1,5 hour to go from Tandi to Bharatpur (to visit the DFO). The office of the Chepang Organisation was established in 2055 BS. It has 365 members and tries to develop more facilities for the local people. For example honey and other products are bought from the locals and the organisations sells these products to other people. In July the chiuri seeds are ripe and people will harvest them. We could do the Chepang Hill Trail trek and visit the Chepang museum next time we will be in Shaktikor.

Date:	**13 April 2009**
Location:	Bharatpur, DFO Chitwan Office
Persons present:	Sjouke Bakker, Mirjam Oosting, Bishnu Paudel

We had a meeting with Bishnu Paudel, the district forest officer. He told us that there are 46 community forests in Chitwan. There are also some leasehold forestry's, these are forests given by the government to local (poor) people for a time of 30 - 40 years. In this way they can earn some money with the forest and develop facilities or other things to improve their livelihood. Bishnu also advised us to go to the Department of Forestry in Kathmandu. He gave us some names and addresses.

Date:	**15 April 2009**
Location:	Shaktikor
Persons present:	Sjouke Bakker, Mirjam Oosting, Bishnu Bahadur Tamang.

In Siddhi VDC, in ward 6, is a village called Majhbang. In this village is a homestay and there are a lot of chiuri trees. It is a 5 hour walk from Shaktikor and from Majhbang it is 3 hours walking to the big 'Chitram Waterfall'. There are 6 community forests in Siddhi VDC. We will need a local guide to translate for us because the Chepang people don't speak English. We made an appointment to hold a meeting on the 17th of April with local people to learn how they use the chiuri.

Date:	**13 April 2009**
Location:	Bharatpur, DFCC Chitwan
Persons present:	Sjouke Bakker, Mirjam Oosting,

The DFCC has been set up in cooperation with SNV. The DFCC is coordinating governmental and non-governmental organizations related to forestry. They could not provide us with information however. They advised us to hire a junior forester that could translate and find information for us.

Date:	**17 April 2009**
Location:	Majhbang
Persons present:	Sjouke Bakker, Mirjam Oosting and others.

Majhbang has 75 households. Every household is the owner of 15 to 20 chiuri trees. The harvesting season of the Chiuri is in July. After harvesting the seeds are spread out and are being dried for one month. Then they are stamped and water is added. The remains are being squashed between 2 long trees and that way the Ghee is extracted. There are a lot of different uses for the chiuri tree. It is used for medicine, when people have stomach problems and cramps. The Ghee is used in curry, bread and porridge. The people use the Ghee locally but they also sell it in Shaktikor and Tandi. The entire village of Majhbang sells about 200kg of Ghee. They sell 1 kilo for 150 rupee.

The also sell the unprocessed seeds for 50 rupee per kilo and the fruits for 25 paisa (0,25 rupee) per kilo.

The people transport the Ghee from Majhbang to Tindobahn by foot and from Tindobahn to Shaktikor they use a bus or tractor. This happens only once in a year, in September when the Ghee production has finished. The Praja Cooperative in Shaktikor buys the products from the locals and resells them. They sell to Kathmandu and to Ghorka (in Ghorka is another organization which also sells internationally). The Chiuri also produces juice but people don't know how to use this. They only use it when they are thirsty while harvesting.

The Chepang Hill Trail was set up 3 to 4 years ago in cooperation with different organizations.

The locals sell 200 kg and keep 15-20 kg for themselves.

Date: **10 May 2009**
Location: Shaktikor, Praja Co-operative Office.
Persons present: Sjouke Bakker, Mirjam Oosting, Dal Bahadur Chepang, Bishnu Bahadur Tamang, Mahendra Chepang.

