

# Active and Equitable Forest Management

Process Report, 2016

(EnLiFT Output 28)



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EnLiFT Project (Enhancing Livelihood and Food Security  
through Agroforestry and Community Forestry in Nepal)  
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## **Introduction<sup>1</sup>**

Trees and forests had played crucial role for survival in many societies and regions in the world. This role has been more immense in Nepal wherein a considerable fraction of the population heavily depends on forest and tree products for dwelling, food and food production, cooking, heating and medicine (Springate-Baginski *et. al.* 2003). Community forestry (CF) has been promoted in the last three decades in Nepal to provide forest users' greater control and access to forest resources and therefore improve local community's livelihood. However CF has not made significant impact on farming systems and rural livelihoods (Dougill *et. al.* 2001, Malla *et. al.* 2003). Low impact of community forestry to rural livelihoods is brought about by the lack of active forest management to enhance productivity (Yadav *et. al.* 2009). The lack of active forest management of community forest is associated with several underlying factors including technical issues, protection oriented forest management, poorly designed silvicultural practices and limited practical knowledge of forest management (Yadav *et. al.* 2011). Gilmour (2014) noted that despite the advances on understanding of social and policy arrangements of community forestry in the last few decades, particularly in Asia there has been an apparent lack of coherent body of knowledge on appropriate technical systems for community forestry.

## **Expected outcomes<sup>2</sup>**

Demonstrations of best silviculture practices are proposed for selected CFUGs in EnLiFT research sites as part of the community forestry action research to examine silviculture systems and treatments of community forests (CF) that promote food security and livelihood. Additionally, as an action research, the silviculture demonstration will also try to incorporate local silviculture knowledge and skills to best silviculture practices in Nepal. This will have the following outcomes:

1. Analysis of silvicultural/biophysical characteristics of community forests through participatory measurements in demonstration plots over a three-year period (within the duration of the EnLiFT Project) and then explaining silvicultural challenges with relevant set of factors;
2. Development of new silviculture for food security that can work for the poor and be applied in the context of community forestry – at least at the conceptual level providing broad principles and guidance illustrated through specific case studies; and
3. Development of tools for observation and measurement of resilient forest-human system given silvicultural interventions (A methodological contribution to how participatory silvicultural technology can be developed to address the concerns of poor, women and disadvantage groups focusing on food security).

## **Research questions**

As an action research the broad research questions are:

1. What are the institutional and regulatory arrangements required for silvicultural regime on community forest that enhance food security?
2. What are the anthropological and ecological processes that are occurring for silvicultural regime that supports food security enhancement? and
3. What variable we need to measure and how do we measure to advance silvicultural knowledge and support policy making?

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<sup>1</sup> Adapted from AEFM process report 2015

<sup>2</sup> Adapted from AEFM process report 2015

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Silviculture demonstration is one of a number of activities of research activities of EnLiFT under the community forestry theme. The proposed silvicultural demonstration is closely linked with the broader policy and institutional innovations being initiated by other researchers of EnLiFT Project. In particular this work will be strongly linked with the action research on Operational Plans revisions in selected CFUGs and the participatory market research, i.e. case study of revitalisation of Chaubas sawmill. A strong feedback mechanism between the silviculture demonstrations other EnLiFT action research activities is ensured by strong collaboration and communication between themes. The silviculture demonstrations will also provide crucial information for the EnLiFT Model and where analysis and projection of food security scenarios will be made possible.

### AEFM Activity brief during 2016

Month/Date	Description
Jan	
1	AEFM/EnLiFT presentation at Dept of Forests
4	Discussion on FM at Babarmahal
7	Meeting on AEFM at ForestAction (Naya/Govinda/Edwin and Madan)
17	AEFM planning meeting (Govinda/Edwin and Madan)
22	Field day in Chaubas
25	SFM workshop at Uddemighar, Babarmahal
26	AEFM presentation in EnLiFT advisory committee
Feb/ March	
19 Feb	DoF visit to EnLiFT Silviculture demo-plots in Chaubas
2 March	Silviculture data encoding
9	Planning if FM extension in Nagarkot
11-13	Paper on analysis of government's thinning decision
21	SFM sharing meeting at Babarmahal
23-25	AEFM Paper
April	
2	Nagarkot field visit
3	National silviculture workshop: concept note
4	AEFM presentation
May	
4-5	Meeting with DFO Kavre
12-13	Paper on analysis of govt's thinning decisions
16	Meeting with DFO, Kavre
25	Silviculture workshop preparation
June	
7-18	AEFM field visit in Kavre and Lamjung (silviculture extension)
7-8	Annual reports
July /August	
22 July	FM workshop
August7-8	AEFM Paper
12	Silviculture workshop meeting at DoF
15	AEFM meeting
17	Brochure preparation for silviculture workshop
Sept/Oct	
Sept 16	DoF program

24-27 Oct	Visit to Nagarkot for silviculture planning
Nov/Dec	
15 Nov-6 Dec	Silviculture Boot Camp in six EnLiFT sites and Nagarkot
22-25 Nov	SFM training at Dhulikhel
7-8 Dec	ARP meeting preparation
9	ARP meeting

### Key Activity description

Three sections

1. Research and science output
2. Extension/capacity building outputs
3. Policy outputs
4. List of stakeholders that we have reached out and number of household representative

### Chaubas Field Day in AEFM demonstration sites

On 22<sup>nd</sup> Jan, 2016 EnLift organized a ‘field day’ to Chaubas to visit and experience the active and equitable community forest management. District Forest Office (DFO), Federation of Community Forestry Users, Nepal (FECOFUN) and EnLiFT project have jointly organized this event. Political party representatives, journalists, members of district forestry sector coordination committee (DFSCC), members of EnLiFT’s district level coordination committee (DLCC), leaders of few community forestry users groups and Ilaka Forest Officers in Kavre have participated the event. The objective of the event was to provide on-site discussion among forestry stakeholders about silvicultural demonstrations and active and equitable forest management and document observations, insights and opinions of the people who participated.

The event began with the presentation of Prem Khanal (DFO, Kavre) on Scientific Forest Management in Sector Forest Office in Banepa. In addition to specific presentation, DFO explained why the field visit organized and how effectively participants could learn about active forest management from silvicultural demonstration plots established in Chappani, Fagarkhola and Dharapani CFUGs. DFO provided a glimpse of scientific forest management in Nepal, including some of the historical context of Nepalese forest management. Following were the key points he highlighted-

1. Natural resources play an important role in making a prosperous country. Resources must produce benefits to the society otherwise they cannot be considered a resource. Therefore, forests should essentially benefit the communities, especially the poor and marginalized ones.
2. Managing forests actively or scientifically or sustainably, whatever the words be, can substantially provide income and employment and increasing benefits from the forests.
3. Nepal’s experience of participatory forest management has been seen successful in protecting the forests but



not in optimizing economic benefits of forest resources.

4. So, the next intervention in Nepal's forestry sector should be the promotion of active or scientific forest management for enhancing both the forest productivity and livelihood and income of the communities. As a forester, I have not yet got opportunity to apply what I learnt in university. This is urgently needed that such trend should discontinue.

At the end, he provided a description of silvicultural systems and an understanding of how such systems could be applied in the forests. Once the productivity of forests enhances, then forest based enterprises will also prosper.

On-site observation of activities carried out in Dharapani CF, such as stem mapping while developing operation plan of Dharapani CFUG.

