

Report of livelihood linkages and economic value of wetland : Nedugula and Tarnad Mand

Introduction

Hill Wetlands of varying sizes are found all across the Nilgiris district. Not only do they support a large and varied biodiversity, they are also of importance to the human settlements in the vicinity. While it is commonly understood that the large tracts of vegetable farming and some tea in the proximity are supported by the wetland, there has been no quantification of the actual economic value of the wetland to the human habitations in the vicinity.

Methodology

A sequence of data collection methods were adopted to ascertain the economic value of the wetlands concerned to the proximate human habitations. In the first step, group discussions were held with the members of the habitations in each case and an outline map of the land use around the wetland was drawn. The resource map so generated is depicted below for both the wetland areas of Tarnad Mand and Nedugula.



Figure 1: Land use around Wetland in Nedugula

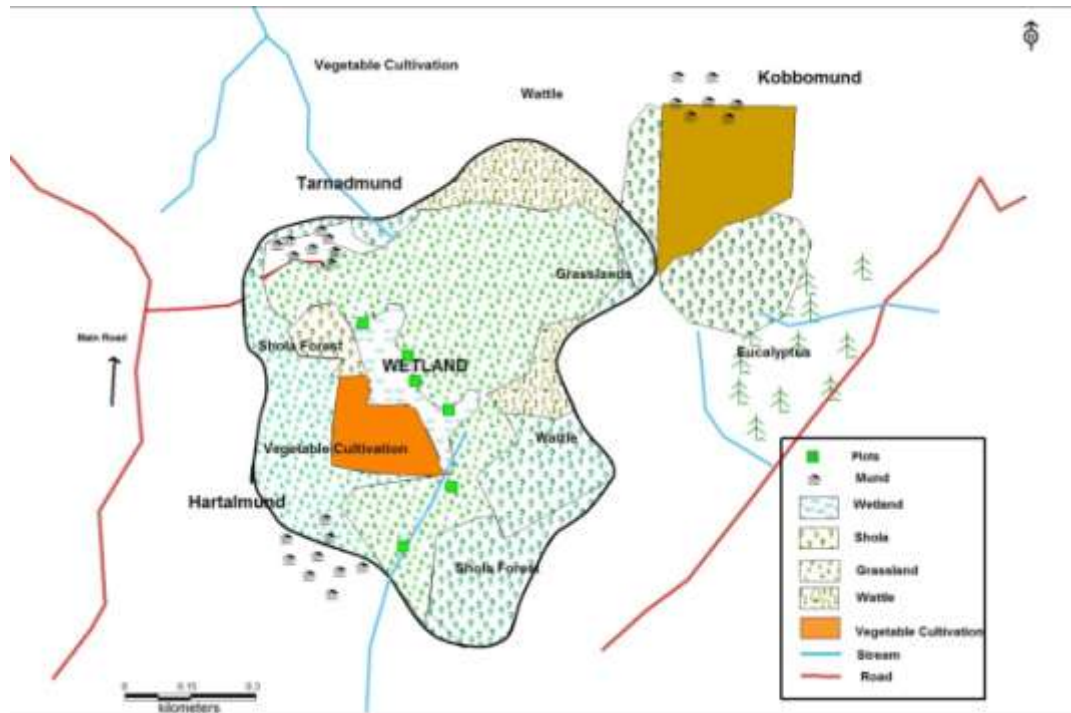


Figure 2 : Landuse around Wetland in Tarnad Mand

Subsequently, a perimeter of the wetland was measured using a GPS instrument. The wetland perimeter was understood to include the drainage area of the wetland as well as the catchment of the drainage area. Members of the Hill Wetland Conservation Group(HWCG) assisted project members in both the locations. The broad areas of varying land use within the wetland perimeters were also demarcated. The data on the land use that emerged from the delineation is represented below.

