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Mountain Vegetation, Indigenous People and Medicinal Plants

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Plants and plant communities survive at the edge of life in high mountains all over the world; these are also ecosystems where climatic change is more visible and where species extinction is very rapid. Mountains are the most remarkable land forms on the earth's surface with prominent vegetation zones based mainly on altitudinal and climatic variations [1]. Mountain ecosystems all over the world support a high biological diversity and provide home and services to some 12% of the global human population, who use their traditional ecological knowledge to utilise local natural resources. Natural vegetation provides basic needs for indigenous human societies and is often their prime source of livelihood, especially in the developing world. Plant-human relationship is as old as human history itself. Plants provide wood, fuel, food, medicines and tools for human, and fodder and grazing lands for their livestock. The use of plants to cure diseases is as old as human history. Around 20% of the plant species of the world are estimated to be used in health care systems. Ethnobotany–a plat form for indigenous people can inform us about the present day use of plant species, their conservation status and the development of new gateways in plant sciences. Traditional botanical knowledge can be used in the assessment of economic benefits derived from plants, both at basic and commercial levels. Medicinal plants play an important role in the traditional health care systems. Additionally, plant materials have provided the models for 50% of the present day allopathic (Western) drugs [2] and the World Health Organization (WHO) has recognized the role that plants play in traditional healing systems and thereby their contribution to the provision of health services, particularly in the developing world. Due to their immense value, however, some of the plants utilized for ethno medicines are under high anthropogenic pressure as a result of non-sustainable exploitation.

Ethnobotanical studies investigate the structural relationships between human society and the environment using socio-anthropological methods and hence they can be used as a useful tool to quantify ecosystem services.These relationships can be social, economic, symbolic, religious, commercial and/or artistic. Recently in the fast developing parts of the world, the trend is shifting from merely the production of inventories of plant species towards more practical quantitative approaches which place an emphasis on conservation and sustainable use of plant resources [3]. Information on how indigenous people interact with the natural environment can be collected and analysed in a number of ways depending on the study objectives and research questions. Such analyses may range from laboratory analyses, to market surveys and assessment of priorities for conservation management. Whatever the analyses may be used for, one common requirement is that the information is obtained in a systematic manner. Indigenous knowledge can be applied in long term management and conservation strategies.

Interaction with indigenous communities requires the researcher to have additional skills i.e., calmness, patience, courtesy, empathy, keeping secrets etc. There are a number of ways to analyse ethnobotanical data which depend again mainly on the research question and hypothesis. Ethnobotanical data can be analysed qualitatively to record plant uses and the plant parts that are collected etc. Recently, quantitative ethnobotany has led to hypothesis-based analyses of data sets [4]. Ethnobotanical data sets based on indigenous traditional knowledge can be tallied and analysed together with vegetation surveys to provide a better understanding and management of ecosystems.

Mountain vegetation has manifold functions not only within the mountain system itself but also regionally in the adjacent lowland ecosystems by regulating floods and flows in streams and globally in combating the climate change and greenhouse effects.Himalaya the world's youngest and highest mountain range alone host 7,500-10,000 species of ethnoecological importance. Apart from the scientific exploration of biotic and abiotic components of mountain ecosystems, there is an immediate need of facilitation, social mobilization and education for the people of these remote regions. An awareness culture should be promoted among the locals so that they value and own the biodiversity and ecosystem services around them. It can be done by arranging workshops, lectures and seminars. The people can only own plant biodiversity and their associated ecosystem services if they are involved in the regeneration and conservation processes. Recent use of indigenous knowledge in conservation led to the new idea of 'ethno-conservation' in the late 1990s which is now a popular conservation approach around the globe.

Available literature showed that most of the Ecosystem Service studies have been done in developed world. Only 13% of publications were found from Asia and the Pacific [5]. Similarly few authors have pointed out the importance of plant biodiversity in mountain as a basic driver of Ecosystem services. In this scenario it is necessary to integrate ecological gradients plant biodiversity with cultural gradients of it to assess the present anthropogenic trends and pressures and recognize immediate and long term management plans.

References

1. Khan SM, Harper DM, Page S, Ahmad H (2011) Species and Community Diversity of Vascular Flora along environmental gradient in Naran Valley: A multivariate approach through Indicator Species Analysis. Pak J of Botany 43: 2337-2346.

2. Cunningham AB (2001) Applied Ethnobotany; people, wild plant use and conservation: London and Sterling, VA: Earth scan publication limited.

3. Khan SM (2012) Plant Communities and Vegetation Ecosystem Services in the Naran Valley, Western Himalaya. PhD Thesis. University of Leicester, University of Leicester, UK.

4. Khan SM, Page S, Ahmad H, Shaheen H, Ullah Z, et al. (2013) Medicinal flora and ethnoecological knowledge in the Naran Valley, Western Himalaya, Pakistan. J EthnobiolEthnomed 9:4.

5. Vihervaara P, Rönkä M, Walls M (2010) Trends in ecosystem service research: Early steps and current drivers. Ambio 39: 314-324.

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