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Biodiversity Conservation of Traditional Knowledge and Natural Resources Management of Madhya Pradesh

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Abstract: ***Biodiversity provides millions of people with livelihood helps to ensure food security and is rich source of both traditional medicines and modern pharma and neutraceuticals. Global attention on natural resources management and environmental protection issues are getting a priority during last few years. Any change in floral biodiversity modifies the global environment and affects the faunal diversity. Traditional medicines are still under practice in Indian villages and were developed through experience of many generations. In contrast to the present global scenario, in remote sites of the few countries, aboriginal communities are silently conserve the natural resources and maintain the biodiversity and achieving sustainable agriculture by their traditional ecological knowledge. In aim of the present context, to deals with conservational aspect of tribal community and traditional Indigenous knowledge (TIK) eastern part of Madhya Pradesh. Tribal systems are based on rich indigenous ecological knowledge gained over the generations. Further, it demonstrates optimum utilization of available land and other natural resources. The case study draws clear inference on tribal communities' traditional Indigenous knowledge (TIK), innovations and their regulating sustainable natural resources management and biodiversity conservation. The present paper highlights on the traditional indigenous knowledge of tribes and roles in regulating natural resources management and conserve the bio-diversity.***

Keywords: Innovation; Conservation; Traditional Knowledge ; Natural resources

1. Introduction

Biodiversity is not just one phenomenon; it is a concept that involves many facets of biological variety (Peters, 1991), genetic differences among them, and the communities, ecosystems and landscapes in which they occur (Noss, 1990; West, 1993). Biodiversity provides millions of people with livelihoods, helps to ensure food security, and is a rich source of both traditional medicines and modern pharmaceuticals (UNEP and WCMC 2003; UNDP, 2003). Traditional knowledge is vital for sustainability of natural resources including forests, water, and agro ecosystems across landscape continuum spanning from households through farms, village, commons and wilderness. Biodiversity provides millions of people with livelihood helps to ensure food security and is rich source of both traditional medicines and modern pharma and neutraceuticals. In present communication was examined the traditional knowledge on biodiversity, particularly in the light of contemporary research on traditional and formal knowledge systems and demonstrate the value of traditional knowledge for biodiversity conservation. We also revisit the efficacy of traditional knowledge systems for conservation. In present work identification was done by recent developments in local knowledge research and interface this with the challenges that contemporary society faces in India and how local knowledge can be useful to address the biodiversity conservation. Humanity faces exceptional challenge of eroding natural resources and declining ecosystems services due to a multitude of threats created by unprecedented growth and consumerism. In aim of the present context, to deals with conservational aspect of tribal community and traditional Indigenous knowledge (TIK) eastern part of Madhya Pradesh.

2. Material and Methods

The present survey was undertaken to collect information from traditional people on the use and management of natural resources. The survey made in east Madhya Pradesh district of Annupur, Sahadol during October 2011 to April 2012. The indigenous knowledge of local traditional healers and the natural resources used for various purposes were collected through questionnaire and personal interviews during field trips.

2.1 Biodiversity Conservation

In order to be effective, efforts on biodiversity conservation can learn from the context-specific local knowledge and institutional mechanisms such as cooperation and collective action; intergenerational transmission of knowledge, skills and strategies; concern for well-being of future generations; reliance on local resources; restraint in resource exploitation; an attitude of gratitude and respect for nature; management, conservation and sustainable use of biodiversity outside formal protected areas; and, transfer of useful species among the households, villages and larger landscape. Traditional knowledge on biodiversity conservation in India is as diverse as 2753 communities and their geographical distribution, farming strategies, food habits, subsistence strategies, and cultural traditions.

2.2 Local Vegetation Management

These systems support biodiversity, which is although less than natural ecosystems but it helps reduce the harvest pressure. In India, local practices of vegetation management perhaps emanate from the basic ecological concepts of local

communities reflected in "ecosystem-like concepts in traditional societies". Two key characteristics of these systems are that the unit of nature is often defined in terms of a geographical boundary; and abiotic components, plants, animals, and humans within this unit are considered to be interlinked.

2.3 Traditional method of conservation of plant species and its usages

Tribals of east Madhya Pradesh while making use of plants, certain conservative techniques. Their traditional faith and beliefs indirectly help in conservation of forest resources. Their traditional practices for use of natural forest resources like timber, fuel, medicinal plants, forest food plants etc. were sustainable and conservative.

2.4 Traditional Knowledge and Water conservation

Traditional system of rain water harvesting proved more successful. In east Madhya Pradesh tribals, applied various harvesting methods for rain water conservation. They built tank and small pond for water harvesting and use its water in summer season for crop irrigation.

3. Results and Discussion

Biodiversity has ethical, social and economic values as mentioned in ancient manuscript and documents (Chowdhery and Murthy 2000). Biodiversity study in an area includes exploring taxonomic richness; the communities, ecosystem and landscapes occupied by these organisms; and the knowledge of nature possessed by local people living on the land (Peters, 1991) and their dependence on natural resources for livelihood security.

Wild plants are often components of farm households that are surviving at a subsistence level. There is enormous scope for enhancement of the wild plant component of such systems through the application of basic agro-ecological principles of diversity, adaptability and resilience, synergy,nutrient recycling and regeneration and conservation of resources (Thrupp, 1996, 1997) Traditional knowledge plays an important role in management of natural resources and conservation. Sustainability and proper management is necessary for ecological balance. Intended conservation is understood here as a practice that is designed basically for biodiversity conservation. Collective wisdom of humanity for conservation of biodiversity, embodied both in formal science as well as local systems of knowledge, therefore, is the key to pursue our progress towards sustainability.

One of the consequences of habitat loss, fragmentation or degradation is the large number of wild species that are threatened with local or total extinction, including many that are used by farm households. The numbers are difficult to ascertain, but the 1997 IUCN red list of threatened plants (IUCN, 1998) lists 33 370 that are threatened to some degree, representing approximately 11 percent of described species. While some species are under imminent risk of total extinction, the threat of extinction much more commonly pertains to local populations of species Biodiversity is essential for human survival and economic well-being, and for the ecosystem function and stability (Singh 2002). Indeed, there are numerous examples where local knowledge derived from long-term nature-society interaction has been extremely useful in validating scientific hypotheses and suggesting new research directions. The process of acquisition, transmission, integration, and field application of traditional knowledge on tree-growing with formal science promises to enhance the productivity and efficiency of managing the natural resource. Human ecological perspective is vital in crafting the sustainability science for natural resource management.

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