Project Update: March 2013

The second progress report details on assessment of natural resources especially fuel-wood in the remaining four target villages, Sumer, Lampi, Desuri and Ghanerao, which are also located along the boundary of the Tropical Thorn Forest, the main habitat of the White-naped Tit. To know the resources use by the house holds of each village, sample households were surveyed with set questionnaire the details of which are given below. The main aspects covered in this report are as follows:

- ✓ Dependency on tropical thorn forest in the remaining four study villages in terms of fuel-wood consumption now (present) and past (results of House hold surveys).
- ✓ Distances moved by local communities to collect these natural resources.
- ✓ Relative percent of major livestock in the six study villages
- ✓ Environmental awareness among target groups
- ✓ Map showing the areas used for the fuel-wood and fodder collection prepared based on manually GIS, i.e., the routes and locations the people use and go for collecting these resources as made by the village people during Participatory Rural appraisal.

In the household surveys using a set questionnaire data was collected on the amount of fuel-wood required per house hold, its availability and distance moved /covered to acquire these natural resource, mainly fuel-wood and fodder.

Dependency on Tropical Thorn Forest for Fuel Wood

The household survey carried out in the remaining four villages i.e. Sumer (households 144 & human population -660), Lampi (households 181 & human population -925), Desuri (households 1717 & human population -8897) and Ghanerao (households 1437 & human population -7650) showed that all four villages used fuel wood to a higher extent upto 70-80kg in the past, which has reduced to 40-50kg in present conditions (**Figures 1, 2, 3, & 4**). However, in the sample the use of fire wood in terms of quantity, has decreased, which is mainly due to the distances they have to travel to aquaire the resources. Further, the fuel requirement is being met through use of charcoal and some even LPG gas. The difficulty in getting LPG gas and the high cost has still made the people to depend on the fuel wood that is being collected from the adjoining forest areas. The larger villages like Desuri and Ghanerao had more of LPGs compared to the smaller villages.

Increased human and livestock population coupled with competition for the natural resources has put tremendous pressure on the nearest forest areas, especially the thorn forest of the foot hills of the western slopes of Aravalli hill range. Hence these tropical thorn forest, the habitat of WNT are under continuous pressure from the local communities, as the major occupation of most of these communities that reside along the foot-hills of this hill range, is livestock rearing and rain fed agriculture. Some of the local communities are traditionally dependent on this forest for natural resources like fuel-wood and fodder. The figures (**Figures 1, 2, 3, & 4**) depicts the changes in the past and present fuel-wood usage in the four study villages, which is based on the sample house hold survey.

