

Role of Gender in Biodiversity Conservation and Management : A Study in the Context of Agriculture in Alibaug Maharashtra

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ABSTRACT

The study is focused on the role of gender in conservation and management in crop diversity and varieties and reported on the findings of the study in four villages of Alibaug Maharashtra. 25-25 respondents for men and women had been surveyed with questionnaire and interviewed in-depth followed by focus groups conducted for men and women which provided the means of cross checking responses. The results indicated that food crop diversity and variety management is mainly done by women while men have great influence over cash crops. Women are responsible for selection, processing and storage as well as home garden practices. Hence, we concluded that role of gender in crop seed diversity and varieties in selection, processing and storage contribute significantly to the human and put a great impact for the cultural and socioeconomic management and conservation of agro biodiversity.

Keywords : Conservation, Crop, Seed Diversity, Gender Relation, Socioeconomic, Food Crop.

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I. INTRODUCTION

Through with the contrastive activities and management practices, men and women have frequently developed a different expertise and knowledge about the localized environment, plant and animal species and their products and uses. These gender distinguished local anesthetic knowledge systems play a crucial role in the in situ conservation, management and betterment of genetic resources for food and agriculture. It is fact that the decision about to conserve depends on the knowledge and perceptual experience of what is most useful to the household and local community. knowledge and perception of

what is most useful to the household and local assemblage. Women's and men's specific knowledge of the measure and diverse use of domestic crop species and varieties extends to wild plants that are used as food in times of requirement or as medicines and sources of income. This local knowledge is highly refined and is traditionally shared and handed down between generations. Through experience, innovation and experimentation, sustainable practice session are developed to protect soil, water, natural vegetation and biological diversity. This has important implications for the conservation of plant genetic resources.

Across the world specially in tropical areas abundance of biodiversity in villages areas, on farms, in homesteads, forests common pastures, field and borders, gender plays an important role in management of the most of the biological resources what are used by humans beings.

In smallholder cultivation, women farmers are more responsible for the selection, betterment and modification of plant varieties. In many regions, women are also responsible for the management of small livestock, including their reproduction. Women often have a more highly specialized knowledge of wild plants used for food, fodder and medicine than men. Haward (2003) emphasizes the culinary traditions and preferences, generally maintained by women have major influences on knowledge, selection, use and conservation of biological resources.

In 1995 [Dianne E. Rocheleau](#) had published a paper on current gender imbalance between rights and responsibilities in biological resource management and its effect on rural peoples' abilities to maintain diverse livelihoods and complex landscapes and to protect the distinct ecosystems on which they and many other current gender imbalance between rights and responsibilities in resource management and its effect on rural peoples' abilities to maintain diverse livelihoods and complex landscapes and to protect the distinct ecosystems on which they and many other species depend. JH Momsen (2007) studied about influence of gender on food and medicines play a major role in biodiversity conservation.

K. Shrinath has reported in 2009 that Conservation of biodiversity can be achieved by the use of technological innovations integrated with development schemes and linking them with self-help groups of women and men. Sustainability issues like the struggle between paddy and shrimp farming, disease in coconuts, drinking water scarceness and pollution have led to deterioration of coastal zone bio-resources and pose challenges to elementary household food security as perceived by both women

and men. Biodiversity intercession help to maintain bio-resources, stipulate various occupations and to make sure about food security for the rural poor.

Both men and women practical knowledge and skills in biodiversity management is not static, but influenced by locally specific social and ecological changes and new sources of information that might be informed by global trends such as improved availability and increased variety. So the study has focused on gender role in management crop diversity and variety with objective to increase the visibility of gender based knowledge of management for agrobiodiversity and food security.

II. Method and Methodology

The study was conducted in western ghat region Alibaug Maharashtra which is situated [Lat:18° 39' 23.9544"- Long: 72° 52' 47.5248" E] in the coast of Arabian sea. Four villages namely Mapgaon, Kihim, Sogaon and Satirje had been selected for study were comparatively more rural and remote and agricultural based. The total number of 100 Respondents (women and men respectively) had been selected for random sampling in which some of the respondents had also taken part in-depth interviews. A pre-tested on few different females and appropriately modified closed questionnaire were used for sampling at the home of the respondents only and descriptive field observation were also recorded. Each has been taken about 45-60 minutes on an average.

There were (3-3) respondents from those four villages) 12 respondents (from survey participants) had been carried out for semi-structured in-depth interview was focused on selection criteria, processing and storage techniques of crop diversity and perception of gender roles in seed work. Throughout the villages respondents were invited (men and women) for interviews and inclusion was based exclusively on their availability and interest. The focus group one with men and other with women were conducted in each villages, in each case hosted by key informants

and five to ten people from each villages were attended by host groups (from sample and non sample and non sample households) ranging in age from 15 to 50 years and above. Variation in responses were resolved through consensual agreement, a process of conflicting of facts and differences of opinion. For the purpose of the questionnaire, activities for agricultural diversity were divided on order to obtain a higher resolution analysis of gendered domains in biodiversity management and conservation.

For role of gender determination process relative participation of agricultural activities both in cash and food crops as well as in home gardens, individual men and women had been asked to measure their own level of participation for each and every task. The described work always performed separately at all time; always female specified work used to performed by respondents with family members as like daughter, mother, mother/daughter-in-law etc. By women members only while listed works generally helped by the women respondents to the men in the family while doing the some portion of work like seed work.