- A. Visit to Chaubas-Saw Mill and a brief presentation by Lok B. Kuwar, Chair of Saw Mill Management Committee.
- B. Visit to four silvicultural demonstration plots and on-site presentation about the demonstration plot establishment, description of silvicultural treatments applied in the plots and the process adopted therein.

### Observation in Dharapani CF

Govinda Paudel talked about how EnLiFT supported CFUGs in developing operation plan and provided examples about how forests can contribute to enhance livelihood of community and food security. He also highlighted the importance of forests in generating continual supply of forest products and income without compromising the quality of forests. On responding to the queries of participants he discussed the following points-

- Only protection of forests, natural or plantation cannot optimize growth of forests. Forests need management.
- Forests can be managed/manipulated according to management objectives, for example, timber production or timber-fodder production or timber-NTFPs production.
- Management of forest can significantly benefit the users and contribute to generate income and employment locally and nationally
- Felling of tree is NOT always deforestation. It is a part of management. Like harvesting mature crops in agricultural or in poultry, trees need to be harvested when they mature.
- Forest management includes regeneration promotion, tending operations to enhance growth and harvesting of mature trees.



Madan Basyal explained how shelterwood system works, how the forest is divided into compartments and annual coups and how felling patterns will be organized. Chandra Singh

Lama, Chair of Dharapani CFUG explained how the process of OP development completed and how EnLiFT helped them in the process. There were two major questions from the participants for the CFUG chairperson.

1. Whether CFUG alone can carryout activities necessary for the implementation of scientific forest management, especially after phasing out of EnLiFT?
2. Scientific forest management allows CFUGs to take out substantial amount of timber viz about 13,000 cft in one year. How does CFUG handle the potential conflict related to the distribution or use of the income from the sale of the timber?

Chandra Singh Lama said that EnLiFT researcher Madan Basyal trained us how to carryout forest management related activities to be carried out in the forests. We know how to divide forests into annual working area. After EnLiFT we will be able to carryout forest management activities with technical support of Ilaka Forest Office. Responding to the second question, he said the CFUGs in general assembly had already decided how to utilize the income from the forests. We would follow operation plan which had provisions of group management and utilization of forest products and group's income. In addition, there are government rules that require 25% of the total income to be spent in forest management activities, 35% income should be allocated for poor focus program and remaining income in community development activities. So, CFUGs collectively will manage the conflict if any.

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## Scientific forest management campaign launched

Raj Kumar Parajuli  
Kavre, January 29

Scientific Forest Management Campaign has been launched in Kavre with the aim of utilising forest resources to financially support local households.

The campaign was launched with the support of Enhancing livelihoods and food security from agroforestry and community forestry in Nepal, a research project funded by the Australian Forest Project.

The campaign focuses on different pine tree species that have been introduced in Phagarkhola, Chappani, Sarpur and Kalopani community forests of Chaubas, Methinkot and Dhunkharka VDCs. Separate plots have been demarcated in the forests for planting Gobre species of pine trees in Phagarkhola and Chappani community forests, and for planting Thingre and Khote species of pine trees in Kalopani and Sarpur community forests, respectively.

As per the campaign, all unhealthy mature pine trees have been felled to make room for other species of plants in the designated forest areas. As many as 900 sap-

lings of Chap and Ipil Ipil trees and 400 Amriso (broom grass) have been planted in Kalopani, while 600 saplings of Lauthsall (a species of pine) and as many cardamom plants have been planted in Kalopani and Phagarkhola.

District forest officer Prem Khanal expressed confidence that the forest management scheme will benefit the locals. "Some 25 matured trees per hectare will be kept in each of the designated areas after felling down the unhealthy trees," Khanal said.

Research fellow for the project Govind Poudel said a total of 1,718 cubic feet timber worth around Rs 7.6 million was collected from the areas after felling down the unhealthy trees.

As per the campaign, the community forest users will be allowed to grow various herbs, plants and trees to generate income.

Chapapani Community Forest Users' Group chairperson Kanchhama Sarki was all praise for the campaign.

"Earlier, we were worried that the forests would be destroyed slowly, but the campaign has helped us conserve it and gave us an income-generating opportunity," he said.

## वनबाट लाखौं आम्दानी

काभ्रे (कास)- वनको वैज्ञानिक व्यवस्थापनबाट उपभोक्ताले लाखौं आम्दानी गरेका छन्। संरक्षणमात्र गर्दै आएका सामुदायिक वनका उपभोक्ता त्यसबाट आम्दानी पनि हुन थालेपछि दंग छन्। 'वन विनाश पनि नहुने, आम्दानी पनि हुँदा फाइदा लिन सकिने रहेछ,' चापपानी वन उपभोक्ता समिति चौवासका अध्यक्ष कान्छा सार्कीले भने। जिल्ला वन कार्यालयको समेत सहभागितामा फरेस्ट एक्सनलगायत संस्थाले चौवास, दुबुर्क गाविस र दाप्चा काशीखण्ड नगरपालिकामा 'कृषि र वन समृद्ध वन परियोजना' लागू गरेका छन्। त्यसअन्तर्गत चौवासको फागरखोला र चापपानी, मेथिनकोटको सापरुप र दुबुर्कको कालोपानी उपभोक्ता समितिबाट एक हजार सात सय १८ ब्युफिट काठ निकालिएको छ। त्यसबाट आएको ७५ लाख ६८ हजार रुपैयाँ

सामुदायिक वनको आम्दानी हो।

जिल्ला वन अधिकृत प्रेम खनालका अनुसार ४० वर्ष कटेका रूख काटेर आम्दानी लिने अवधारणा नै वैज्ञानिक व्यवस्थापन हो। 'पहिले संरक्षणमात्र हुन्थ्यो, आम्दानी थिएन,' उनले भने, 'अहिले काट्नेपने रूख काटेर वृक्षरोपण पनि गछौं।' उनका अनुसार घना जंगलमा पर्याप्त प्रकाश, स्थान र खाना नपाउँदा रूखको वृद्धि र विकास हुन पाउँदैन। वैज्ञानिक व्यवस्थापनअन्तर्गत प्लट छुट्याएर पाको र उमेर पुगेका रूख हटाई प्रतिहेक्टर २५ रूख रोपिन्छ। आवश्यकताअनुसार वृक्षरोपण पनि गरिन्छ। कालोपानी सामुदायिक वनमा ६ सय लौठसल्ला, चापपानीमा पाँच सय चाँप, चार सय अम्रिसो, चार सय इपिल तथा फागरखोलामा ६ सय अलैची रोपिएको अनुसन्धानकर्ता गोविन्द पौडेलले जानकारी दिए।

Screen clipping taken: 2/3/2016, 6:55 PM

## GPS/GIS Training (and its application in SciFM)

This training was held in 19-21 May 2016

### Participants

DFO : Prem Khanal

AFOs : KB Thapa, Baburam Aryal, Shailendra Mishra, Yogendra Poudel, Shivaram Thapa, Ram Aashis Sharma, Uddim Rai, Bachuram Pudasaini, Prakash Nepal, Oam Bdr Oli Ram Kumar Bhandari

Rangers : Santosh Mishra, Damayanti Pandey

Trainers : Madan Bashyal (Forest Action), Navin Kumar Yadav (IOF, Pokhara) and Lekh Nath Dahal (Land Management Training centre/GoN)