Figure 1: Past and Present Dependency on Fuel-wood by Sumer Village

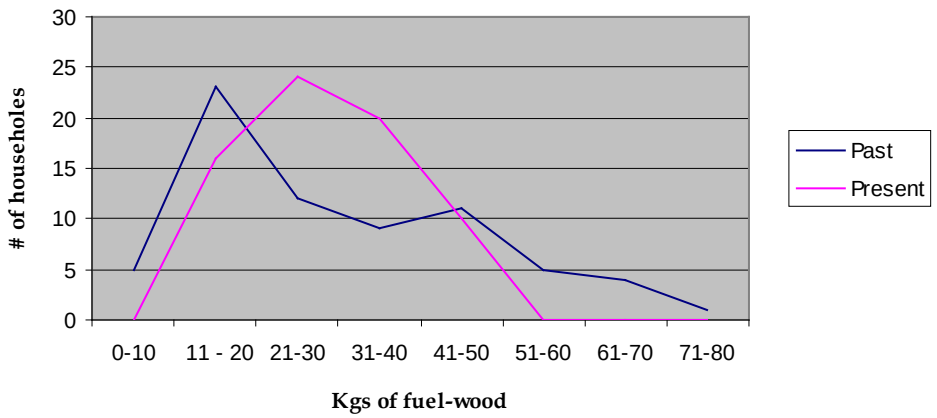


Figure 2: Past and Present Dependency on Fuel-wood by Lampi Village

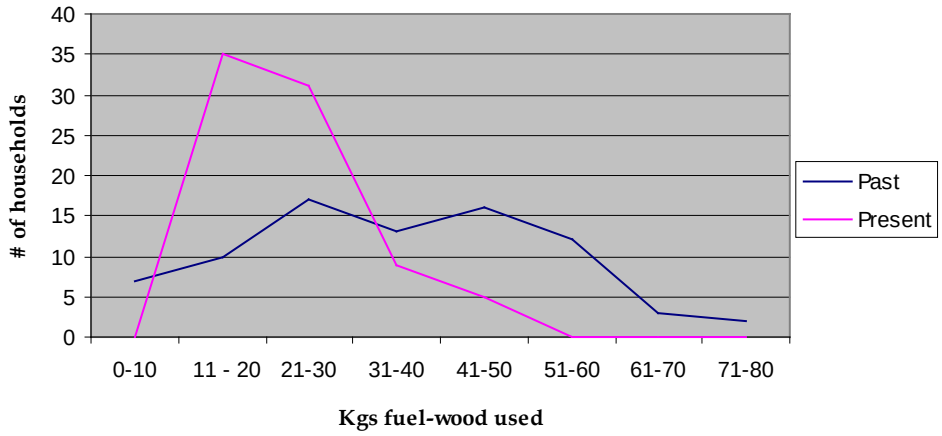
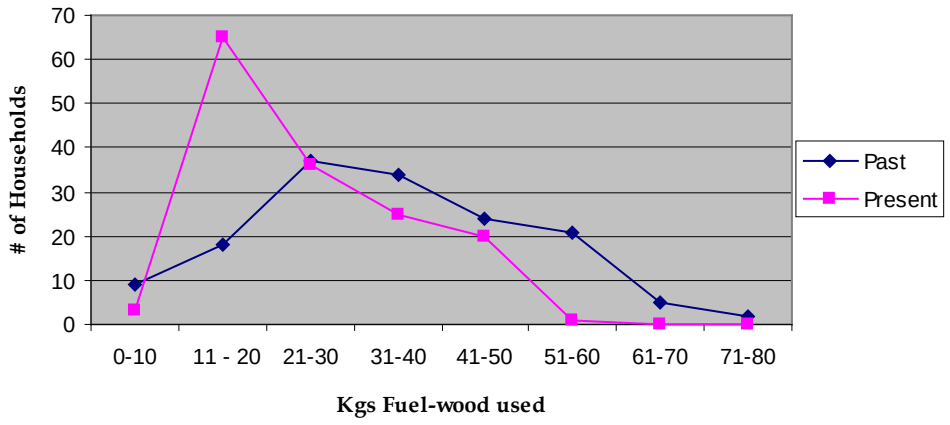
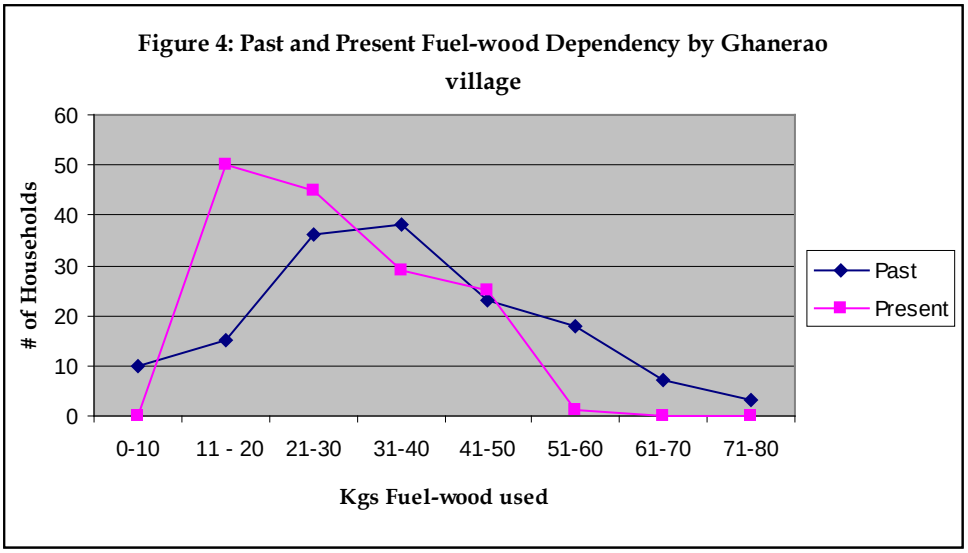