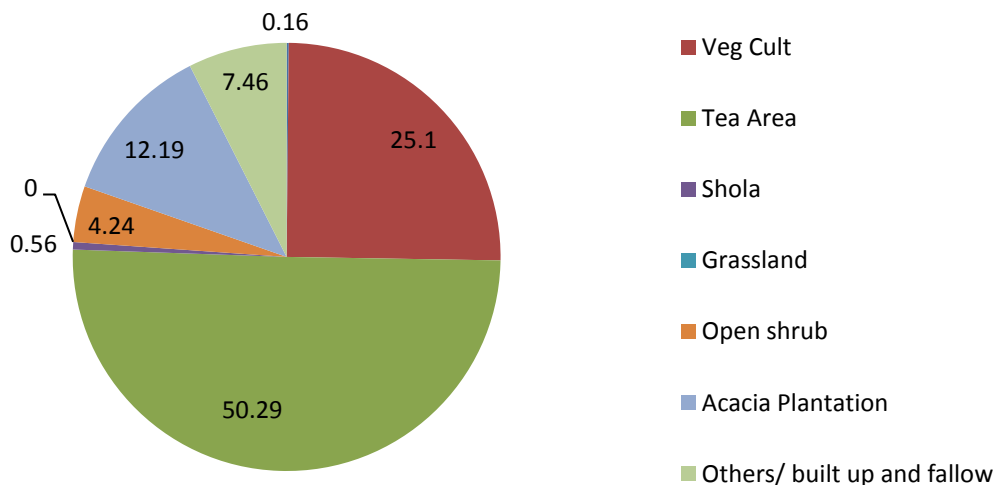


Figure 3: Relative Proportion of varying landuse around wetland in Nedugula

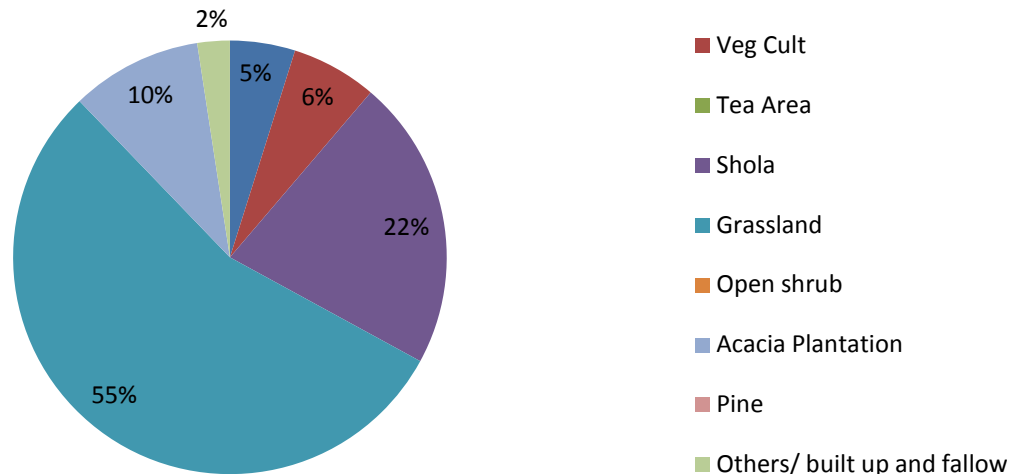


Figure 4 : Proportion of varying land use around wetland in Tarnad Mand

Village level discussions revealed that the direct influence of the wetland on economic activity in the villages should be determined by the extent to which vegetable cultivation was practiced. Cattle rearing was identified as a second key area. The dependence of agriculture on the wetland in Nedugula is far more than in Tarnad Mand where a smaller percentage of the wetland area is under vegetable cultivation.

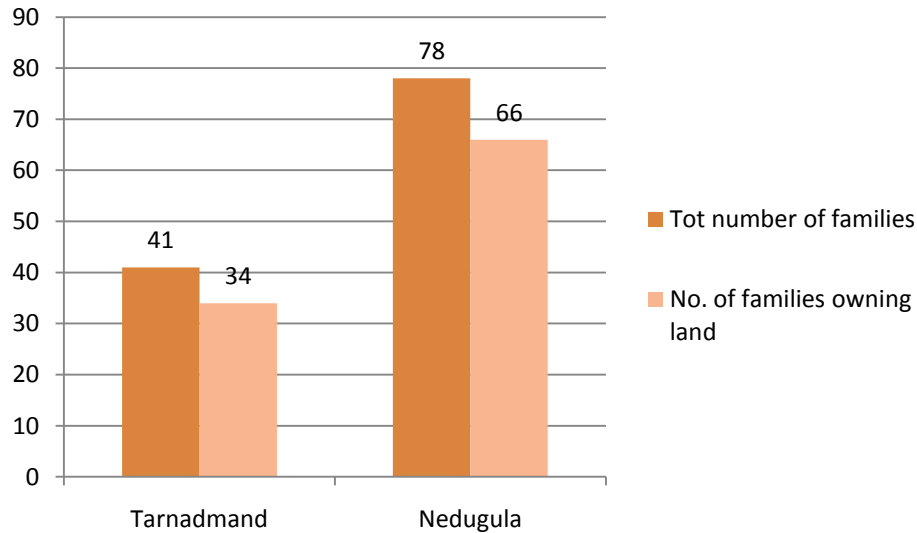
A survey questionnaire was drafted for sharing with the HWCG, which then selected a member from within the village to administer the questionnaire to each household. The findings of the survey are discussed below.