### Training Content

- Theoretical background and application of GIS/GPS in forestry.
- Operation of GPS and field practice
- Installing and operating GPS/GIS software, downloading GPS data

- GPS data management (computer, manual)making map using Arc GIS 10.1
- Overlaying with GIS maps available

### Visit of Policy Actors in Chaubas

On Friday 19 Feb 2016, EnLiFT has coordinated a multi-actor visit to Chaubas in Kavre district. The objective of the visit was to provide an update of EnLiFT to key policy actors and obtain on-site feedback from them. The visit accommodated three major discussions-

A) presentations about EnLiFT project, forest management initiatives in Kavre and EnLiFT's Active and Equitable Forest Management Initiatives

B) On-site discussion about Chaubas Saw Mill and issues around community forestry enterprises in general

C) visit to Silviculture demonstration plots and discussions related to application of silviculture in mature forests in mid-hills. Here are some of the highlights of the visit-

### Key policy actors in forestry sector participated the event

The visit brought major forestry sector policy actors to EnLiFT site in Chaubas. Naya Sharma, Prem Khanal and Govinda Paudel provided brief updates about EnLiFT, programs of district forest office and EnLiFT's active and equitable forest management initiatives respectively. Following is the list of organizations who participated the visit-

- Department of Forests (director general, four Joint-secretaries, four district forest officers of Dolakha, Sindhupalchowk, Kavre and Lamjung, Ilaka Forest Officers)
- Federations of Community Forestry Users (general secretary and members of central secretariat, president and general secretary of Lamjung, member of Kavre district).
- Himalayan Grassroots Women's Natural Resource Management Association (President)
- Nepal Foresters' Association (General secretary)
- Federation of Forest Based Industry and Trade (president)
- Community Forestry Supporters' Network (President)
- Nepalese Federation of Forest Resource User Group (representative)
- RECOFTC- The Center for People and Forests (country program coordinator)
- Green Foundation (president)
- Media

The participants appreciated the efforts of EnLiFT researchers in providing a policy learning forum in Kavre and Lamjung. Resham B. Dangi, Director General of Department of Forests has made this comment-

*It is the fact that a Public policy formulation approach based on strong evidence based research has always high level of acceptance, ownership and success rate compared to ad-hoc and incremental approach. In my personal view, our field visit was an excellent field laboratory policy dialogue. I am very much hopeful that it will definitely value add in drafting the forth coming Management guideline for established plantation community Forests. Let me extend my appreciation to your research team and all participants for their interesting thoughtful deliberation regarding forest management issues in CF. I also do acknowledge your field team members for their excellent effort to make it productive . The family, who offered us excellent food is really worth to praise!*

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### **On-site policy dialogue on silviculture**

The visit became a kind of on-site policy dialogue where policy makers, researchers, practitioners, communities and their federations collectively discussed about the problems and prospects of sustainable forest management. As DG of Dept of Forests re-iterated, the visit has become 'an excellent field laboratory policy dialogue'. EnLiFT's demonstration facilitated/provided onsite platform to discuss silviculture system. Participants were particularly interested on objectives of silviculture demonstration, the process of demo-plot establishment, the application of silviculture treatments (e.g., choice of species, selection of trees for retention or removal etc). While observing the application of silviculture treatments in demonstration plots, officials from department of forests emphasized the need of 'National Level Silviculture Workshop'. The idea of such workshop is to enhance research-policy interface and provide policy inputs for active management of forests, particularly the old-growth forests in mid-hills.

### **Expansion of AEFM experience**

#### **Kavre**

On Saturday 2nd April, 2016, EnLiFT organized a visit to three community forestry user groups in Nagarkot, Kavre. The team included Prem Khanal (DFO, Kavre), Assistant Forest Officers KB Thapa, Baburam Aryal, Bachhu Pudasaini, FECOFUN Chair Binod Sapkota, FECOFUN central committee member Shanta Neupane, Gopal (political leader), Govinda Paudel and Madan Basyal.

The objective of the visit was to have discussion on how AEFM experience/learning of EnLiFT sites be applied to other CFUGs. Nine members of the visit team and about 20 leaders of three CFUGs (Khungepakha, Hile Jaljale-Ka and Hile Jaljale-B) had a detailed discussion about active forest management and EnLiFT's support to CFUGs in developing their operation plans. KB Thapa facilitated the meeting.

District Forest Officer Prem Khanal talked about the need of active forest management and how district forest offices engages in EnLiFT research. Binod Sapkota and Shanta Neupane shared FECOFUN's experience of working in EnLiFT and explained how effective was AEFM in Chaubas and Dhunkharka . I talked about EnLiFT, its working area, working approach and how forests can/should be linked to agriculture, livestock, people's livelihoods and local development. I also briefly discussed nature of EnLiFT support in developing the OPs of three CFUGs and how we replicate learning from this engagement. Madan and Baburam talked about Chaubas experience. Bachu Pudasaini (Forest Officer of that Ilaka) and Chairpersons of three CFUGs also provided their opinion.

Following are some of the key points agreed in the meeting-

1. A joint meeting of executive committees of three CFUGs has been scheduled in April 9, 2016. Ilaka Forest Officer and Madan Basyal will participate this meeting. The meeting will take a formal decision to work with EnLiFT research.
2. On 24 April 2016 (same day of last year's earthquake), Forest Minister will visit to one of these three CFUGs and distribute timber to earthquake victims.
3. EnLiFT researchers from DFO/FECOFUN/ForestAction will facilitate the AEFM in CFUGs in Nagarkot and provide technical support to CFUGs for developing operation plans.

4. There are few wetland spots in the CFUGs. District forest office and CFUGs have plans to jointly work on wetland management for increasing water supply downstream.
5. DFO and FECOFUN proposed a visit of CFUG members to Chaubas while they revise their OP based on government's Scientific Forest Guideline.
6. Final draft of Operational plan of 4 CFs (Dhungepakha Bahal Ban, Hile Jaljale Ka, Hile Jaljale Kha and Faskot Sundar) have been prepared and yet to approve from CF general assembly.

## Lamjung

### Plantation in Silviculture Demo Plots in Lampata CFUG, Lamjung

EnLiFT has supported two community forestry user groups in Kavre and Lamjung to plant fodder seedlings in their silviculture demonstration plots. In late July 2016, Chapani CFUG in Kavre planted Chap (broadleave timber species), Dudhilo, Bhatmase and Panyau (fodder species). During first week of August 2016, Lampata CFUG in Lamjung introduced fodder species into the existing hill Sal forest.

