



ABSTRACTS

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on

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Role of women in bio-diversity in different agro eco-system

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Biodiversity is the feedstock not only for food and health security, but also for the management of climate change induced alterations in temperature, precipitation and sea level. Gene banks for a warming planet have become urgent for promoting climate resilient farming systems. We must preserve for posterity a sample of the existing genetic variability in all ecosystems. The prospects for climate change have added urgency to efforts designed to save every gene and species now existing in our Planet. Biodiversity may be the basis of human well-being but human habits threaten to deplete it. Its definition is broad, spanning diversity between ecosystems and species, and also within species (genetic diversity). Agrobiodiversity encompasses all components of biological diversity of relevance to food, agriculture and the sustainability of agro-ecosystems. Earth supports almost 100 different types of ecosystem, however, the richest arrays of species are found in coral reefs and tropical forests, which cover less than 10 per cent of the Earth's surface.

Women are a vital part of Indian economy. The key role of women in agricultural development and their vital contribution in the field of agriculture, food security, horticulture, processing, nutrition, sericulture, fisheries, and other allied sectors has been well appreciated and realized women labours have been efficient in terms of physical outputs and quality works. Women have multifarious responsibilities including assistant in crop and animal production, preparation of meals, raising of children maintaining the homestead etc. In fact women are involved in all aspects of agriculture, from crop selection to land preparation, to seed selection, planting, weeding, pest control, harvesting, crop storage, handling, marketing, and processing. A long term strategy for the conservation, utilization, improvement and management of genetic resources diversity for food and agriculture requires:

- Recognition that there are gender-based differences in the roles, responsibilities and contributions of different socioeconomic groups in farming communities
- Recognition of the value of men's and women's knowledge, skills and practices and their right to benefit from the fruits of their labour
- Sound and equitable agricultural policies to provide incentives for the sustainable use of genetic resources, especially through in situ conservation and improved linkages with ex situ conservation

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- Appropriate national legislation to protect “threatened” genetic resources for food and agriculture, guarantee their continued use and management by local communities, indigenous peoples, men and women, and ensure the fair and equitable sharing of benefits from their use
 - Improvement of women farmers’ access to land and water resources, to education, extension, training, credit and appropriate technology
 - Participation of women, as partners, decision-makers and beneficiaries

The challenge for future generations is to safeguard agro-biodiversity by protecting and promoting the diversity found in integrated agricultural systems, which are often managed by women. The maintenance of plant and animal diversity will protect the ability of men and women farmers to respond to changing conditions, to alleviate risk and to maintain and enhance crop and livestock production, productivity and sustainable agriculture.

It is worth mentioning that the most important productive work force in the economy of the developing nations including India is the rural women and Agriculture, in India contributes about 18% of GDP, is increasingly becoming a Female Activity. This is evident from the fact that Agriculture sector employs 4/5th of all economically active women in the country. 48% of India’s self-employed farmers are women. There are 75 million women engaged in dairying as against 15 million men and 20 million in animal husbandry as compared to 1.5 million men. Keeping in view the importance of women in all sectors of agriculture, there is an urgent need to strengthen their participation by empowering them with gender friendly technologies that help in increasing the production.

Besides women have a key role as user and preserve of agro-biodiversity because as farmers, rural women are responsible for growing and collecting food and for deciding how to use diverse natural resources to fulfil daily household needs (crops and wild plants, tree products, wild and domesticated animals). To understand the importance of gender issues in plant and animal biodiversity we have to recognize that men and women have different roles within livelihood systems that comprise farms and gardens, common property resources, such as pastures and forested lands, as well as protected areas. In addition to staple food production in the fields, home gardens often provide a wide variety of vegetables, relishes and condiments. Referring to role of women’s in hills where they represent more than 50 % of the population. Mountain women have extensive knowledge of mixed farming, preference for traditional varieties to increase on farm biodiversity thus have been playing an integrated role in terms of ecosystem functioning and sustainability. However, in recent years, environmental degradation, poor resource management, and increased migration of men to plains have deteriorated livelihood options and added more workload of women in

the Himalaya. The suffering of the mountain communities is gradually increasing and their standard of living is declining because they have been neglected at both policy and practice levels by the government.