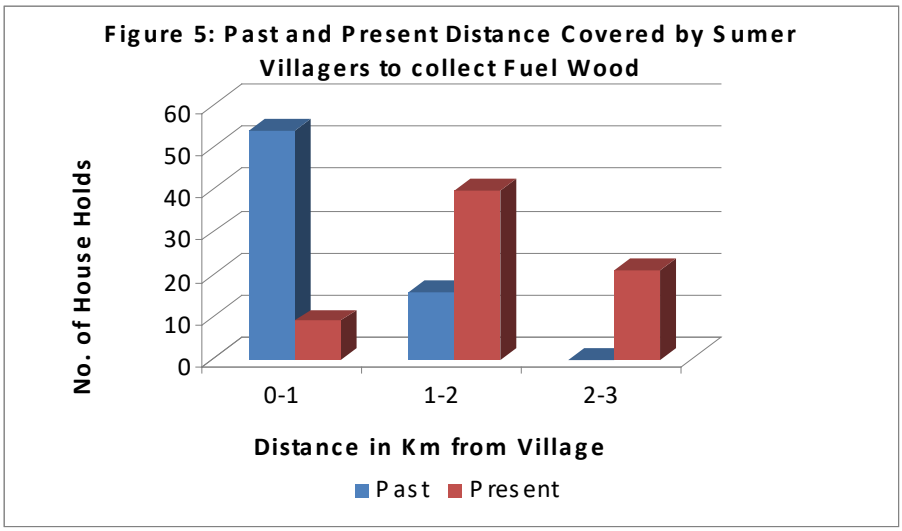
Figure 3: Past and Present Fuel-wood Dependency by Desuri Village





Distance Moved by Local Communities to Collect Natural Resources

The distances moved by the villagers in pursuit of fuel wood and fodder collection and for grazing their livestock seem to have generally increased when compared to the past in all the study villages (**Figures 5, 6, 7, & 8**). Data showed that earlier, the local people had to rarely cover a distance of four kilometres to collect the fuel-wood and fodder, as majority of them moved maximum distances of up to 1-2 km, but presently they were found to go up to four kilometre or more. The decrease in the maximum distances covered by these remaining four villages was comparatively less to the Rajpura and Mandigarh villages, which was mainly because of the presences of forest around all these four villages, as against availability of forest on only two sides of other two villages (Rajpura & Mandigarh) that was more than 6-7 km.



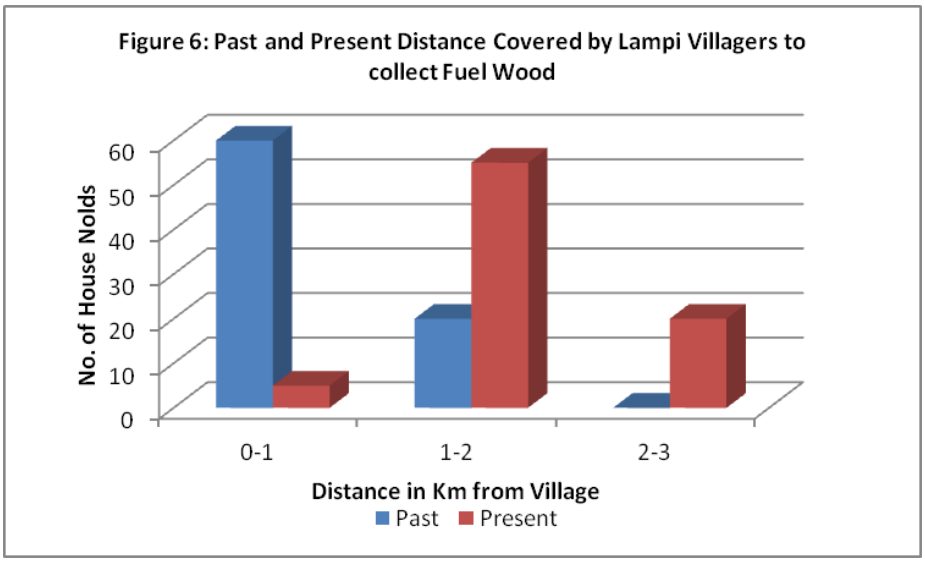


Figure 6: Past and Present Distance Covered by Lampi Villagers to collect Fuel Wood
No. of House Nolds
60
50
40
30
20
10
0
0-1
1-2
2-3
Distance in Km from Village
Past
Present

