

Environmental Degradation of Natural Resources in Broghil National Park in the High Mountains of Pakistan - Empirical Evidence From Local Community and Geoinformatics

Authors : Siddique Ullah Baig, Alisha Manzoor

Abstract : The remotest, mountainous, and icy Broghil Valley is a high-profile protected area as a national park, which hosts one of the highest altitude permanent human settlements on the earth. This park hosts a distributed but diverse range of habitats. Due to a lack of infrastructures, higher altitudes, and harsh environmental conditions, poverty-stricken inhabitants mostly rely on its resources, causing ecological dis-balance. This study aims to investigate the environmental degradation of natural resources of the park based on empirical evidence from stakeholders and geoinformatics. The result shows that one-fourth of the park is a gently undulating basin dotted with water bodies / grass, and agricultural land and three fourth is entirely rugged with steep mountains and glaciers. There are virtually no forests as the arid cold tundra climate and high altitude prevent tree growth. Rapid three-decadal land cover changes have led to ecological disequilibrium of the park, narrowing the traditional diverse food base, decreasing the resilience of biodiversity and local livelihoods as crop-land has shifted towards fallow, alpine-grass to peat-land and snow/glacial ice area to bare-soil/rocks. The local community believes in exploiting whatever vegetation or organic material is available for use as food, fodder, and fuel. The permanent presence of the community and limited cost-effective options in the park will be a challenge forever to maintain undisturbed natural processes as the objective of a national park.

Keywords : Broghil National Park, natural resources, environmental degradation, land cover

Conference Title : ICRSE 2024 : International Conference on Remote Sensing and Environment

Conference Location : Lisbon, Portugal

Conference Dates : September 19-20, 2024