III. Results

The study is showing a clear differences in men and women's duties and responsibilities with respect to crop and seed. Women were more involved in production seeds of subsistence food crops like as beans, potatoes, grains, finger millet, vegetables etc. than men who were concerned with production of seeds for cash crops. Though both genders are working together in production of Rice because of its dual role as both as household food and cash crops. There were home gardens also included in the questionnaire and the result was socking. Most of the women showed higher involvement in the home garden works and used to grow seasonal vegetables, spices, fruit trees etc. is for self consumption and extras sold in the local market which is surplus income. During the study it was found that people were doing fish farming at small level in home garden in a netted small tank that is a good concern towards

conservation practices and socioeconomic status. The detailed data from villages also indicated that involvement of women in field activities like as nursery activities, planting, weeding, harvesting, storage and preservation which completely covers the fact that these works are mostly done by men.

Nursery activities

Nursery practices are primary activities of agriculture. Seed processing is the series of procedures by which raw grains are treated for planting in the respective season. Respondents were asked to describe the different phases of seed cleaning and drying for several crops. Involvement of women were more in seed processing than men because of their habitual skills in winnowing, wind and in sieving or grading and drying had made learn by their mother at early stage of household learning. Each and every crops are usually have their unique processing steps like as ash used to applied for the removal of vegetable seeds to help them out from the fruit and remove sticking and control the pests.

Gender tests for seed dryness checking in those villages by following methods: For paddy crops sounds of seeds hitting against each other in the hand palm or throw in the air by the winnowing weight feeling and husk comes off. Seeds rolled against one another for millet husk to make out. For vegetable or fruits just open the seeds to get well-formed cotyledons or sounds of seeds rubbing against each other. The study also revealed that the minor crops which grows in the home garden can easily available without any labour intensive during staple crop shortage.

Farm Practices:

As far as the farming practices are concern most of the respondents were agreed with equal role of gender. They both use to go for all types of activities like planting, watering, weeding, harvesting etc. Other types of farm works like spray of insecticide and pesticides types of work usually done by men.

The women were equally participating in agricultural farm as well as domestic and house work. harvesting of crops, removing of fruits, fodder, etc. Selling in the local market mostly done by women but the matter of sorrow is that women were working more than men but paying less. If we talk about farming in coastal region we can't leave the fishes which is main food of the Konkan. During the study it was found that people were doing fish farming at small level in home garden in a small netted tank that is a good concern towards conservation practices and socioeconomic status. The careful procedure for selection of different traits is largely responsible for the difference in performance and appearance of the breed from its wild progenitor, as well as from other breeds of the species.

The study also reveals about the livestock rearing during the discussion/ interview mostly women are responsible for the feed, fodder and water for newborn or or sick animals while men use to do milking ewes and other household works were performed by married or young girls who were trained by their mother as lively hood.

Seed storage and management:

The role of gender in seed storage and management vary with the different crops grown. Men use to take important role in storage and maintenance of cash crops and food crops. Respondents have their different-different types of storage like one of the storage unit was raised platform made up of wooden walls which prevents from dampness of the mud. Other type of storage units were different type of container can be made with metal, clay, plastic etc. The containers must be closed air tightly to prevent by insect/pest, fungus, light, water etc. The mud containers were tightly closed with cow dung and mud mixture generally done by women. During survey and interview respondents were asked first that who is responsible for seed management and why? Most of the men answered that it is women

task as they are having good knowledge of house work and habit. Hence, families are mostly dependent on the women rather than men for seed storage and management.

IV. Discussion

Men and women have different knowledge about seed and crop diversity and their preference also be different like women generally prefer food crop seeds, meal quality, taste, can be also including cooking time, should be resistance to pest or disease and should be easy of collection, processing, preservation and storage. Men are more likely to consider yield sustainability for a range of soil type and easy of storage. Women also had a broader set of seed selection criteria than men because they use plant material in different ways like paddy not only provide food but it is also used for thatching mat-making, fodder, and also used as husk for fuel. Women try to make sure that varieties are in line with culinary traditions, are palatable and nutritious and meet processing and storage requirement.

There are several studies has been done in this field which shows that wherever women do not produce crops directly but then also men use to take preferences and criteria for selecting and preserving varieties. However, the researchers mostly used to neglect these criteria based claims because they are not directly related to agroecological field condition. Women are also responsible for seed storage, preservation, exchange and also takes part in seed and crop management activities which is often explained by the close relation with agricultural and domestic work Assumption of cultivation method, crop breeding varietal diversity, Plant uses are not informed by both men's and women's contribution do not adequately trace or conserve local knowledge and can lead to the marginalization of agro biodiversity. Crop management should be included within the discussion on agro biodiversity and recognition of men and women destructive roles (Kothari;2003).

There are limited researches has been done on women's role in crop management contributed by three major factors in which first and major factor is to exclude out the women from assumption based data collection, because women are not easily accessible to the male researchers Second is failure to identify the sex of participants cannot discriminate properly the basis of gendered division of labour. The third factor is partiality by researchers to label the essential task of processing, storage and exchange as domestic rather than agricultural work activities. Women shows a great responsibility in nutrition and health needs as they are highly knowledgeable about crop diversity and variety, their culinary, nutritional and curative properties with agronomy and environmental characteristics. Hence, women need to get preferences with empowerment and capacity building under a strategy. Understanding gender roles would better help in conservation of agro biodiversity for food security.

V. Conclusion

Agricultural diversity of crops and varieties cannot addressed without all considering of role of gender in diversity management and conservation. Furthermore, the significance of gender role in biodiversity is not only has implication on agrobiodiversity conservation, but it is also essential to other difficulties such as health, food security, poverty, trade and technology development etc. Positive steps to ensures gender roles specially women's contribution in agricultural biodiversity management and conservation are to be taken into account and that their reliance on plant genetic resources for their livelihood status and welfare are recognized through use of diverse crop biodiversity, thus promoting its use and transmission in all appropriate spheres including formal and informal education, training and extension. Hence, we can say that women are users, preservers and managers of agrobiodiversity.

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