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**Review Article**

# ROLE OF ETHNIC WOMEN IN BIODIVERSITY CONSERVATION

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**ABSTRACT**

Human population is very much dependent on the natural resources for the fulfilment of the basic needs of their lives. It is the ethical duty of every human being to protect it. Biodiversity conservation and management of the use of natural resources are the ways, by which major environmental issues can be solved up to certain limits. In recent times many efforts have been made to conserve the biodiversity. But the understanding of indigenous people in the biodiversity conservation cannot be ignored, especially the role of women. Women have always been accountable for the food and nutritional needs of their families as they play an essential role in the household. They are also being involved in almost all aspects of farming, from seed selection and plantation to harvesting, weeding, winnowing and grain storage. As they remain in direct contact with nature, they possess detailed knowledge about the species and ecosystem. It is near to impossible to manage and conserve the biodiversity without involvement of women power. And for this it is very essential to make them aware and educate on the ethics, management and sustainability of natural resources. This article focuses on women's basic understanding and their role in biodiversity conservation.
**Keywords:** Basic needs, biodiversity conservation, women's basic understanding.

## INTRODUCTION

The world around us is surrounded with biodiversity. Biodiversity is the sum of organisms that include plants, animals, microorganisms and the ecosystems they live in (CBD, 1998). From billion years, human being is facing challenges to sustain and nurture the environment (Halim *et al*, 2012). Biodiversity conservation and management of the use of natural resources are the ways, by which major environmental issues can be solved up to certain limit.

Rapid biodiversity loss and newly developed environmental issues have made people aware about biodiversity conservation. Various strategies like Landscape planning, incorporated fisheries management, sustainable agriculture and rural development are made by people from different corners of world from various fields with concern of biodiversity conservation (Anonymous, 2003). Though today such efforts are given much attention, many of such practices were traditionally followed by indigenous people since many years. However, this knowledge has been lost or degraded due to lack of knowledge of the importance of indigenous system. But the role of indigenous people and their knowledge cannot be ignored.

**Role of traditional knowledge in maintaining biodiversity**

Traditional knowledge is unique local knowledge existing and expanded within and around the specific conditions of people indigenous to a particular geographical area (Warren, 1992). This knowledge is woven in indigenous people's memories and actions and is reflected in their lifestyle. It is shared and communicated orally through culture (Sellato, 2005). Indigenous knowledge in concern with the relation between human and the environment can provide a valuable vision to deal with the causes and consequences of climate change. Since last few decades' traditional

knowledge study is grown progressively as it is much recognised and used in the society (Bonny and Berkes, 2008).

Experiential aspects of the knowledge system has been emphasized in earlier indigenous knowledge researches (Bonny and Berkes, 2008), like in wildlife harvesting (Moller and Berkes 2004; Pearce and Smit, 2010) and vegetation monitoring (Berkes and Kislalioglu, 1998; LaRochelle and Berkes 2003; Garibaldi and Turner 2004; Ghimire and McKey, 2004). While the majority of research on Indigenous knowledge is related to environmental management (Davidson-Hunt and Berkes 2001; Long and Tecle, 2003; Watson and Alessa, 2003; Berkes and Davidson-Hunt 2006; Parlee and Berkes, 2006; Berkes and Berkes, 2007; Marie and Sibelet, 2009). Both scientific and Indigenous knowledge are valuable because they expand the area of available information (Berkes and Berkes 2009).

Indigenous people are able to use and share the natural resources wisely as they have deep relation with nature and because of this they have been guardian of diversity since long time. Sacred groves are the live example of the spiritual aspects in the biodiversity conservation. Thus knowledge of biodiversity and its use are intertwined with traditional, cultural, spiritual practices of a large number of people (Natarajan, 2012).