Products (from Majhbang)	Price to villagers (1 kg)	Sale to	Price (1 kg)	Transportation	Amount in 1 year
Ghee	**100-125 Rupees**	**Locals**	**130-140 Rupees**		**2000 kg in total.**
		Manakamana Traders in Kathmandu	**130 Rupees**	**The MKT transports it themselves.**	
Honey	**130 Rupees**	**Locals and local traders**	**175 Rupees**		**5000 kg in total.**
Pina	**10 Rupees**	**Locals**	**12 Rupees**		**??**
Tezpa	**20 Rupees**		**25 Rupees**		**300 kg**
Amala	**45 Rupees**		**55 Rupees**		**200 kg**
Harro	**15 Rupees**		**20 Rupees**		**900 kg**
Barro	**13 Rupees**		**16-20 Rupees**		**1500 kg**
Gurzo	**12 Rupees**		**15-20 Rupees**		**3000 kg**
Kurilo	**150 Rupees**		**170 Rupees**		**500 kg**
Ritha	**20 Rupees**		**25 Rupees**		**1500 kg**
Tejpa	**20 Rupees**		**25 Rupees**		**500 kg**
Seeds???	**50 Rupees**	**Only processing**	**See Ghee.**	-	**??**
Fruits	**25 Paisa (0,25 Rupee)**				

The Praja Cooperative has a machine for extracting oil from seeds. They use this for Chiuri, mustard and other products. 2,5 kg of Chiuri seeds delivers about 1 kg of Ghee. This means the yield of this machine is between 40% and 50%. The yield of the authentic machine that the chepang people use, the Chepuwa, is between 30% and 40%. The taste of this 'original' Ghee is better; the machine produces a more bitter Ghee. The machine is driven by a 15 horsepower electromotor.

Praja cooperative sells the Chiuri Ghee mostly to locals and local businessmen. They sometimes have a contract with a bigger organization. At this time they have a contract with 'Manakamana Traders' from Kathmandu and they buy large quantities of Ghee. Traders who buy bigger quantities can have a 5 rupee discount per kg.

They only buy Chiuri seeds from local people and then they process it into Ghee. They also don't buy the Chiuri flowers because there is no use for them. They sell the Pina to local farmers who have problems with insects on their lands. The Pina works as a pesticide.

The main products of the Praja Cooperative are local honey, Chiuri Ghee and some medicinal NTFPs. The honey produces better money than the others. In one year they sell 4000-5000 kg of honey for 175 rupees per kg. This means with the honey they make about NRP 780000,- rupees in one year. They buy it from local people for 130 rupees so they make a profit of NRP 200000,- rupees (€ 2000,-) every year. The one responsible for buying and selling the products is Dal Bahadur Chepang. There is also other staffs that are at the office when local people come to buy or sell their products. There are 5 staff members and their monthly salary is 3000 each. Dal Bahadur is working for PC for 8 years now so he know many people and makes phone calls to ask them how much products they need.

Ward 6 of Siddhi produces 700 kg of Chiuri Ghee (2000 in 5 VDCs) so this is very much.

The CFC is not only conserving the forest but with the money they earn from selling the products they are making roads, plantations, taps, irrigation systems and others things. A member of the CFC has the position for 2 years and then someone new will take his place.

On school there is some education about the environment. The school in Shaktikor (& Majhbang?) is fully in Nepali except for 1 class, which is in English. From class 6 – 10 they have environment education.

Date:	**7 may 2009**
Location:	Indrendri Community Forest Committee Meeting
Persons present:	Sjouke Bakker, Mirjam Oosting, Dal Bahadur Chepang, Bishnu Tamang, Indrendri CFC

Name of the CFC: Indrendri

Location: Ward 1 and 6 of Siddhi.