Table 1: Number of families and Population

Village	No of Families	Total Population
Nedugula	78	331
Tarnadmand	41	170

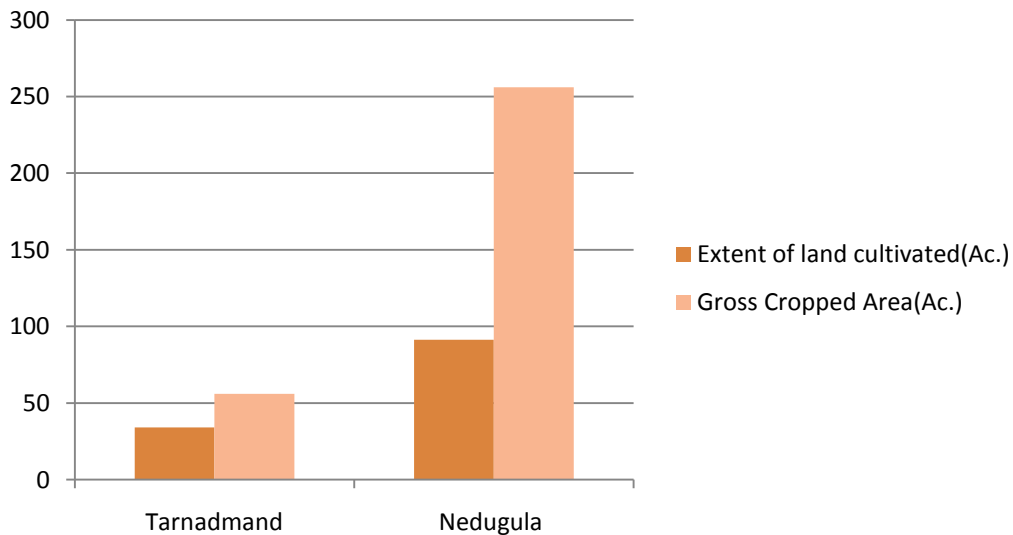
A total of 119 families were surveyed across the 2 villages. Tarnad Mand comprises the four habitations of Tarnad Mand, ArtaMand, KobbuMand and Pudu Mand. The total population in the 5 habitations is 501.

Table 2 : Number of families owning land in wetland area



In Nedugula, about 84% of families in the village own land in the wetland area and the corresponding figure for Tarnad Mand is 83%.. The land area under vegetable cultivation in both villages is vastly different, Nedugula cultivating almost 91 acres while the area in Tarnad Mand is only about 34 Ac.

Table 3: Extent and intensity of cultivation in wetland area



The main crops grown in both villages include beans, cabbage, beetroot, carrot and potatoes. The total yield of all vegetables was estimated from the survey response and the market value of each vegetable was taken at an average of the price range across the year. The results arrived at are shown in the table below.

Table 4: Quantum of Vegetable Production and estimated market value

Habitation	Total vol of produce(tonnes)	Value of Produce(approx in '000Rs.)
Tarnadmand	49	493
Nedugula	941	9270

The wetland in TarnadMand has traditionally been an integral part of the grazing grounds of the Toda buffalo. Community elders recall upto 500 head of cattle in the area once. The survey shows only about 49 buffaloes.

Table 5 : Number of Livestock in Wetland Area

Habitation	Cow	Buffalo
Tarnad Mand	5	49
Nedugula	7	0

The survey attempted to understand if there was any income from the sale of milk from the cattle. The cow's milk was largely reported to be for household consumption with some non sale distribution to neighbors. Buffaloes in Tarnad Mand are kept more for ritual purposes than their milk yields. Their milk is consumed within the household and any income from sale of milk seems to be small.

Tenurial aspects of Wetland use

Tenure over the wetland area has emerged as an important dimension of wetland use from the various small group discussions that were held to interpret the survey findings. In Nedugula, where the wetland

is located in private land, there seems to be very little community jurisdiction over the land use. In Tarnad Mand, the wetland cuts across the Toda Patta land which is a revenue assignment to the Toda community. However, this current status of this land is unclear. The forest department claims 'ownership' over it as does the community. Under the circumstances that the community has been using the said extent of land for grazing, they are eligible to claim tenure over it under the provisions of the Scheduled Tribes and Other Traditional Forest Dwellers' (Recognition of Forest Rights) Act, 2006. Pudu Mand, one of the habitations of Tarnad Mand has initiated the process of filing community claims over about 7 Ha. Of land. There are competing claims to this land from the neighbouring village of Sholur Kokkal as well. While there is a strong cultural motivation for the protection of the wetland amongst the Todas, due to its connection to the sacred buffalo and its pasture, we recognize that the lack of capital to invest in vegetable cultivation has also been an important factor in the fact that only a small portion of the wetland area is appropriated for vegetable cultivation currently.