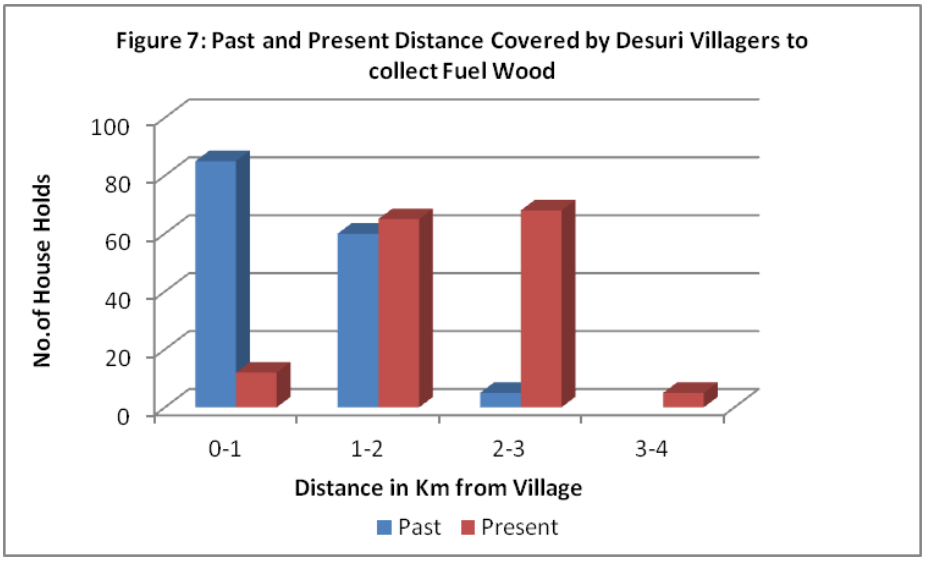


Figure 7: Past and Present Distance Covered by Desuri Villagers to collect Fuel Wood
No.of House Holds
100
80
60
40
20
0
0-1
1-2
2-3
3-4
Distance in Km from Village
Past
Present

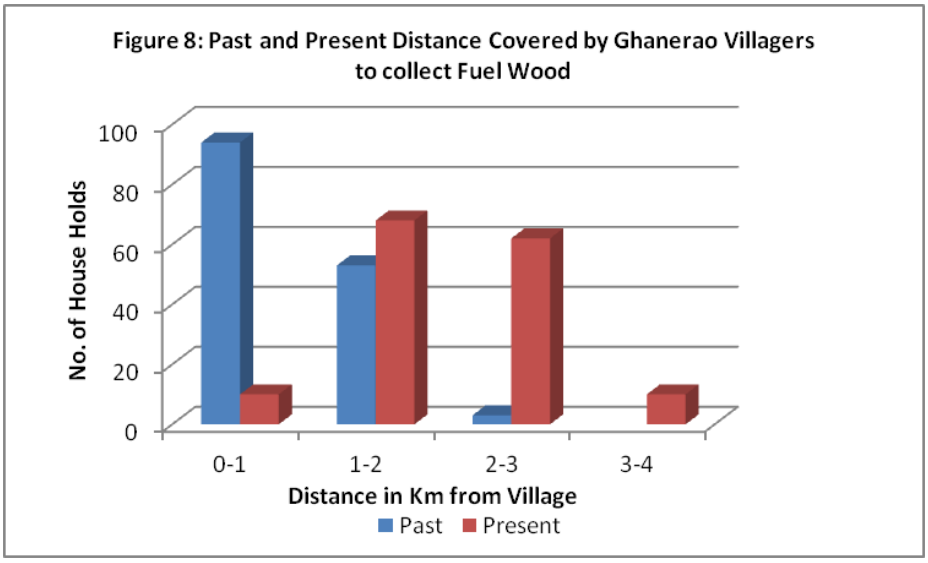
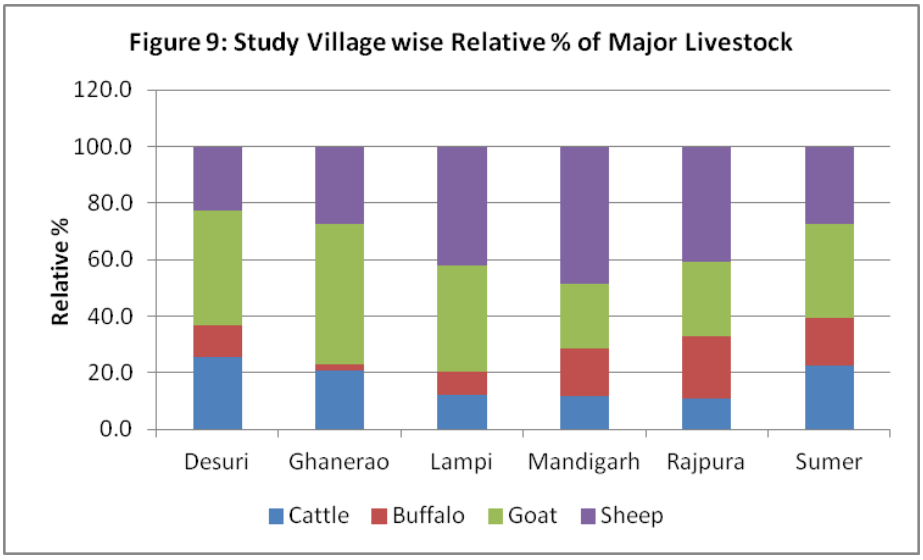