People Present;

Gayasing Chepang (Chairperson)

Debjung Tamang (Vice-chairperson)

Kaji Chepang (Founder)

Chandra Bahadur Tamang (Secretary)

Milan Chepang (Vice-secretary)

Man Kumari Chepang

Man Mahyah Chepang (Monitoring)

Buddhima Tamang

Junmahjah Chepang

Ritula Tamang (Accountant)

Jit Bahadur Tamang (Advisor)

Man Bahadur Praja (Advisor)

The Indreni Community Forestry was established 14 years ago. Before it became a community forest, it was a national forest. The area was selected to become a community forest and when the 13 member management committee was founded, they started to make a management plan, together with DFO. In starting time they had no money, but all the members of the community saved 5 rupee each month. And than after 10 years they could sell wood. And 4 years ago it is transferred to the community. When a new family is moving to the area, they have to pay 100 rupees to become a member of the community forestry. In the beginning the conservation was easily; only grass and wood. The committee has got 4 staff, 3 for conservation and 1 secretary. The sell wood from community forestry, with the earned money they build roads, invest in agriculture, drinking water or plantations. The committee gives loans to poor people. They also support old people. They have a plan to make a Chiuri plantation (1500-1600 plants) next year, in a blank area. The community forest area is 454.15 ha, and the borders are: Kalika community (forest is border), Daurali, Ambrit Tarapani Community Forest (west), Nibuata and Koerla. The Chiuri production is decreasing, and the local people think that is due to bee-keeping. The bees are brought from town in favor of the honey production, but they consume the juice of the Chiuri. As a consequence the seeds are falling down before they are ripe, and so there is less production. The bees also affect farming; especially the corn farming. There are 40 – 45 items harvested, but not for selling. They now are conserving it.

The District Forest office made the management plan; after the Indreni CFC handed in their first draft of the Forest management plan, the DFO made some changes and put extra information in and they finally approved it. It is a 5 year management plan; and it only valid for one more year now. People personally harvest Chiuri. In the community forest there are 2000-3000 Chiuri trees, those are not private. There is no Chiuri harvesting in the community, because of the low quality of the seeds, well some people do, they bring and sell it in Shaktikor. There is no permission needed on harvesting products. Only members are harvesting the products and they are free to harvest as much as they want. There is a lot of private land, too much. The most important forest products of Majhbang are; wood, grass, NTFPs (Amala, Gurjo, Ten Paatch, Jasmin). They sell the products to villagers and Praja Cooperative, the prices differ a little bit, Praja Cooperative is paying 5-10 rupees more per kilo. The flowers of the Chiuri are not processed or sold, some people consume the juice, but that's all. When it is flowering time, many animals, birds and bats (in night time) eat the nectar of the Chiuri flower.

The people use the leaves of the Chiuri, for fodder and for making roti (bread); they bake the bread between the coals of the fire within 2 Chiuri leaves. The Ghee of the Chiuri is used for curry, roti, pain on

feet, pain on lips and fire wounds. One household is consuming 60 kg of Chiuri Ghee in one year. All the Chepang people use Ghee, if they finished their supply they will buy it from their neighbors. In other areas of Nepal people mostly use cow-Ghee, which is sweeter and easier to gain than Chiuri Ghee. The people who harvest and process Ghee do not need to pay the community forest.

When the Chiuri seeds are pressed in the Chepuwa, or in the machine, there is left a waste product in the basket; called Pina. Pina is used in farming as an insecticide and it is used with fishing as a fish poison.

The people don't try to make new products; because they don't have any knowledge about it.

The responsibilities of the CFC are; conservation of community forest, the new plantation, developing the awareness programme. The activities of the CFC are related to those topics, they for example have a cutting system; cutting worse branches out of trees.

Date:	**9 may 2009**
Location:	Praja Cooperative Office, Shaktikor
Persons present:	Sjouke Bakker, Mirjam Oosting, Shyam Hada, Armin Dieckmann, Flo Schmidt & 17 participants.

