

ANALYSIS OF DEFORESTATION DRIVERS IN STUDY AREA TEHSIL BARAWAL DIR UPPER PAKISTAN

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ABSTRACT

Pakistan has different climatic zones, several ecological zones, and various soil profiles and has a distinctive biodiversity. The area of Pakistan forest is 4.8% of the total geographical land and the forest are in facing a titanic problem of deforestation. Field survey and Remote Sensing (RS) and Geographic Information System (GIS) techniques both are the superlative approaches to identify those areas of deforestation and to identify different drivers of deforestation in study area in Tehsil Barawal, District Dir (U). The main objective of the study was to identify different drivers of deforestation in study area. The results of field survey revealed that there are seven drivers of deforestation, source of income from forest, fuel wood collection, illiteracy rate, agriculture expansion, forest fire, illegal cutting/harvesting and encroachment. In the study area 40 % of the respondents approved that agriculture is one of the main drivers of deforestation while 24% of respondents agreed that fuel wood collection and 19% were agreed that the illegal cutting is main driver of deforestation. A positive technique like supervised image classification was used for Landsat 5 satellite image of the year 2000 and 2012. The study area was mainly consisting of five classes such as forest, agriculture, barren land, snow and water. In year 2000 the area of forest, barren land, agriculture, water and snow 49.53%, 43.39%, and 5.19%, 1.30% and 0.59% while in year of 2012 area was 37.16%, 41.37%, and 12.69%, 5.04% and 3.73%. After investigation of RS and GIS data it was cleared that from year 2000 to 2012 the forest land was decrease 12.36%, agriculture was increase 7.5% barren area decrease 2.03%. Therefore from field as well as from GIS and RS results that was cleared that agriculture is the key driver of the deforestation study area.

KEYWORDS: Analysis of Deforestation Drivers in Study