Following is brief account of plantation of these two sites-

#### Lampata CFUG in Lamjung District

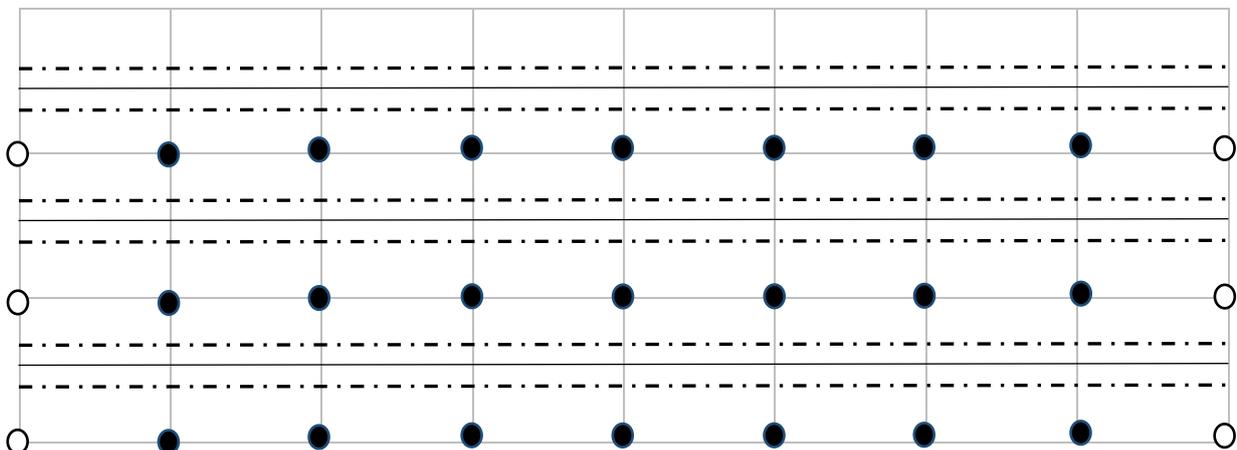
Lampata CFUG organized a joint meeting of executive committee and local research group (LRG) and discussed in detail about the plantation in its silviculture demonstration plots.

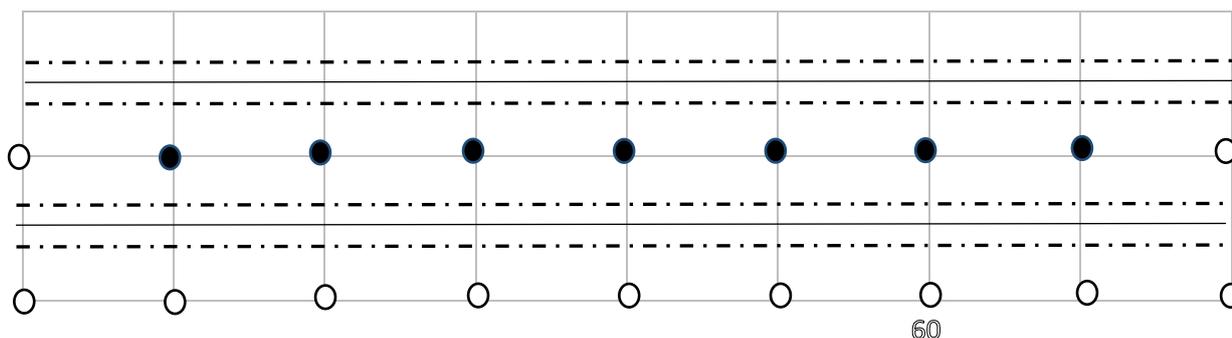
They identified the supplier of the seedling of the fodder and made arrangements to transport the seedlings to the plantation site. The meeting asked the chairperson of CFUG to oversee overall plantation activities, make arrangements for the plantation, including mobilizing users to dig pits, transport seedling and plantation. Bhola N. Paudel, Madan Basyal and Som Maya supported CFUGs in seedling supply and overall technical support from EnLiFT. CFUGs provided human resources required for the plantation.



#### Plantation

Fodder seedlings (Mendola, Bhatmase, Ipil Ipil and Amriso) are now introduced into the silviculture demonstration plots established jointly by the EnLiFT project, and CFUGs. The layout of the plantation is as follows-





Fodder were planted in rows into the silviculture demo plots which are covered mostly by hill Sal trees. Amriso seedlings were planted in rows and Ipil Ipil and Mendola were planted alternatively in two lines. CFUG has planted total of 1,300 seedlings of the fodder species i.e., 500 Amriso, and 800 seedlings of other fodder combined (Mendola, Bhatmase, Ipil Ipil). CFUGs has bought fodder seedlings from member of local research group. During three day long plantation program, total of 16 CFUGs members involved, including

4 women. The pit dimension was 1\*1\*1 feet for fodder. CFUG also discussed about how it would protect the plantation sites from grazing and fire. Grazing is totally banned, and road/trails around the plantation sites serve as fire lines.

#### **People's opinion towards plantation:**

**Chairperson of LAMPATA CFUG:** When we carried out harvesting in these demonstration plots, I thought we have cut many trees. However, when I look at the canopy it is about to close. We are planting fodder seedlings here. Light is insufficient for the natural seedlings and the planted ones. Now, I have realized we had to cut more trees. I think no major problems to protect the plantation except one likely problem of monkey. Monkeys like the tender Amriso shoots and may damage them.

**LRG member, seed supplier:** I got good price for the seedling I have raised in my little nursery. I have worked on my own. CFUG has bought seedling from me, and I could make additional income from it.

**Krishna B Malla :** Plantation of fodder species in forests is good. It increases fodder supply to the community. However, we should be cautious about protection of the most valuable Sal trees. By planting fodder, the valuable Sal should not be damaged. Sir, does fodder plantation harm Sal?

**Krishna p Khanal:** Mendola and Bhatmase are the annual fodder crops. They should be harvested each year. So, how will the CFUG distribute the fodder to the users?

**Ram Bahadur Shahi:** I don't know whether fodder seedlings into Sal forest thrive? I am not fully confident about it. We have done it but we are not sure whether the plantation survives.

### **Chapani CFUG in Chaubas, Kavre District**

Last year in Aug, 2015 Chapani community forest user group planted fodder and tree seedlings in silviculture demonstration plots established jointly by CFUG, DFO and EnLiFT research team. However, massive forest fire in April and May in 2016 burnt most of the planted seedling. Amriso seedlings were comparatively little damaged.

So, this year in July, EnLiFT supported CFUG in enrichment plantation to compensate the damage by the fire. Total of 800 seedlings (Chap-500 and Dudhilo/Panyau/Bhatmase- 300) have been planted out into the demo plots where CFUGs carried out the plantation last year.

#### **Plantation**

Like that of Lampata, Chapani CFUG organized a joint meeting of executive committee and local research group (LRG) and discussed in detail about the plantation in its silviculture demonstration plots. CFUG bought seedlings of the fodder species from the members of local research group. The Chap seedlings are not locally produced, therefore, CFUG requested Sector Forest Office in Kavre to provide 500 Chap seedlings. The joint meeting asked the chairperson of CFUG to make necessary arrangements for the plantation such as supplying seedling, pitting and plantation. Madan Basyal, Netra Kuwar, Sushila Kuwar and Netra Kuwar supported CFUGs in seedling supply and overall technical support from EnLiFT. CFUGs provided human resources required for the plantation. The CFUG followed exactly the same plantation layout of last year plantation. Total of 16 CFUG member involved in the plantation.

Like that of last year, CFUG has prohibited grazing. As fire damaged almost all of last year plantation, the CFUG should construct fire lines around the plantation site and clean the fire hazards in well before the dry season commences.

#### **News coverage about EnLiFT FM initiative in Kavre**

Here I have provided a link of Rastriya Samachar Samiti (National News Agency) that wrote a brief press note which also mentioned EnLiFT's FM initiative in Kavre district. The news is in Nepali and can be found in

<http://setopati.com/samaj/53489/>. This time, the journalist has correctly spelled EnLiFT. Nearest English translation of this news would be-

#### **Cut pine trees are in verse of decay**

Rastriya Samachar Samiti (National News Agency), Banepa (15 Sept 2016)

The trees cut during Scientific Forest Management in Chapani and Dharapani CFUGs of Kavre districts are in verse of decay. While doing FM, the trees were supposed to be distributed to earthquake victims for rebuilding their houses. However, people did not prefer pine timber for rebuilding. People considered pine timber weak for house construction. As a result, timber left in the forests for long.