Training Sustainable Wild Harvest of Forest Products

Rishi was doing the introduction; he is working for 'Eco-Center', a NGO in Narayangadh. He was interacting with the participants immediately and asked them about with forest products were harvested 20 years ago. They wrote it down on a large piece of paper and the participants noticed that there were much more NTFPs harvested in the past. Now the plants are getting old, while the population is increasing; and taking the plants. Sometimes businessmen come to Shaktikor, to buy a specific product; Ghee, honey or a NTFP. The people sell it to them, but they don't tell them that they have much more products; so bad marketing. When the group was discussing about sustainable harvesting, one man said; "the selling and protection of NTFPs is the responsibility of the NGO's, not ours." The management has to be changed; the natural resources exploitation and the promotion of tourism. More development is leading to more spending; when modernization is taking place; people have to pay more. People have to follow organic system; in they end they can earn more money. One reaction of a participant: "there is a cooperative, located on the highway of Kathmandu, and they planned to organic farming a few years ago. But the vegetables were much smaller, than the non-organic ones, so the people did not sell the organic ones." It takes time for the soil to adapt to organic farming, it is long-term process. Another reaction from participant; "I started to use organic pesticide on my corn, and the corns are bigger than the ones I grew before!" Organic farming has got a constraint; the soil needs more and more organic nourishment; while with chemicals every year there is less needed.

Some guidelines on sustainable harvesting of forest products:

- Don't harvest from the first row of trees on the border of the forest; those trees are important, because their seeds are falling down on the new grounds and so the forest can expand naturally.
- Don't harvest the first plant of a species you see. It may be the last one and then it has the chance to reproduce. This is good for the biodiversity.
- Respect the nature, and worship when products are harvested. Thank the plants.
- Don't stand on the roots of the trees (the near surrounding of the tree) or plants; young saplings are growing there and too much walking will make the soil more compact which is not good for the roots.
- Harvest from the top to the bottom of the hill, so in case of landslides and bushfires not all the harvest will be lost.
- Don't take fruits of sick trees, in stead give protection to give opportunity to heal.

During our lunch break, the participants got the task to come up with a plan on how to do sustainable harvesting; with good benefits. An example; Farming on piece of land of the community forest could earn more money to develop the area. And change the land every two year; because of landslides.

After the break the plans were discussed and further benefits on organic sustainable harvesting were mentioned. The participants received a handout with all the information that was given to them so they could read it through and later teach their family and other people in the village what they had learned today.

Shyam later told us, when we were evaluating, that he hoped that one or two people had really understood the necessity of sustainable harvesting and that they would try to convince others. It is a process of years, and this is only one step in the good direction. But every step counts. Some time before the harvesting season (july-august) they will arrange a follow-up meeting to make the people remember the importance of not over-exploiting the forest.

Date: **2009**
Location:
Persons present: Sjouke Bakker, Mirjam Oosting

Activity	Season	Materials	Working Hours	Location	Value/Price	Buyers
Harvesting Seeds	**Asar to Bhaday**	**Basket (Rome), Bag (Jabi), Doko, Dali, Kore**	**5-6 hours per day**	**Private land (Khoriya) or Community Forest**	**20-25 rupees per kg**	**Praja Cooperative**
Removing Pulp	**Asar to Bhaday**	**Hand**		**" "**	**0. They drink the juice and feed pulp to goat and pig**	
Cleaning in Water	**Asar to Bhaday, directly after harvesting**	**A lot of Water, Basket**	**30 minutes**	**River or tap, sometimes in house.**		
Drying	**Asar to Bhaday**	**Mandro, Jhapra**	**15 minutes and 1 week to dry**	**In home, over the fireplace**		
Crushing	**Last of Asar to any time, any year**	**Dong, Musal, Dhalei, Basket, Burning the seeds; dikeli, water and fire.**	**12,5 kg for 2 hours**	**House**		
Steaming	**Directly after Crushing**	**Dikchi, Water and Fire.**	**1 hour**	**House**		
Pressing	**Directly after Steaming**	**Chepuwa, Stick (Kokcing)**	**15-20 minutes**	**Near to the house.**	**12-15 rupee per kg Pina.**	**PC and Villagers**
Storing	**Within 12 hours after pressing. (before solidification**	**Plastic pot, Silver pot, Wooden pot. Crown of Banana tree and bamboo.**	**10 minutes**	**In cornerside of home**	**100-125 rupee per kg.**	**PC and Villagers**

Men climb into the trees and women pick up the seeds from the ground.