Figure 8: Past and Present Distance Covered by Ghanerao Villagers to collect Fuel Wood
No. of House Holds
100
80
60
40
20
0
0-1
1-2
2-3
3-4
Distance in Km from Village
Past
Present

Relative Percent of Major Livestock in the Six Study Villages

The study area comprises of different types of local communities, and these different communities' uses the forest for meeting out their different needs but mainly for fuel wood and fodder. Livestock rearing, being one of the main livelihood for these local communities, has a huge impact on these forests. The local communities who are dependent on the forested landscape, for meeting out the major fodder needs of their livestock, seem to have more of smaller animals like goat (predominantly browsers) and sheep (predominantly grazers) among their major livestock (**Figure 9**). Presently in order to feed these animals including cattle and buffalo, the local communities lop the trees extensively as all the fodder available within the livestock reach has been exhausted due to over browsing and grazing. All these communities which are traditionally depended on the forest can not be stopped to go to the forest but the pressure on the forest can be diverted to the other areas in and around their village environs, mainly the Government wastelands and the village grazing or gauchar (*term used locally for grazing lands*), which are presently very highly degraded, but have potential to be restored as an good fuel wood and fodder / grazing plots. So as part of this second grant model fodder and fuel wood plots were developed in four villages to an total extent 50 ha, 20ha in Bhagibavri of Sadri, 10 ha in Rajpura, 10 ha in Mandigarh and 10 ha in Sumer. The details of the model plots developed will be given in the final report that is to be submitted before 10th of May 2013.



Environmental Awareness among Target Groups

Environmental awareness is becoming one of the major tools in addressing the conservation issue in present conservation practices. Conserving White-naped Tit and its thorn forest habitat by using this tool was one of the main objective of this project. Most of the local communities especially the livestock keeping communities were addressed primarily on the sustainable use of the natural resources, development and management of their grazing lands and the ecological significance of the other biodiversity and the WNT, of the Tropical Thorn Forest and their conservation for their own survival. Apart from this, the school kid who are the future users and the women group, who are actually involved in collection of these

resources from the forest and the managers who are the main stakeholders of these forest were also involved in this conservation initiative. Since two workshops as part of this objective of the project has to be completed, the outcome would be discussed in the final report of the project that would be submitted before 10th of May 2013.

Map Showing the Areas used for the Fuel-wood and Fodder collection

The map (**Map 1, 2, 3 & 4**), that shows the locations and the direction of movement that was used by the people of the study villages to collect fuel wood and fodder or for grazing, was prepared based on the drawings made on the ground (manual GIS) by the respective villagers during the Participatory Rural Appraisal (PRA) exercise. The maps clearly show that the areas in the immediate vicinity to the village boundaries that were used in the past were highly degraded, which decreases in the magnitude of degradation when moving further away from the village towards the interior forest. As the Tropical Thorn Forest are spread along the boundary of the villages, it is highly degraded, thus having a immense impact on the habitat of WNT. Areas which are described as scrub land were earlier either pure thorn forest or partially thorn forest but due to excessive use of natural resources have been converted to scrub-land. Further, these maps also show the location of the model plots that were developed as part of this project. The pros and cons and participation of the local communities in developing these model plots would be described in the final report.

Map 1, 2, 3 & 4: Map showing Routes to the Tropical Thorn Forest used for collection of Natural Resources by the Study Villages - based on manual GIS