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Prem Khanal, DFO Kavre said 'the earthquake victims did not demand pine timber and because of the government's guideline, we could not sell those timber outside of the CFUGs. However, we will begin the (open) tender process soon.'

DFO Khanal mentioned that the price of harvested pine timber is NRs 100 per cubic feet. He also reported that the government has allocated 1 million Nepali Rupees budget this year for scientific forest management in Kavre.

Officer (researcher) of EnLiFT Project Mr Govinda Paudel said that the project has initiated research in FM previously and will continue this (research) endeavour. He also said that EnLiFT is also supporting three CFUGs including Hile Jaljale CFUG in Nagarkot areas of Kavre and one CFUGs (Kalopani) in Dhunikharka. He also mentioned that the timber harvested in those CFUGs will be considered for selling outside of the CFUGs. EnLiFT has been supporting scientific FM initiatives in Kavre from the past two years (RSS)

### **Field Day in Lamjung**

On 18th Sept, 2016 EnLiFT organized a field day in Lampata Community Forestry User group where approximately 30

CFUG leaders observed EnLiFT's demonstration sites. Five participants (chair, vice-chair, secretary, treasurer and one member) from each of five CFUGs viz Kirtipur, Sunepani, Deurali, Jyamire and Lampata visited the demonstration plots. The objective of the field day was to provide CFUG leaders an opportunity to



learn the application of on-site forest management (treatments) and discuss how learning(s) can be applied and expanded to their own forests.

After a brief explanation of ENLiFT and its FM initiatives, Rishiram Khanal-chair of Lampata CFUG took the participants to demonstration sites and provided a detailed account of the process and steps taken while establishing the plots and application of the FM treatments. In each plots, he explained how the plots laid-out, how the measurement went on and the treatments they applied. The users of Lampata shared their experience with leaders from their neighboring CFUGs.

After the visit, participants sat together in a hall and discussed about what they have seen and how the learning can be adopted in their forests. The participants showed interest on FM demonstration plots and wanted to see how learning can be applied in their forests.

### **Forest Management Training in Dhulikhel**

Forest management training in Dhulikhel was carried out in 22-25 Nov 2016. Govinda Paudel, Shambhu Dungal, Edwin Cedamon and Madan Basyal have participated the training.

It is officially organised by District Forest Office and supported jointly by EnLiFT, MEDEP and ENDEV. We have accommodated the contents of Silviculture Boot Camp into the schedule of the training. Prem Prasad Khana, DFO Kavre, Shambhu Dangal, Edwin Cedamon were the key facilitators. This training is important in three ways-

1. Post-training plan is to support the revision of operation plans of three CFUGs in Nagarkot area in Kavre. EnLiFT has opportunity to replicate the AEFM learning of EnLiFT silviculture research sites in these CFs.
2. EnLiFT has developed a functional partnership with DF office and development project (MEDEP) in supporting CFUGs in development of their operational plans and carrying out silviculture research collectively.
3. There is opportunity to engage government and development project to share resources in FM research in the future.

Total of 28 participants (18 CFUG leaders, 1 DFSCC member, 4 forest officers, 1 NAF, 2 forestry consultants, 1 FECOFUN, 1 FenFIT) attended the training. The schedule of the training is given in Annex-2 of this report.

### National Silviculture workshop

First silviculture national workshop has been conducted in Hotel Park Village on 19-21 Feb, 2017. Department of Forests together with EnLiFT, Care Nepal, FECOFUN, ACOFUN and NTNC have jointly organized the workshop. The role of EnLiFT has been well recognized by the department and other organizing institutions, and adequately visualized in the workshop banner and the workshop brochure (attached in the Annex of this report) which was widely circulated nationally and beyond. EnLiFT has also presented a significant number of research papers and posters. A total of seven papers and one poster (table below) have been presented (See annex for the list of papers presented in the workshop).

SN	Research Papers/posters
1	Silvo-institutional Model for Silviculture based Sustainable Forest Management in Nepal by Naya S Paudel*, Edwin Cedamon, Govinda Paudel, and Shambhu Dangal
2	Regeneration Establishment and Crown Openness in Silviculture Demo Plots in Pine and Sal Forests in Mid-hills Nepal by Edwin Cedamon, Govinda Paudel, Madan Basyal* and Ian Nuberg
3	Q-factor as a Useful Guide for Silviculture Selection on Nepal's Community Forests by Edwin Cedamon, Govinda Paudel*, Madan Basyal, and Ian Nuberg
4	Prospects of Application of Shelter-wood System in Mature Pine Stands in the Hills of Kavre District by Govinda Paudel, Prem P Khanal* and Madan Basyal
5	Optimizing Ecosystem Services: Potential Implications of Forest Management on Water Yield by Buddi S Poudel*, Naya S Paudel, and Manoj Badu
6	Integrating Women's Voice in Silviculture Practices by Racchya Shah* and Suman S Bhattarai
7	Institutional Bottlenecks in Forest Management: Experience of Thinning Operation in Pine Plantations in Kavre District by Guman D Kuwer, Binod Sapkota* and Govinda Paudel
	Poster
1	Silviculture for Enhancing economic contributions of community forestry: Experience from Lamjung district by Durga B Karki, Govinda Paudel, and Madan Basyal

Out of the seven paper presentation, six are going to be published in the workshop proceedings soon. The publication of workshop proceeding is coordinated by the department of forests and supported by EnLiFT.

7.

8.

It is important to note that the idea of organizing the workshop emerged right from a visit of high level policy actors to EnLiFT silviculture demo-plots in Chaubas Kavre. Looking at the silviculture treatments in the demo-plots, members of the visit team including the then DG of Department of Forests Resham Dangi emphasised the need of national level workshop on silviculture. Resham Dangi explicitly made the following comments-

*It is the fact that a Public policy formulation approach based on strong evidence based research has always high level of acceptance, ownership and success rate compared to ad-hoc and incremental approach. In my personal view, our field visit was an excellent field laboratory policy dialogue. I am very much hopeful that it will definitely value add in drafting the forth coming Management guideline for established plantation community Forests. Let me extend my appreciation to your research team and all participants for their interesting thoughtful deliberation regarding forest management issues in CF. I also do acknowledge your field team members for their excellent effort to make it productive . The family, who offered us excellent food is really worth to praise!*

Therefore, EnLiFT has already played an important role in ensuring this workshop happen and had a valid claim on it. I think the value of the workshop has been much more than just contributing to EnLiFT deliverable. This is an important policy contribution of EnLiFT in Nepal's forestry sector.

### **Silviculture Boot Camp**

The silviculture boot camp is design for 2 days combining class room lectures, class room group activities and field works for community forest user groups (CFUGs). The CFUGs Silviculture Boot Camp is a collaborative endeavour of the EnLiFT Project, the Department of Forest, Community Forestry Division (DoF/CFD), District Forest Offices (Kavre and Lamjung Districts), and Federation of Forest Users in Nepal (FECOFUN Central/Kavre and Lamjung District Offices).