Date:	**23 May 2009**
Location:	"Manakamana Soaping Traders"; Balaju, Kathmandu
Persons present:	Youkta Dhakal, Deepak Dhakal, Sjouke Bakker, Mirjam Oosting

Youkta and Deepak Dhakal are the founders of Manakamana Soaping Traders, they founded it 3 years ago, and they supply to all districts.

"Manakamana Soaping Traders" is processing 4 different kinds of organic soaps: one of them is Chiuree soap.

- Rose Face wash
- Jadjbutj Soap
- Neems Soap
- Chiuree Soap

They only need Chiuri Ghee for the Chiuree soap (not for the others). Many companies who buy Chiuri Ghee also buy natural oil; coconut oil from India, lemon grass oil and camo oil. The last 2 are very expensive; lemon grass oil cost 16.000-18.000 rupee per liter and Camo oil is even more expensive, 1 liter oil cost 40.000 rupee. The Chiuri Ghee is the cheapest ingredient in the Chiuri soap.

They buy the Ghee at 2 different organizations: Praja Cooperative in Shaktikor and a local trader in Nepalganj. There is no difference in quality of the Ghee, compared to those two organizations. Manakamana needs 500 liters Chiuri Ghee per month, (60.000 liter per year) and they are a medium sized factory.

The market price of the Chiuri soap is 120 rupee (90 rupees without rent, 5 rupees profit). They sell it for 115 rupees to clients. The amount of client increased a little bit compared to last year; last year they had 20 clients, and they sold 1000 pieces of soap. Those clients sell a lot of soap and they distribute it. This year Manakamana predicts that they will sell 20.000 pieces of soap. The demand is increasing, due to marketing; the people know the product and its good quality.

There are some developments regarding export to foreign countries. Deepak is working in a Cargo company as well and there he is also doing some marketing for Manakamana. Businessman from; Russia, Spain and Thailand already have samples soap pieces (22-30 pieces) for trying, they seemed to be very interested so maybe it will work out. Youkta and Deepak say that they put a lot of efforts in marketing; they go into the field and they provide good quality and personal service. They however do not have a website.

There are 8 staff members (excluding Youkta and Deepak), and they get different salaries; between 2500 and 3000 rupees per month. The work 8 hours per day from 09.00 till 17.00, 6 days a week (Saturday is their holiday). If full manpower and materials are available, they can produce 3000 pieces of soap in tree days. So the maximum capacity is 1000 pieces of soap per day. They only sell a 100 per day, so there is overproduction and too less sale. The factory lost a lot of money; spent 1000 pounds on machinery. There is a lot of capacity, but they have to expand their markets. Per year they process 20.000-30.000 pieces of Rose soap and Jutabuti (together). And they produce 15.000 pieces of Rose soap per year; there is a big market. There are no chemicals in the soaps; no complains from customers, so that's the prove for the good quality. 5-10% of the soap goes out of the Kathmandu Valley, 90% is sold Pokhara Chitwan

Praja Cooperative

They visit Shaktikor 4 to 5 times per year; it depends on the demand for Chiuri soap. Last time they bought 150 liters of Ghee and it cost 140 rupee per liter. They got a discount of 10%, but they also had to buy the bottles, where 17 liters of Ghee are put in. Those bottles cost 60 rupee, but can be re-used. Shaktikor is a small area, Manakamana can only buy 300 liters from them. They have a small machine and they can only provide Ghee in June-July. If Praja Cooperative produced more liters of Ghee, Manakamana would buy more of it. Or if they sold direct materials; not Ghee; only 2 months (june-july). Manakamana is also buying other products from Praja. They buy honey, (100kg per year; 150 rupee per kg), Holdie (yellow color masala), oil mosterd (200 kg per year; 180 rupee per kg) and Ritha (250 kg per year).

