Project Update: June 2013

1. Introduction

Laljhadi corridor is situated in Western Terai Arc Landscape and lies in Kanchanpur district. Geographically, the area is located between latitude 28˚42'8.86'' to 28˚51'27.05'' North and longitude 80˚22'51.81'' to 80˚32'17.13'' East and elevation is approximately above 135 to 184.4m from sea level. The total area covered by the forest corridor is 15,500 ha which is nearly 9.60% of total area of Kanchanpur district. This forest is spread over the south-eastern part of Kanchanpur which encompasses whole or part of five VDCs namely Krishnapur, BaisaBichawa, Shankarpur and RaikawarBichawa (Laljhadi) and Dekhatbuli. The corridor area has a flat topography. The corridor connects Nepal's Churia forest in the north to India's Dudhuwa National Park in the south.

A biological corridor, alternatively termed habitat corridor**,** provides functional linkage between-conserving habitat for species movement and for the maintenance of viable population. Laljhadi Corridor is experiencing high pressure due to encroachment and deforestation activities of free-bonded labourers, flood victims and landless people. These VDCs, every year experiences heavy flood from the nearby river, as a result encroachment has started severely inside the forest mostly in the peripheral region (100 to 1500m). Hence, forest of the corridor is almost vanished. Most of the local wildlife has been also disappeared because of drastic change in the habitat quality and poaching. Hence, first activity was to map the biological resources the corridor by using GIS, RS and field survey in context to land use/ land cover change. Also, the inventory of vegetation within the forest and animals' presence evidence are another main objective of the research. Beside these, to increase the level of understanding among the Community Forest Users Groups for the sustainable use of forest products, for the first-time bio-briquette training introduced targeting for the women groups.

Some of the activities that were conducted to meet the above mention objectives in the first phase were as follows:

2. Activities

1. Image classification

In order to map the land use/land cover map of the forest region, a base year map was taken of the year 1992 which was revised in the year 1996. By using the Features Code, classification was made in order way given in the topographic sheet, where our main motive was to observe the percentage coverage region. Similarly, the Landsat imageries of the year 2002 and 2012 downloaded from the USGS which was further proceed for error correction for the year 2012. Supervised classification was performed to classify the image into different land use changes as supervised classification has high accuracy to that of unsupervised classification since, the user can train the classes according to his wish thus, the base map and further two mentioned years maps for change detection was prepared by supervised classification. Maximum likelihood classifier is generally used for supervised classification.

Data on the different land use land cover classes obtained from the field study (GPS location) were used as training sample for supervised classification. Land cover was classified into the following six classes.

1. Forest (Dense)
2. Forest Sparse (Bush and deforested land)
3. Grass land
4. Plantation
5. Water body
6. Cultivated land and other

Fig.1: Random Sampling points generated from Hawth's tool.

Fig.2. Allocating GPS points for the forest area and dried river below the Churiya belt.

2. Biodiversity Inventory

For the scientific documentation of the vegetation type within forest region, 20 m X 20 m quadrat was taken. Hawth's tools in ArcGIS were used for random sampling points for the vegetation sampling. Altogether, 50 sampling plots were taken for the vegetation sampling.

For the animal's presence records, transect line was taken for nine regular grids which were generated from GIS. All the evidence such as scat/pellets, pug marks were snapped in for the records.

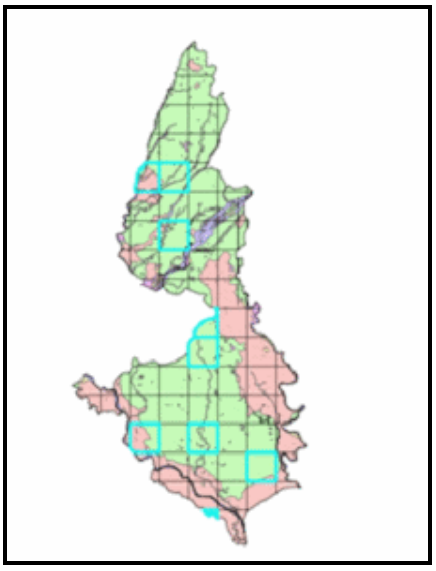

Fig.3: Grid line generated for animal presence inventory by using Hawth's tool.

Fig.4: Vegetation sampling by Quadrat (20X20 meter) method and data entry of vegetation types

3. Bio-briquette Training.

Altogether 30 interested women from four Community Forest Users Groups were selected for the bio-briquette training in the study area for the first time. The main objective of this training was to reveal the importance of conserving forest by reducing the direct pressure on the forest

product such as in usage of fuelwood. Women are responsible to carry out all households' activities including the collection of firewood daily in the forest area. Their most of the time is wasted for collecting the firewood in the forest including the children. This training introduced for the first time will help them for income generating source as one piece of briquette is sold in NRs.30 per piece if directly sod in market. Not only this, print media such as pamphlet was also distributed for more than 100 households residing nearby with the help of trainees.

Fig.5: Front view of pamphlet prepared in Nepali language for briquette training. Fig.6: Back view of pamphlet prepared in Nepali language for briquette training.

Fig.7: Conducting Bio-briquette training for the women groups.

4. Plantation

Plantation program within the forest region by enrolling the community people has been planned to conduct in mid-July 2013.