Silviculture Boot Camps have been organized in all six EnLiFT sites. In each site, 5-6 CFUG leaders

Annexes

Annex-1

Content of Silviculture Boot Camp

Day 1

### **Registration and Short Opening Program**

**Module 1 - Lecture on Silviculture and silviculture system** (EnLiFT Team) (morning)

Activity 1 - review and reflection of silviculture practice

- Research data collected from the mini-workshop outputs
- Audio-recording for data collection

**Module 2 - Silviculture appraisal following the Scientific Forest Management (SFM) Guidelines 2071** - starting with a short lecture (EnLiFT Team) (before lunch)

Activity 2 –hands-on silviculture appraisal following SFM (

- Developing stand stock table - by diameter classes and by species class
  - ❖ The participants are formed into groups of 6 persons (3 male, 3 female) and will be assigned to do a forest survey and tree measurement in an assigned spot of the community forest.
  - ❖ The importance of forest survey and tree measurement is explained in the field. Participants will be trained how to measure, diameter at breast and the importance of this measure in silviculture planning
- Prioritising silviculture options based on CF management objectives
- Developing tree marking guides (marking guides for leave trees) for selected silviculture option
- Start writing-up silviculture plan - outline and framework

**Module 3 - Short lecture on forest policies and regulations affecting silviculture practice** (timber harvest, processing, marketing - timber cutting during thinning) (afternoon)(District Forest Office Team)

Activity 3 - short moderated discussion on forest regulation experiences

- Audio-recording for data collection

**Recap on key lessons and observations for policy recommendations to support silviculture practice in Nepal** (FECOFUN Central and District)

Day 2

**Module 4 - Developing silviculture prescriptions based on SFM**(EnLiFT Team) (morning)

Activity 4 - Writeshop and presenting silviculture plan

- Finalise and present ( limit to 2 pages) silviculture plan as annexed to the OP

**Module 5 - hands-on training on practical silviculture operations** (afternoon)

Activity 5 - Hands-on tree selection, marking and virtual felling for selection silviculture and regular shelterwood

Activity 6 - Hands-on training on intermediate treatments - tree selection for pre-commercial thinning, thinning and pruning

**Recap on key lessons and observations for policy recommendations to support silviculture practice in Nepal** (FECOFUN Central and District)

**Closing program and distribution of certificates**

**Training on Scientific Forest Management**

<b>Session</b>	<b>Topic</b>	<b>Key Content</b>	<b>Methods</b>
1	Introductory	Registration, introduction, explain on training objectives, schedule, logistic,	Presentation and explain
2	Forest Management and Enterprise-Context of the District	History and Status of Pine Plantations in the District, Perception of community on pine from ecological and economic point of view, Status of Forest Based Enterprises and Potential for Value addition and enterprise of Pine Plantation Management	Presentation and Plenary Discussion
3	Forest Management-Concept	Introduction, Three pillars of Forest Management/objectives, elements of sustainable vs scientific forest management	Presentation, brainstorming and discussion
4	Silvicultural systems	Overview, need and application of Silvicultural Systems & Forest Conversion in Mid hills and especially in plantations	Brainstorming, presentations and discussion
	Khaja		
5	Forest Rotation	Introduction, Importance, major types (2-3) and applications	Brainstorming, presentations and discussion
6	Silvicultural and Management Prescriptions	Silvicultural prescriptions on pine species (Silvicultural system, Thinning Regimes, management considerations, where do we use MAI? (protection, use), Conversion?)	Brainstorming, presentations and discussion
	Wrap-up Day I		
7	Resource Assessment	Introduction of Rapid Forest Resource Assessment Techniques, Tools used for these techniques. Analysis and Interpretation.	Class room Briefing
8	Understand Your Forest	Rapid Assessment Techniques, Use of Tools, Estimate, Analysis and Interpret	Field Practice
	Lunch		
9	Policies and Guidelines	Forest Policy and Guidelines that facilitates scientific Forest Management	Presentation and Discussion
10	Understanding the function of Forests Services, Development of Vision and Objectives	Understand the Potential Forest goods and services; exercise in developing vision and objective of forest management (long term and short term)	Individual Exercise, plenary discussions
11	Selection of appropriate silviculture and management prescriptions	Possible silviculture system and prescriptions based on forest management objectives, forest management tools, examples of long term silvicultural prescriptions	Discussions and plenary exercise
	Wrap-up Day II		
12	Harvesting Plan	Concept, content and development and Implementation procedure	Plenary discussions
13	Tools/ Equipment for Operations	Introduction, Use and Maintenance of Improved Harvesting Tools, use of products and enterprise	Demonstrations and discussions
14	Safety and Safeguard	Product safety- fire, grazing, insect attack, seasoning defect, product damage during harvest; tools safety; and human safety- safety gears and measure; ecological safety	Presentations and plenary exercise
	Field Planning		

	Lunch		
	Field Exercise	Tree Marking, Measurement, Tree Felling, Logging and Transportation and Product Measurement and Record Keeping	Group work
	Field Analysis and Planning	Based on learning, develop vision, objectives, simple management prescriptions of your forests. CFUG needs to bring their existing OP for reference.	5 groups – one each CF (assisted by other participants)
	Reflection	Presentation and discussions	Plenary
	Wrap-up	Action Planning and Closing	Plenary

Annex 3: First National Silviculture Brochure

<http://dof.gov.np/image/data/dof/Brochure-SilviWS-Nepal.pdf>

Name and office designation of participants

## First National Silviculture Workshop

19-21 February 2017 (8-10 Falgun 2073)

Park Village Hotel &amp; Resort, Budhanilkantha

### Program Schedule

First Day: Sunday 19 February 2017	
Time	Activity
08:00-09:00	Registration and Breakfast
09:00-10:30	<b>Conference Inauguration</b>
10:30-11:00	Tea Break
11:00-12:00	<b>Keynote Presentation by Dr Don Gilmour (Topic)</b>
12:00-13:00	<b>Plenary Presentations</b> <ol style="list-style-type: none"> <li>1. Key Messages from Forest Resource Assessment Nepal on Forest Management by Buddi S Poudel, Rajendra K.C. and Yam P Pokharel* (20 min)</li> <li>2. Policy Transformation for Silvicultural Forest Management: Weak Domain Areas for Prosper Development in Nepal by Pashupati N Koirala* (20 min)</li> </ol>
13:00-14:00	Lunch
14:00-15:30	<b>Breakout Sessions –A</b> (Presentations: 20 min each, discussion and rap up: 30 min)
Breakout session # A1 <b>Banyan Hall</b>	<ol style="list-style-type: none"> <li>1. Sustainable Forest Management in Nepal: Issue and Opportunity by Krishna P Yadav, Rakesh Karna* and Nagendra P Yadav</li> <li>2. Opportunities and Challenges of Implementing Forest Management Activities in Different Forest Management Modalities by Vijaya R Subedi*</li> <li>3. Adopted Silvicultural System for Old Aged Forest Management in Terai Region of Nepal: Achievements, Users Experiences, Policy Gaps and Way Forward: A Case Study of Rupandehi District by Dipak Jnawali* and Basanta B Shrestha</li> </ol>
Breakout session # A2 <b>Sakura Hall</b>	<ol style="list-style-type: none"> <li>1. Role of Silviculture Demonstration Plot in Sustainable Management of Forests in CF by Yub R Pokhrel*, Kedar Baral, Ambika Poudel, Kamal Lamsal, Manoj Ranabhat &amp; Hem L Aryal</li> <li>2. Silviculture of High Altitude Forests and Indigenous System of Forest Resource Management: Lessons from Dolkha and Sindhupalchowk Districts by Navraj Baral*</li> <li>3. Is the Scientific Forest management Sustainable? A Study on the Implementation of Operational Plan of the Community Forest under Scientific Forest Management Regime of Makwanpur District, Nepal by Chandra P Sedai* and Deepak K Kharal</li> <li>4. Silviculture for Chilaune-Katus and Hill Sal Forests Kedar Baral* &amp; Kalidas Subedi</li> </ol>
Breakout session # A3 <b>Budanel Hall</b>	<ol style="list-style-type: none"> <li>1. Branding “Scientific Forestry” in the Community Forests of Nepal: A Case Study from the Midhill District by Bijendra Basnyat*, Thorsten Treue and Ridish K Pokharel</li> <li>2. The Application of Principles, Criteria and Indicators to the Governance of Sustainable Forest Management in Nepal by Tim Cadman*</li> <li>3. Workers Role in Sustainable Forest Management in Nepal by Bhola Bhattarai and Krishna Adhikari*</li> </ol>
Breakout session # A4 <b>Kasthamandap Hall</b>	<ol style="list-style-type: none"> <li>1. Managing <i>Mikania micrantha</i> through Manual Cutting by Rajesh K Rai*</li> <li>2. Assessment of Control Measures of <i>Mikania micrantha</i> and their Effectiveness (A Case Study from Grassland in Sauraha area of Chitwan National Park) by Upendra Aryal*, Prakash Thapa and Ashok Parajuli</li> <li>3. Selecting Tree Species for Climate Change-Integrated Forest Restoration and Management in the Chitwan-Annapurna Landscape of Nepal by Keshav P Khanal*, Eric Wikramanayake and Gokarna J Thapa</li> </ol>
15:30-16:00	Tea Break
16:00-17:30	<b>Breakout Sessions –B</b> (Presentations: 20 min each, discussion and rap up: 30 min)