People from sabah region, Malaysia are not allowing forest users to take the last fruit from any plant in order to make sure the movement and propagation of the species fruit. This practice is called "Tuwa di pogiwian" which aims fertilization and continuity of the plant (Halim *et al*, 2012). Indigenous people play a very important role in biodiversity conservation through their deep understanding in various fields like agro biodiversity, medicinal diversity and socio-cultural or spiritual aspects. As women are associated with all of these aspects, their contribution in biodiversity conservation is very significant. This article intended to look at the women's role in natural resource conservation and why conservation strategies will only succeed with the involvement of rural women in various activities govern by government and non-governmental conservation bodies.

**Role of women in biodiversity conservation through different practices**

With the use of natural resources rural women play central role in the household activities and take care of food and nutritional need of their families. It is crucial for them to sustain natural resources for their livelihood sustainability. This makes them closer to ecosystem surrounding them with detailed knowledge about the species. As far as agriculture is concerned women are involved in almost all the activities of farming like seed selection, production, harvesting, storage, processing, and last but not the least cooking. In fact women can be considered as managers of natural resources. They are often plays a mediator role in passing on the traditional knowledge which is locally much known as "grandmother's cures" which includes many curative plant uses (Anonymous 2012, GRAIN 2000, Owen 1998).

In Sabah region of Malaysia, people are very concern and also dependent on natural assets. With the noble aim of maintenance and reduce the wastage of resources they collect only mature fruits in needful amount from forest. And this is being practiced by women participants (Tongkul, 2002). Even though rural women are relatively poor and uneducated, they are the chief sustainers of rural micro-economic activities. Mostly activities of rural women are dealing with natural resources, from fuel wood collection to treatment of common ailments. These things reveal that maintenance and sustainable use of biodiversity is mostly the domain of women.

Wild plants covers major portion of diet of indigenous people and conservation strategies differ from region to region like kenyan women uses a considerable amount of biodiversity during rainy season and women in Bangladesh collects and preserves food before onset of the monsoon as it become difficult to prepare meals due to water logging (Natarajan, 2012). Kitchen gardens or home gardens are also being practiced by women. These home gardens also harbour various original varieties that are very often taken care of by women. For example, in rural Bangladesh women select seeds of vine and gourd species, chiefly indigenous varieties that are to be grown the following year (Wilson, 2003). Many plants are used for medicinal purposes by indigenous people. For example Samoan women healers use around 100 different plant species and Indian indigenous women from the state Madhya Pradesh use a combination of

 

plants as birth control agents (Cox, 1995, Cox 2000, CSE, 1982).

Women are always found to be more religious and actively participating in all religious ceremonies. Many plants and leaves are used for religious purposes and during festivals. 45 various species (cultivated and wild) used in different religious ceremonies were recorded from Pune city (Ghate, 1998). Past evidences showed that women have become victims of development and environment degradation. But as time passed it has been realised that they play a crucial role in the cultivation and the management of diversity (Natarajan, 2012). Women have also registered their strong candidature in biodiversity protection as Indian women guarded the trees during the well known chipko movement and 80,000 Kenyan women have planted trees during Green Belt Movement (Natarajan, 2012). Biodiversity management in South India clearly shows how tradition and culture are carefully applied in cultivation and protection of diversity. Natural resources are given respect and treated with dignity. These aspects are taught and practiced by women of indigenous societies of Northwest America for sustainable development and to fight consumerism (Turner 1992, Ramprasad 1999).

Women's understanding of local biodiversity tends to be broad, containing many unique insights into local species and ecosystems. During a survey in Sierra Leone, women could name 31 uses of trees on fallow land and in forests while men could name only eight (Domoto, 1994) and in a sample participatory study, women hill farmers in Dehra Dun, India provided the researchers with no less than 145 species of forest plants that they knew and used (Shiva and Dankelman, 1992). These way women are involved in every aspect of biodiversity from its sustainable use to protection, preservation and religious faith.

**CONCLUSION**

From the review it can be concluded that without involvement of women it is almost impossible to conserve the biodiversity in rural area. For this they need to be trained and their involvement should be motivated. They manages natural resources by their own way, but that need to be in a direction so it is necessary to educate them on the on the values, management and sustainability of natural resources as alternative sources of livelihood. Their invisible resource management should be appreciated by the society and they should get benefit from relevant incentives in their cultural roles.

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