

# Gender and Globalization: Agricultural Sector in India

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## *Abstract:*

Globalization is a complex economic, political, cultural and geographic process in which the mobility of capital, organizations, ideas, discourses and peoples has taken on an increasingly global or transnational form. It has been described as the gradual elimination of economic borders and concomitant increase in international exchange and transnational interaction and the world increasingly becoming similar and smaller. In the context of women this would mean a better social and economic status. But does a growing interdependence and interconnectedness, necessarily lead to women's development?

The paper seeks to study the impact of globalization in the agricultural sector in India with reference to women. In case of India, the contemporary process of globalization with emphasis on technical change in agriculture associated with higher capital intensity, greater mechanization of production and post-harvest operations, the development of crop and livestock with varied characteristics geared to the requirement of commercial commodity production has been accompanied by changes which women experience in unique ways. These include the loss of knowledge, skills and production contributions. For Indian agriculture multiplication, distribution and availability of good quality seed is crucial to accelerated food production. With the entry of multinational companies in seed production and distribution and the consequent effects of patenting under the WTO regime, providing good quality seeds at affordable prices is becoming a challenge. The growth-oriented policies of government have taken away whatever control women had over traditional occupations. With a decline in State's interventionist role the marketization of the economy has led to an increased burden for women and is turn increasing the inequalities between regions, men and women, destruction of biodiversity and increased feminization of poverty.

## *Key words:*

Gender, Globalization, Intellectual Property Rights, General Agreement on Tariffs and Trade, World Trade Organization, Patents, Biodiversity conservation

## *Introduction:*

Globalization is a complex economic, political, cultural and geographic process in which the mobility of capital, organizations, ideas, discourses and peoples has taken on an increasingly global or transnational form. It has been described as the gradual elimination of economic borders and concomitant increase in international exchange and transnational interaction and the world increasingly becoming similar and smaller. In the context of women this would mean a better social and economic status. But does a growing interdependence and

interconnectedness, necessarily lead to women's development? Agriculture sector plays a key role in our country and women's contribution in this sector cannot be denied. Therefore, any policy in this sector also affects women. History bears testimony to women's integral role in the field of agriculture.

According to Dr. Swaminathan, the famous agricultural scientist, "some historians believe that it was woman who first domesticated crop plants and thereby initiated the art and science of farming. While men went out hunting in search of food, women started gathering seeds from the native flora and began cultivating those of interest from the point of view of food, feed, fodder, fibre and fuel".(Lal&Khurana, www://zenithresearch.org.in) Thus women have been integral part of agriculture be it prehistoric times or contemporary society.

### ***Body of the paper:***

Women have played and continue to play a key role in the conservation of basic life support systems such as land, water, flora and fauna. They have protected the health of the soil through organic recycling and promoted crop security through the maintenance of varietal diversity and genetic resistance. They play a major role in food production and processing even though this fact has remained invisible and neglected. The nature and extent of women's involvement in agriculture, no doubt, varies greatly from region to region. Even within a region, their involvement varies widely among different ecological sub-zones, farming systems, castes, classes and stages in the family cycle. But regardless of these variations, there is hardly any activity in agricultural production, except ploughing in which women are not actively involved. In some of the farm activities like processing and storage, women predominate so strongly that men workers are numerically insignificant. Studies on women in agriculture conducted in India and other developing and under developed countries all point to the conclusion that women contribute far more towards agricultural production than has generally been acknowledged.

Here are some facts from various regions in India:

In India, agriculture employs 70 per cent of the working population, and about 84 per cent of all economically active women.(National Sample Survey, Report No. 341) For example, in the tribal economy of Orissa – shifting cultivation (*bogodo*) – women spend 105.4 days per year on agricultural operations compared to men's 59.11 days (Mies and Shiva 232).

According to Vir Singh's assessment in the Indian Himalaya, a pair of bullocks work for 1,064 hours, a man for 1,212 hours and a woman for 3,485 hours a year on a one hectare farm: a woman works longer than men and farm animals combined!(Singh, The Hindustan Times Weekly, 18 January 1987).

K. Saradmoni's study of women agricultural labourers and cultivators in three rice growing states – Kerala, Tamilnadu and West Bengal – shows that both groups of women make crucial contributions to production and processing.(Saradmoni, Economic and Political Weekly, 22 (17) 1987). Joan Mencher's studies in the Palghat region of Kerala reveal that outside ploughing, which is exclusively men's work, women have a

predominant role in all other processes. On the basis of this study, it is estimated that more than two-thirds of the labour input is female.(Mencher, Standford University Press, Standford, 1987).

Bhati and Singh in a study of the gender division of labour in hill agriculture in Himachal Pradesh show that overall women contribute 61 per cent of the total labour on farms.(Bhati, and Singh, Economic and Political Weekly, Vol. 22 NO. 17, 1987). A detailed study by Jain and Chand in three villages each in Rajasthan and West Bengal, covering 127 households over 12 months, highlights the fact that women in the age group 19-70 spend longer hours than do men in a variety of activities.(Jain, Devaki and Seth, Indian Statistical Institute, Calcutta 1985).

Women's work and livelihoods in subsistence agriculture are based on multiple use and management of biomass for fodder, fertilizer, food and fuel. The collection of fodder from the forest is part of the process of transferring fertility for crop production and managing soil and water stability. The work of the women engaged in such activity tends to be discounted and made invisible for all sectors.(Shiva).