Breakout session # B1 <b>Banyan Hall</b>	<ol style="list-style-type: none"> <li>1. Regeneration Status, Increment Rate, Issues and Learnings of Barhaban Collaborative Forest by Ramesh B Chand; Krishna B Bhujel*, and Thakkar B Shahi</li> <li>2. Regeneration Promotion and Income Generation through Scientific Forest Management in Community Forestry by Yajnamurti Khanal*</li> <li>3. Survival Status of Plantations in Parbat District, Nepal by Ganesh Paudel* and Reeti Acharya</li> </ol>
Breakout session # B2 <b>Sakura Hall</b>	<ol style="list-style-type: none"> <li>1. Quality Seed Source Management to Enhance Forest Productivity by Rajendra KC and Hem L Aryal*</li> <li>2. Experience of Collaborative Forest Management from Chure to Dashgaja by Ishwori P Paudel*, Vijaya R Subedi, Krishna D Bhatta, Pralad P Dhital, Brahma D Mahato, Janaki P Yadav and Damodar Sharma</li> <li>3. Sustainable Management of Tarai Sal Forests: Learning from Community and Collaborative Forests in Tarai by Nagendra P Yadav* and Rakesh Karna</li> </ol>
Breakout session # B3 <b>Budanel Hall</b>	<ol style="list-style-type: none"> <li>1. Silvo-institutional Model for Silviculture based Sustainable Forest Management in Nepal by Naya S Paudel*, Edwin Cedamon, Govinda Paudel, and Shambhu Dungal</li> <li>2. Policy Instruments and Practices of Collaborative Forest Management: Community Prospective by Bhola P Bhattarai*, Ram A Mandal and Ram R P Kurmi</li> <li>3. Sustainable Forest Management: FECOFUN Prospective by Thakur Bhandari*</li> </ol>
Breakout session # B4 <b>Kasthamandap Hall</b>	<ol style="list-style-type: none"> <li>1. An Assessment of the Impacts of Silviculture and Forest Management Regimes to Forest Cover Change in Churia Region during 1992 and 2014 by Bharat K Pokharel, Dharam Uprety*, Rabin Niraula and Pragyan R Pokhrel</li> <li>2. Linking Rural Depopulation with Forestry Transition in the Context of REDD+ by Mohan Poudel*, Sindhu Dhungana, Biswa N Oli, Aswin Dhakal, Gopal Kafle and Kapil Khanal</li> <li>3. Costs and Benefits of Reducing Deforestation in Different Forest Management Regimes of Nepal by Rajesh K Rai*, Mani Nepal, Bhaskar S Karki, Eshwaran Somanathan, Niroj Timalisina, Madan Singh Khadayat, and Nabin Bhattarai</li> </ol>
<b>Second Day: Monday 20 February 2017</b>	
<b>Time</b>	<b>Activity</b>
08:30-9:30	<b>Keynote Presentation by Dr. K C Paudyal</b> (Silviculture for Forest Management in Nepal)
9:30-11:00	<b>Plenary Presentations</b> <ol style="list-style-type: none"> <li>1. Adoption of Different Silvicultural System depending upon Different Factors in Tarai and Churia by Govinda P Kafley* (20 min)</li> <li>2. SFM Procedure Guideline for Community Forestry by Prakash Lamsal* (CF Division of DoF) (20 min)</li> <li>3. Natural Forest and Silviculture: What are Benefits and How do we Organise Restoration of Natural Forests and Silviculture for our Life? By Kazue Fujiwara* (45 min)</li> </ol>
11:00-11:30	Tea Break
11:30-13:00	<b>Breakout Sessions –C</b> (Presentations: 20 min each, discussion and rap up: 30 min)
Breakout session # C1 <b>Banyan Hall</b>	<ol style="list-style-type: none"> <li>1. Bamboo Growing for Environmental Conservation and Rural Development in Nepal by Annapurna N Das*.</li> <li>2. Restoration of Degraded Land through Moso Bamboo (<i>Phyllostachys pubescens</i>) Plantation by Gopal P Gautam*, Raja R Aryal and Prakash Lamichhane.</li> <li>3. Management of Tree Outside Forest in Nepal by Sushma Bhattarai, Basant Pant*, and Niroj Timalisina</li> </ol>
Breakout session # C2 <b>Sakura Hall</b>	<ol style="list-style-type: none"> <li>1. Regulating uneven aged forest and conceptual model in context of Scientific Forest Management by Shyam P Sharma*</li> <li>2. Regeneration Establishment and Crown Openness in Silviculture Demo Plots in Pine and Sal Forests in Mid-hills Nepal by Edwin Cedamon, Govinda Paudel, Madan Basyal* and Ian Nuberg</li> <li>3. Pine Plantations Management in Community Forestry: Opportunities for Income Generation, Replacement of Timber Import and Silviculture Prescriptions for the Conversion into Mixed Forest by Shiva Sapkota and Arun S Poudyal*</li> </ol>
Breakout session # C3 <b>Budanel Hall</b>	<ol style="list-style-type: none"> <li>1. Relevance of Forest Inventory for Guiding Decision in Silviculture Operation: Are We Doing the Right Things in a Right Way? by Sony Baral*, Harald Vacik, and Bir B K Chhetri</li> <li>2. Application of Silviculture System, Yield Regulation and Thinning in Natural Forests by Vijaya R Subedi*, Iswori Paudel and Pramod Bhattarai</li> </ol>