Nepalganj

There is not an organization like Praja Cooperative in Nepalganj, it is done individually, there are more than 50 people who are selling Ghee. But the person who is the main collector and seller of the Ghee is: *Ram Chantra Tharu.* He is using the machine (rented) and is selling large quantities of Ghee. Manakamana

buys 1000 liter of Chiuri Ghee per year from Nepalganj. They pay 125 rupee per kg Ghee, and they go twice a year to Nepalganj, for doing business.

Transport

They transport the Ghee by their own; the transportation costs for Shaktikor are: 250 rupees for the bus Kathmandu-Tandi, and 35-50 rupees for distance Tandi-Shaktikor. The total transportation costs are 600 rupees, which means 4 rupee per liter Ghee.

When they have to go to Nepalganj (200km far), the total transportation costs are 2000 rupees, that means 2 rupees per liter Ghee.

Date:	**25 May 2009**
Location:	"Alternative Herbal Products"; Anamnagar, Kathmandu
Persons present:	Sjouke Bakker, Mirjam Oosting, Ranjana Pathak.

Alternative Herbal Products is a company which sells 17 different kinds of products. They sell organic spices like cardamom, garlic, coriander, turmeric, chili, cinnamon, ginger and mustard. They also sell organic coffee and honey. "Berry berg" is a fruit juice made of Seabuckthorn. Their most sold product is 'Marmelous'; a bael fruit squash and Aloe Vera juice. They also sell "Mero Herbal Soap" which contains Chiuri Ghee.

The organization is growing. Last year they had a total turnover of 40.000.000 rupee but this year (Nepalese year: April 2008 until April 2009) it was 60.000.000. 10-12% of this amount is net profit. The organization was founded 8 years ago, in 2058 (2001), by Mr. Govindra Ghimire. It was founded with the help of SEACOW and the last three years it has functioned fully without the support of SEACOW. The organization processes Chiuri Ghee for 4/5 years. When the company was founded they only sold "Marmelous Juice".

The average salary is 7000/8000 rupee for one month. Of course the managing level earns a different salary than the processing level employee. The working hours of the employees are 10.00 to 17.00 from Sunday to Friday. The company has 9 shareholders, including Govindra Ghimire.

All products are produced with appropriatie technology; no industrial or chemical processes. Impact on environment is nearly zero in processing. Especially Bael and Seabuckthorn juices promote forest conservation.

Buying of Ghee
All the Ghee that AHP buys comes from Shaktikor. The raw materials that they need for other products are from all over Nepal. They also buy other products from Chitwan, like honey. They transport everything by bus or by truck, depending on the amount.

Processing
The factory where the soap is made is located in Bhaktapur. The organization has 14 staff members, the shareholders not included. Other products are made in other factories. AHP has one office but multiple factories (in Bhaktapur, Kausaltar, Lahan and Bardiya

Sale
There is a lot of competition from other companies, they try to market their products by improving the quality and service. They market the product, not only by making phonecalls but also by going into the field and convincing wholesalers and other customers to buy their products. Chiuri Ghee is exported internationally and the other products are sold all over Nepal. AHP sells the Chiuri soap for 58 rupee. They can offer this price because they have good processing machines which can produce a lot of soap without a lot of staff costs. AHP sells over 1000 pieces of soap every month. This means they sell about 12.000 to 15.000 pieces in one year.

Future plans
In 2010 they want to start the sale of Chiuri Cream. They already have the raw materials and production machines; they will start production in the winter of 2009/2010. The raw materials for this cream are Chiuri Ghee and other fragrances.

Date:	**22 June 2009**
Location:	SNV Nepal, ; Hetauda
Persons present:	Sjouke Bakker, Mirjam Oosting, Ranjana Pathak.

On Monday we had our final meeting with SNV; we presented our results and we discussed our research. We pointed some strengths and weaknesses out and we talked about future plans concerning Siddhi VDC and the possibilities regarding the Chiuri. Vijay Kesari and Laxmi Dhuttha were very satisfied with the efforts we put in our project and they were amazed by our research report.