LAND USE PATTERN OF UPPER TONS CATCHMENT
DISTRICT, UTTARKASHI, U. P.

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ABSTRACT

Aerial Photographs of 1:50,000 scale pertaining to Tons Catchment were used for generating a land use map showing cultivated lands, forests land, grass land, barren land with rock outcrops, snow and glaciers. The area was divided into 4 altitudinal Zones: More than 81% lies above 3000 m height and should be left for natural regeneration. Cultivated land occupies 4.9% of the area and is concentrated below 3000 m altitudinal zone and lies along river courses and on river terraces. Distribution of forest lands in altitudinal zone indicates that percent area covered under forest is higher than the average distribution of forest as reported by Seth (1978). Grass and open scrub, barren land with rock outcrops, glaciers and snow covered areas occupy 6.8%, 18.1%, 16.5% and 28.0% respectively.

INTRODUCTION

The Himalayan region plays a key role in the social, cultural, environmental and economic life of the Indian people. They influence the climate of the major parts of the country. The region forms the source of the catchment of several major river systems of the country. It is rich in natural resources like soil, forest, water and minerals. The said resources are badly depleted by the geocatastrophic factors like deforestation, over grazing, lopping, landsliding, unscientific methods of quarrying etc.

The National Committee on Environmental Planning and Coordination organised a National Seminar on Resource Development and Environment in the Himalayan region during April 10-13, 1978, and one of the recommendations was that the inventories of soil, land use and forestry should be prepared for optimal and scientific utilization of resource and based on these information, the Himalayan region can be divided into viable sectors for a purpose of land use planning and management.

The present study of Upper Tons Catchment, north of Naitwar in the Uttarkashi Dist. of U P. aims to prepare inventory of present land use pattern data on cultivated land, forest land and snow covered area and also to find out the extend of cultivated land and its slopes characteristics under different altitudinal zones for land use planning.
METHODOLOGY

In the present study aerial photographs of 1:50,000 scale were interpreted for land use. The information thus generated were transferred on 1:50,000 scale toposheets of survey of India with the help of Sketch Master. The area was divided into four altitudinal zones as proposed by Saxena and Singh (1978). Slopes of the cultivated area in percent were determined. The area of mapping units was calculated by using dot grid. The map was prepared on 1:50,000 scale and was reduced to suitable scale for presentation.

GENERAL DESCRIPTION OF THE AREA

Geo-identity:

The study area is situated between 31°0' to 31°20' N latitudes and 78°5' to 78°35' E longitude with an area of 82,735 ha. The area lies on altitude of 1400 msl to 6085 msl.

The area is connected by Purola-Jarmola-Naitwar forest motor road (which is jeepable). A bridle path runs from the Tons valley to Lami pass, Borasu pass and Dhumdhar Kandi pass.

Water Resource:

In the area there are some important glaciers viz Bunder punch glacier in the south, Jamdar Bemak in the northeast and Devkir glacier in the north.

It is drained by the river Tons and its various tributaries. The main tributaries are Supin Gad, Obra Gad, Harki Dun Gad, Morinda Gad and Ruinsara Gad. These rivers originate from the glaciers and snow covered peaks and are sources of good quality water. There is one lake, Baudhar Tal situated at an elevation of 4500 msl.

Climate:

The climate data of Naitwar station situated at elevation of 1500 m above msl is presented in table 1. The table shows the June is the hottest month and January the coldest in the region. Mean maximum and mean minimum temperature variations are also high. Days are warm and nights are very cool. Rainfall is heavy in July-August and first half of September. Snow falls during December, January and February and continues upto 15th of March. It seldom lasts long below 2000 m.

At greater heights and on northern slopes the fall is very heavy and the snow stays for long periods. Mean annual temperature is 22.7°C. and qualifies for Hyperthermic temperature regime. Temperature and moisture regime varies with elevation. In the north, northeast and southeast lies the snow