

A Study of Indigenous Knowledge and Sustainable Development in Indian Context

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Abstract— Indigenous ecological knowledge is empirical knowledge of natural system accumulated by the tribal ethnic groups while dealing with nature and natural elements that help them to make a living in a particular environment. It is also known as traditional knowledge, traditional environmental knowledge, traditional ecological knowledge or local knowledge that has evolved through long standing traditions and practices through generations. Identification, utilization and Cultivation of plants of potential medicinal value are extensively done by tribes and rural people around the world. About 7000 common medicines were used by them. They identified plants and used animal parts to cure a number of diseases. This knowledge is needed to be tapped by modern practitioners.

Key words: Indigenous Knowledge, Sustainable Development, Biodiversity

I. INTRODUCTION

Globally about 300 million people are considered as indigenous or aboriginals representing 4 percent of the world's population. They follow 5000 distinct indigenous cultures and occur in every climatic zones throughout the world in 184 countries, contributing about 95% of the world's cultural diversity. Indigenous people are also referred as tribal, autochthonous people, national minorities, or first peoples. Indigenous groups are thus, "Ecosystem peoples who practice shifting or permanent cultivation or herders, hunters, gatherers, fishers or handicraft makers ". They often practice small scale, labour intensive rural production that use natural resources and live a community life sharing common language, religion, moral values and beliefs.

II. INDIAN DIVERSITY

India has a rich cultural diversity. It includes 4635 distinct ethnic communities speaking 235 languages and follow 6 major religion, dozens of smaller independent faiths and there are distinct residential population. Indigenous ecological knowledge an biodiversity are intricately linked. Convention of biodiversity at the Rio conference (1992), strongly advocates for the conversation of biodiversity through the active roles of rural tribal or ethnic communities. Conserving biodiversity helps in strengthening cultural integrity in the community as cultural diversity is closely linked to diverse flora and fauna.

Traditional communities in India have developed folklores and myths that tell stories of conversation of plants and animals. Myths refer to ancient stories of religious or magical ideas which may explain natural or historical events.

These peoples worshiped nature and its elements and also afforded protection to them.

The different communities worship plants and animals like cows, snakes and elephants, monkey and other animals that they presumed to be connected with God. The hind communities of Gujjars protect langur monkeys, squirrels as these were part of Ramayana. Blue Sheep and snow cocks are excellent food but local people rarely hunt them because of religious-social and cultural norms. Cow is treated as a mother God and animal is endowed with tremendous economic and religious values. Likewise several wild animals are also protected for religious reasons which help in conversation of local flora and wild fauna.

A. Findings

1) Indigenous Ecological Knowledge

Indigenous ecological knowledge is empirical knowledge of natural system accumulated by the tribal ethnic groups while dealing with nature and natural elements that help them to make a living in a particular environment. It is also known as traditional knowledge, traditional environmental knowledge, traditional ecological knowledge or local knowledge that has evolved through long standing traditions and practices through generations.

From the study it was observed that traditional ecological knowledge is cumulative body of knowledge and beliefs handed down through generations by cultural transmission, about the relationships of living beings with one another and with their environment. Traditional knowledge forms an integral part of the culture and history of a place and is specifically adapted to the need of the local people and also distinguishes one community from another. It aims towards the sustainable utilization of resources. From the survey of the study, the benefits arising, are categorized as:

a) Economic benefits

Ethnic groups have identified and developed traditional crop varieties. Endemic or uncommon plants and animals for food and medicines from the wild that can harness commercial returns.

b) Ecological or social benefits

Ethnic groups have found out means to mitigate environmental hazards, Control hydrological problems, Manage soil fertility for a better environment.

c) Ethical benefits

The cultural or spiritual beliefs of traditional groups centre around sacred groves or sacred forests which are usually the great repository of diverse flora and fauna often remaining unknown to the rest of the world.

III. DISCUSSION

A. Indigenous Knowledge and sustainable Development

Literature review says that the Indigenous knowledge helps on natural resources, agriculture, aquaculture, forest and

game management offers new models for development that are more ecologically and socially sound. Integrating indigenous knowledge, components into developmental projects into modern scientific research, would provide future option for sustainable development. From the study it was found that indigenous knowledge helps in sustaining developments in the following ways:

B. Local flora and faunal management

The study observed that local people especially in the tropical regions over thousands of years have innovated varieties of vegetation for enhanced quantity and quality of crops. Traditional farming systems involve maintenance of natural diversity of domesticated as well as wild plants and animals.

C. Water harvesting and Biodiversity

It was observed that traditional rainwater harvesting promote growth and maintenance of plants, providing suitable method for utilization of freshwater vegetation cover was maintained around water bodies.

D. Agriculture and indigenous knowledge

From the observation of the study it was found that Ethnic communities manipulated their environment in various traditional ways for increased food production, Maintenance of ecosystem stability, Maintenance of sustainable development.

The local communities of north eastern India grow about 45 varieties of crops in a mixed cropping system. The local communities of north eastern India grow about 45 varieties of crops in a mixed cropping system

E. Cultivation of Medicinal plants

Identification, utilization and Cultivation of plants of potential medicinal value are extensively done by tribes and rural people around the world. About 7000 common medicines were used by them. They identified plants and used animal parts to cure a number of diseases. This knowledge is needed to be tapped by modern practitioners.

F. Sacred Groves

The study shows a very important point of sacred grooves. A sacred groves is a cluster of trees that are of religious importance to a particular culture.

These are community protected forest fragments that consist of either natural or planted trees in which local deity is believed to reside. There are also temple groves in which a temple is surrounded by trees and landscape groves that contain a variety of important species and ecosystem. In India about 100,000 to 150,000 sacred covering an area of 33,000 hacteres are reported to exist. There are almost 750 groves in Andhra Pradesh, 600 in Chattisgarh, 670 in West Bengal, 1424 in Karnataka, 5000 in Himachal Pradesh and 1600 in Maharashtra.

G. Indigenous Knowledge and Biodiversity

The study says that conserving biodiversity often helps strengthen cultural integrity. Indigenous societies have long history of social governance, forest management, and resource conservation, treatment of various diseases, traditional agriculture and water management based on customary practice. Thus disappearance of such indigenous

societies lead to loss of cultural and ecological wealth with subsequent loss of genetic resources.

Indigenous management system helps in modern science and technology and incorporating the traditional values for

- management of natural resource
- conversation of forest,
- developmental projects
- Revival of water save management would be highly effective for sustainable utilization of natural resources and conservation biodiversity.
- This can help in the establishment of national programs for in-situ conversation of germplasm that complement the existing ex-situ programs

IV. CONCLUSION

Erosion of Indigenous knowledge

- 1) With the influence of globalization and industrial growth in this era of science and technological advancement, various economic and social forces or political pressures on the rural or tribal communities have largely threatened their traditional ecological knowledge
- 2) The growth of national and international markets modified indigenous beliefs, values, customs, technology and practice.
- 3) Modernization of education system,
- 4) Changing lifestyles
- 5) Exposure to global influence
- 6) Better option for employment
- 7) Conservation of this threatened traditional knowledge can be done only by raising public awareness, making people understand the value of indigenous knowledge and encourage them to take pride in these age old customs.

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