The Convention on Biological Diversity has recognized “the vital role that women play in the conservation and sustainable use of biological diversity” and affirms “the need for the full participation of women at all levels of policymaking and implementation for biological diversity conservation”.

Women and men often have different knowledge about, and preferences for plants and animals. For example, women’s criteria for choosing certain food crop seeds may include cooking time, meal quality, taste, resistance to bird damage and ease of collection, processing, preservation and storage. Men are more likely to consider yield, suitability for a range of soil types and ease of storage. Both are essential for human welfare

Women play a lead role in biodiversity conservation and sustainable use. Mainstreaming of the gender dimension in all conservation and food security programmes is a must. Women conservers should be enabled to continue their conservation ethos, by providing support for essential infrastructure. Agro-biodiversity is the result of interaction between cultural diversity and biodiversity. An important aspect of cultural diversity is culinary diversity. Every step should be taken to recognize and preserve cultural diversity and to blend traditional wisdom with modern science.

The living organisms contribute to a wide variety of environmental services, including regulation of the hydrological cycle and climate, protection of coastal zones, generation and conservation of fertile soils, pollination and breakdown of wastes. Species diversity buffers ecosystems against the effects of human change, with biodiversity ensuring local and global food security, providing the genetic basis for most food crops and increasing genetic resistance, obtained from wild varieties, to diseases. Human health also depends directly on biodiversity, given that some 75 per cent of the world’s population relies for their health care on traditional medicines derived directly from natural resources.

Biodiversity is particularly crucial for people living in poverty, who directly depend on its services for their survival and livelihoods. Unfortunately, the loss of biodiversity is accelerating at an unprecedented rate. According to the World Conservation Union’s 2002 Red List of Threatened Species, over 11,167 species face extinction. The most important drivers of biodiversity loss are unsustainable production and consumption, Inequities in distribution of wealth and resources, demographic developments, international conflict, and international trade and agricultural policies. These result in land conversion, climate change, pollution, atmospheric nitrogen deposition and unsustainable harvesting of natural resources. As ecosystems falter, threats to food and water security, health care and economies grow.

Therefore, it is necessary to make visible the gender-differentiated practices and knowledge of women and men in their relations with biodiversity resources. In the recent past very little progress has been made in understanding the fundamental roles that women play in managing and conserving biodiversity. It is essential to recognize that women and men have particular needs, interests and aspirations, and that they make different contributions to the conservation and sustainable management of biodiversity.

Alarming trends relating to agro-biodiversity

- Some 75% of plant genetic diversity has been lost over the extended period as farmers worldwide have left their multiple local varieties and “landraces” for genetically uniform, high yielding varieties
- 30% of livestock breeds are at the risk of extinction: 6 breeds are lost each month
- Today, 75% of the world’s food is generated from just 12 crops and 5 animal species
- Of the 4% of 250,000 to 300,000 known plant species that are edible, only 15-200 are used by humans and only 3 (rice, maize and wheat) contribute nearly 60% of calories and proteins obtained by humans from plants
- Animals provide some 30% of human requirements for food and 12% of the population live almost entirely on products from ruminants

The most striking change within the process of conservation, however, has been the shift in the gender roles of the community. Women were completely absent from decision-making processes, placing all the power in the hands of the societal hierarchy of males. Once the biodiversity management practices began, women were playing a large role, raising the seeds into saplings and planting the saplings. In their eyes, this gave them a sense of self-accomplishment. Self help groups were formed to enable the women to access formalized credit for self employment and to give them a greater role in the community conservation work by teaching them leadership skills.

