

Abstract of the Ph.D. Thesis entitled:

**Identification and Management of Common Property Resources of District Rajouri:
A Geoinformatical Approach (Sept. 2012-Awarded)**

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Common Property Resources (CPRs) play very vital role in people's self sustained livelihood but due to lack of proper management and conservation measures they are getting degraded and depleted constantly. Particularly hill and mountainous landscape are more vulnerable where hill farming and pastoral nomadic systems of livelihood is performed with heavy dependence on CPRs in Jammu and Kashmir. District Rajouri, one among such areas has been taken as the study area for the present research. Primary data has been collected through field survey in 20 sample villages as responses of CPR users besides digital processing and interpretation of remote sensing imageries for Land use / land cover classification and change computation. The secondary data consists of various government records, official reports and other published material.

In Chapter first a local level identification and classification of CPRs has been attempted. Regarding distribution of CPRs in the country, 15 percent of geographical area is noted to be under CPRs while as per-capita availability of CPR land was 0.06 hectare as national average presented by NSSO. The State of Jammu and Kashmir possesses good pastures and water resources, but hilly and mountainous areas experiences crucial situation in terms of water, where up to 100 households are found dependent on one natural spring for drinking, similar situation is with ponds for livestock needs. Regarding irrigation, whole of the net irrigated area in the district (0.075 thousands hectares) is irrigated by common waters of natural streams. 85 percent households collect fuel wood, 63 percent timber, 67 percent fodder from the forests, while as 34 percent collect mushrooms, wild fruits, and various herbs etc in the district as projected estimates of primary survey. Chapter second notes that the State of Jammu and Kashmir is 41% deficient in fodder requirement for its livestock due to lack of proper management and conservation measures. In study area, Proportion of CPR land is about 22 percent to total land area while as per-capita CPR land is around 1 acre. 82 percent population of the district is dependent on

common waters of the natural springs for drinking purposes. Growing population pressure on CPRs is felt in terms of decrease in availability of livestock heads to 100 humans by 20 percent for sheep, 45 percent for goats, 25 percent for cattle, 12 percent for buffalos and 25 percent for horses during last 30 years. Such a fact is further analysed in chapter third where it is noted that CPRs are in the process of depletion due to undesirable changes in land / use land cover classes. CPR endowed land classes are decreasing sharply in area i.e. forest cover decreased by 76 percent, pastures 28 percent, barren lands 7 percent and mixed vegetation 3 percent causing adverse impacts on common pasture dependent livestock and livelihood of the rural people in terms of livestock availability. Increase has been noticed in land use classes i.e. wheat and maize crops by 34 percent, rice crop 31 percent, grasslands (harvestable grasses) 59 percent and built up area 44 percent. Such classes usually don't possess CPRs but their increase, up to some extent, is found encouraging for stall-fed livestock. In broad view livelihood crises in terms of livestock are noticed and expressed in terms of per capita availability of livestock. Chapter fourth found that rural people are 24% dependent on CPRs for their livelihood. Villages with higher proportion of CPR area are greater dependent on CPRs and vice versa. Such a dependency is directly proportional to distance from the roads and towns, altitude and ruggedness of topography while as inversely proportional to literacy, electrification, LPG cooking fuel supply, and tap water supply in the Villages. Regarding water resources, all the villages irrespective of physiographic and socio-economic attributes, are heavily dependent on common waters of springs, ponds and streams. However, in chapter fifth Socio-economic response of the community towards participatory schemes is found to be favourable as respondents are found willing to contribute for the management and conservation of CPRs under such schemes. Such a tendency of contribution is higher in the villages with higher dependency on CPRs. Regarding preferred mode of contribution, 41 percent tendency was shown for physical contribution in the shape of physical work, 18 percent for financial contribution, 06 percent for sparing occupied CPR land and about 1.5 percent for donating personal piece of land to be used as CPR. Also, the tendency towards physical contribution is higher in the villages where average dependency is higher and financial contribution in the villages where average dependency on CPRs is comparatively low. It is because people fear of losing their livelihood if CPRs further depleted.

Finally it can be concluded that endangered livelihood of the rural people as well as deteriorating ecology of the area can be saved by proper methods of land use / land cover change monitoring and managing and conserving CPRs under participatory approach-based schemes to maintain harmony between sustainable ecology and progressive livelihood. To meet such an end some suggestions are put forward at the end of the thesis.