	3. Q-factor as a Useful Guide for Silviculture Selection on Nepal's Community Forests by Edwin Cedamon, Govinda Paudel*, Madan Basyal, and Ian Nuberg
Breakout session # C4 <b>Kasthamandap Hall</b>	1. Forest Management and Landscape Erosion Susceptibility in Mountainous Terrain: A Concept and Application by Prem P Paudel*, Bijaya R Paudyal and Bimala Devkota. 2. Optimizing Ecosystem Services: Potential Implications of Forest Management on Water Yield by Buddi S Poudel*, Naya S Paudel, and Manoj Badu 3. Linking Silvicultural Aspects of Pro-poor Leasehold Forestry for Socio-economic Benefits to the Poor and Vulnerable by Kamlesh K Yadav* and K P Yadav
13:00-14:00	Lunch
14:00-15:30	<b>Breakout Sessions –D</b> (Presentations: 20 min each, discussion and rap up: 30 min)
Breakout session # D1 <b>Banyan Hall</b>	1. Prospects of Application of Shelter-wood System in Mature Pine Stands in the Hills of Kavre District by Govinda Paudel, Prem P Khanal* and Madan Basyal 2. Silviculture and Forest Management in Hill Pinus Forest in Dhankuta by Krishna P Osti* 3. Impact of Management Practice and Age on Increment in <i>Pinus patula</i> Plantations in Nepal by Shambhu P Dangal, Padam B Chand* and Shiva Sapkota 4. Forest Management and its Impacts on the Conservation of Genetic Diversity by Rajendra KC* and Hem L. Aryal
Breakout session # D2 <b>Sakura Hall</b>	1. Experiences of Association of Collaborative Forest Users Nepal (ACOFUN) in Policy Advocacy: A Story of Success by Radheshyam Siwakoti*, Ram P Chaudhary and Bhola Bhattarai 2. Integrating Women's Voice in Silviculture Practices by Racchya Shah* and Suman S Bhattarai 3. Institutional Bottlenecks in Forest Management: Experience of Thinning Operation in Pine Plantations in Kavre District by Guman D Kuwer, Binod Sapkota* and Govinda Paudel
Breakout session # D3 <b>Budanel Hall</b>	1. Tree Harvesting in Nepalese Forestry: Practices and Challenges by Raj Bd Shrestha* 2. Preparation of Local Volume Table of <i>Dalbergia sissoo</i> , <i>Shorea robusta</i> and <i>Terminalia tomentosa</i> (A Case Study from Kapilvastu, Nawalparashi and Rupandehi Districts) by Him L Shrestha*, Mohan R Kafle, Kapil Khanal, Ram A Mandal and Keshav Khanal 3. Taper and Volume Equations for Sal ( <i>Shorea robusta</i> ) in the Western Tarai of Nepal by Ramesh Silwal*, Sharad K Baral, and Bir B K Chhetri
Breakout session # D4 <b>Kasthamandap Hall</b>	1. Geospatial Tools and Techniques for Assessing Forest Degradation and Deforestation by Kabir Uddin* and Mir A. Matin 2. Building Timber Value Chains for REDD+ in Nepal by Kishor Aryal* 3. Formulating Allometric Equations for Estimating Biomass and Carbon Stock in <i>Paulownia tomentosa</i> Grown in the Middle Hills of Nepal Himalaya by Nabin R Joshi*, Megh D Adhikari, Erica Udas and Bhaskar S Karki 4. Role of Private Sector in Agroforestry towards Climate Change Mitigation: A study from Plantec coffee Estate (P) Ltd, Nepal by Niroj Timalsina*, Nabin Bhattarai, Bhaskar S Karky, Hammad Gilani, Kai Windhorst and Basant Pant 5. Assessing Climate Change Vulnerability of Forest Ecosystems in Nepal by Vishwas Chital*, Mir Matin, Kazi M Ullah, Birendra Bajracharya
15:30-16:00	Tea Break
16:00-17:30	Gallery Walk (Poster Presentations)
<b>Third Day: Tuesday 21 February 2017</b>	
<b>Time</b>	<b>Activities</b>
08:30-10:00	<b>Reflective synthesis of breakout sessions</b> (4 breakout sessions 10 min each and 20 min discussions)
10:00-10:30	Tea Break
10:30-12:00	<b>Panel discussions</b>
12:00-13:00	Lunch
13:00-14:30	<b>Discussion on workshop message and way forward</b> (buzz group discussions)
14:30-15:00	Tea Break
15:00-16:30	<b>Closing</b> (Synthesis of the workshop outcomes; next step; reflection; vote of thanks; Speech by

**Note:**

\* Name of presenting author

**List of Poster Presentation**

1. तिलौराकोट वनमा साभेदारी व्यवस्थापन by Jay P Pandey
2. Choice of Silviculture System by Vijaya R Subedi and Ishwari Poudel
3. Commercial cultivation Practice of Taxus Plants in Southen Lalitpur by Bhuban Timalisina
4. Solutions to Forest Fire Management: a burning issue in Nepal by Him L Shrestha
5. गोडमेल, सर सफाइ जस्ता टेन्डिग अप्रेसनबाट बढी फाइदा हुन्छ (सामदायिक वन उपभोक्ता समूहहरुसंगको एक अनुभव)  
by केपी यादव र कमलेश कुमार यादव
6. Drainage Management in Forest Area: An Ignored Aspect in Nepalese Forestry by Vijaya R Subedi
7. Silviculture for Enhancing economic contributions of community forestry: Experience from Lamjung district by Durga B Karki, Govinda Paudel, and Madan Basyal
8. Income and employment generation through Scientific forest management: An Analysis from Lumbini collaborative forest management group Rupandehi by Yajnamurti Khanal and Dhanishwor Neupane
9. नेपालको पहिलोसामुदायिक वनको वैज्ञानिक वन व्यवस्थापन योजना कार्यान्वयन: एक अनुभव by कृष्ण राज न्यौपाने, कृष्णदत्त भट्ट, मदनमोहन सान्दिल्य, विजयराज सुवेदी, र इश्वरी प्रसाद पौडेल
10. Role of Forest Workers in Forest Management in Nepal: Experience of Forest Environment Workers Union Nepal (FEWUN) by Yogendra B Dahal, Bachu S Kanu and Narayan Pokharel
11. Experiences of Management Practices of Shrikhand (Santalum album) in Pyuthan District by Pravin Bindari, Ishwari P Poudel and Vijaya R Subedi, and Damodar Sharma
12. Silvicultural Management Issues for Urban Green Space in Nepal (Case Study of Pokhara City, Nepal) by Jyoti Bhandari and Dhruba B GC
13. Facilitators' role on Sustainable Forest Management by Bhola Khatiwada
14. चुरे क्षेत्रमा वैज्ञानिक वन व्यवस्थापनका सिकाई by Raju Chhetri
15. Main Results of Forest Resource Assessment (2010 - 2014) in Nepal by Rajendra KC, Buddi S Poudel, Shiva Khanal, Raj K Giri, Milan Dhungana, Yam P Pokharel
16. Invasive Alien Species in Chure Region of Nepal by Rajesh Malla
17. Management Practices and Issues of Protected Forests in Nepal by Shanta R Baral, Saraswoti Sapkota, Ganesh Paudel
18. Agarwood and its Status in Nepal by Navin Giri
19. Forest Fragmentations: Challenges in Forest Management by Pravin Bindari, Ishwary P Poudel, Prahalad Dhital and Vijaya R Subedi