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## Natural Resource Management and Food Security in the Alaknanda Basin of Garhwal Himalaya, India

VISHWAMBHAR PRASAD SATI

*HNB Garhwal University, Department of Geography, India*

### Abstract

This paper examines the natural resources conditions and food security in the Alaknanda Basin of Garhwal Himalaya. The availability of natural resources in the forms of flora, fauna, water, soil, and feasible agro-ecological conditions is abundant; yet, these resources are not utilised optimally. Furthermore, irrational exploitation and over utilisation of natural resources has resulted in considerable amounts of soil erosion, nutrient loss, and environmental degradation in the highlands and silting of river beds causing floods, loss of property and life in the lowlands. Agriculture is based upon the centuries old practices, carried out mainly on the narrow patches of terraced field, and dominated by intensive cereal farming. The outcome from the cultivation of cereal crops is not sufficient for food security and even the populace struggle for availing two times meal at several times. Forest resources are abundantly found as above 60 % land is covered by forest. Similarly, the region is rich in terms water resources. The Alaknanda and its sub-systems provide abundant freshwater. Enhancing and diversifying livelihood options from the available natural resources such as cultivation and off-season vegetables, medicinal plants, apiculture, and fruits according to environmental conditions, slope aspects, and elevation, forest based non-timber products, promotion of eco-tourism as plenty of natural, cultural, and historical places are located here, and construction of small scale hydroelectric plants, will secure livelihood. The main objective of the paper is to identify the availability of natural resources and their optimal utilisation, which could maintain food security. Data were gathered mainly from primary sources and participatory observation method was used for discussion of data.

**Keywords:** Cereal farming, food security, Garhwal Himalaya, natural resource management