

**Brief report on**

# **Forestry students' visit to silviculture research plots in Chaubas and Chautara**





On 22-24 August 2023, 22 Masters of Science in Forestry student (12 female students, 10 male students) of Institute of Forestry, Tribhuvan University, Kathmandu led by Professor Nagendra P Yadav and Professor Rajesh Rai visited the EnLiFT2 working sites in Chaubas and Chautara for observation of community sawmill, different silviculture regimes and interactions with EnLiFT2 researchers and selected CFUG members.

## DAY 1: 22 August 2023

The students arrived at 11:30 am in community Saw mill at Chaubas who were welcomed by Min Bahadur Tamang (Secretary of Chapani Gadhidada CF) and Mr Madan Bashyal of EnLiFT project at Chaubas Bhumlu community Sawmill. Personal introductions and introductions about the EnLiFT2 project were made on the mill premises. Mr. Madan Bashyal described about the background of community sawmill establishment, the initial success achieved by sawmill, the problems that started after that and the environment that led to the closure of sawmill. He also gave brief information about the efforts of EnLiFT2 project regarding the various modalities of sawmill operation and the support provided by different projects at different times for the establishment of Sawmill, its operation and the re-operation of closed mill. Secretary of Chapani Community Forest and Madan Bashyal clarified the questions raised by the students about the Community Sawmill. After discussing about the community mill for about an hour, the team reached Lakuri Bhulbhule CF where the forest was managed according to the approved Operational plan and harvesting plan in the community forest. The community forest has been managed their forest by preparing an Operational plan based on the Pinus Patula thinning guidelines. The team observed the area where felling occurred in the previous and this financial year.

Mr. Madan Bashyal clarified the questions raised by the students. Dr. Rajesh Rai further elaborated that the canopy should be opened based on the regeneration of the desired species after felling. Therefore, he said that the silviculture system to be applied should be considered after considering the silviculture character of the species. If the desired species is light demanding, you have to go for canopy open and if your desire species is shed bearer, you should go for gradually opening it. Meanwhile, students got knowledge about pruning from Dr. Nagendra Yadav.

After visit to Lakuri, the team moved to EnLiFT silviculture trial plots. There, students got an opportunity to develop better understanding on different silvicultural practices and ground response in different silviculture method. Mr. Madan Bashyal facilitated the discussion at the trial plots.



## DAY 2: 23 August, 2023

On the second day of the visit, the students observed the Disperse Variable Retention (DVR) plot where discussion and interaction were made about the principles of silviculture. The key topics discussed in the plot include rotation age, regenerations, pruning, thinning and forest management objectives as key drivers for silviculture systems. The students were also given a print-out of the stand profile to discuss the stand structure before the trial and discuss the projected stand structure and composition. The discussion was continued in the Shelterwood plot. A total of 2 hours was spent in the Sansari CF.

### Students in EnLiFT silviculture demonstration plots

The team moved to ShreeChap to observe the shelterwood, control plot and strip shelterwood trial plots. In the shelterwood plot, discussion and interaction about site quality was facilitated by Professor NP Yadav and supplemented by Mr. Madan Bashyal. The team then moved to the strip seed tree system where the rationale for strip system was discussed. After visit to all silviculture plots, the team headed to ShreeChap CF office where a brief interaction with CF leaders was organised.



## DAY 3: 24 August 2023

The third of the visit included a brief reflection, interaction and synthesis among the participants. The students were divided into groups where three rounds of questions and answers were allowed for each group. Professor Yadav also delivered a short lecture on general forest management and administration issues reinforcing the principles of cycle of regeneration, tending operations and felling operations. The reflection lasted for 1 hour.

Following the reflection, the students visited Patlepani nursery to observe the nursery infrastructure, seedling production and range of species. A small exercise was held to introduce how to assess seedling quality using the sturdiness quotient. Each student were required to pick-up one Bauhinia seedling for measuring seedling height and root collar diameter. These measurements were drawn in a graph on a brown paper for assessment. Students derived the sturdiness quotient of their seedling by dividing the seedling height (in cm) by the root diameter (in mm). The students found that only half of the seedlings were within the threshold of a good quality seedlings ( $\leq 6$  SQ).

At 10.15 am the students moved to the nearby naturally regenerated *Pinus patula* stand. The students were introduced to the basic principles and techniques of thinning a stand with irregular spacing, such as the one achieved by natural regeneration. The stand is 10-15 years old since seedling emergence and is believed to have been thinned at least once from pole stage. The exercise involved selecting trees for retention in a 5m x 20 meters plot. Trees were marked with a plastic twine and then discussion on principles of selecting trees – stem form, vigour and spacing was done. Students appreciated the practical exercise held in the nursery and in the stand.



### Some reflections from the students:

"We had a chance to see the things we read in the book here. Silviculture works are very few in Nepal. After seeing the demonstration of different variants of Shelterwood system here, it has been felt that the level of our practical knowledge has reached a high level. I am very happy to visit and interact on EnLIFT2 research on different silviculture systems, I had not had seen such practice before."

"Off course we had an opportunity to do same work at Kavrepalanchok as well but we missed that opportunity. This year we will try to do same silviculture work in Bhagawanthumki CF" Gaurab Bhatta, Assist. Forest Officer, DFO, Kavre.

"The students learned a lot of practical insights, gained skills in silviculture practice, seedling quality assessment and thinning and appreciated the impact of opening crowns on regeneration development, this visit is certainly helpful to prepare student in their respective forestry careers" Professor Yadav.