When these allied activities which are ecologically and economically critical are taken into account, agriculture is revealed as the major occupation of 'working' women in rural India. The majority of women in rural India are not simply 'housewives', but farmers. Therefore, without the total intellectual and physical participation of women, it will not be possible to popularize alternative systems of land management to shifting cultivation, arrest gene and soil erosion, and promote the care of the soil and the health of economic plants and farm animals.

Therefore, the contemporary process of globalization with emphasis on technical change in agriculture associated with higher capital intensity, greater mechanization of production and post-harvest operations, the development of crop and livestock with varied characteristics geared to the requirement of commercial commodity production has been accompanied by changes which women experience in unique ways. These include the loss of knowledge, skills and production contributions. For Indian agriculture multiplication, distribution and availability of good quality seed is crucial to accelerated food production and agriculture and related activities are the most important source of livelihood for women of the developing countries. The buzz of globalization began in the 90s with India becoming a part of WTO.

The impact of WTO rules and policies of trade liberalisations in the agricultural sector on women is distinctive for four reasons.

Firstly, women have been the primary seed keepers, processors. WTO impacts women's expertise and productive functions throughout the food chain. The TRIPS agreement impacts women's knowledge and control over seeds. The AoA (Agreement on Agriculture) impacts women's livelihood and income security and also has secondary impacts in terms of increased violence against women. The sanitary and phyto sanitary agreement has a direct impact on women's expertise and economic role in agro-processing.

Secondly, as globalization shifts agriculture to capital intensive chemical intensive systems, women bear disproportionate costs of both displacement and health hazards.

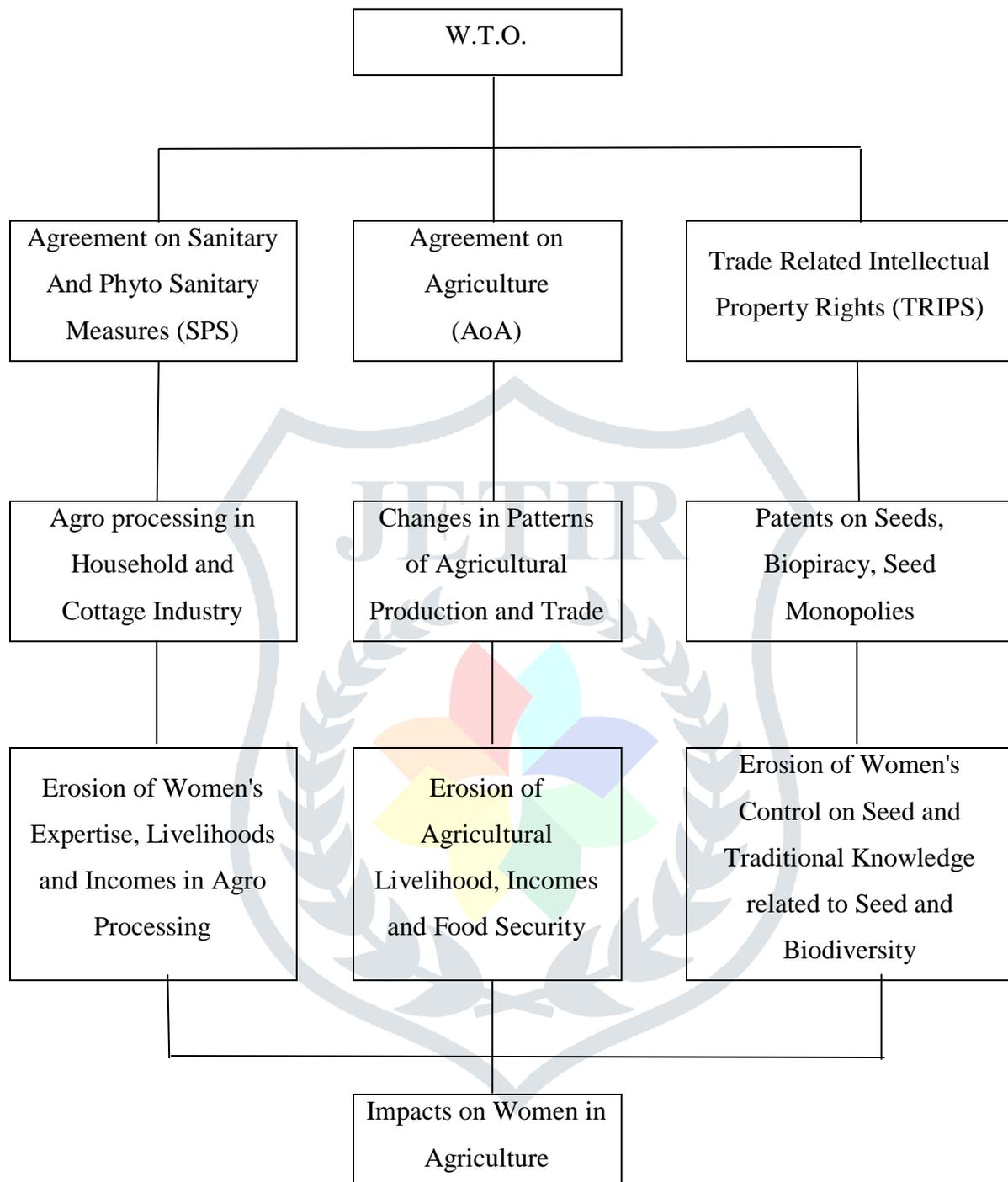
Thirdly, women carry the heavier work burden in food production and because of gender discrimination get lower returns for their work. When WTO destroys rural livelihoods, it is women who lose the most. When WTO rules allow dumping which leads to decline in prices of farm products, it is women's already low incomes, which go down further.

Fourthly, their position vis-à-vis WTO is also more vulnerable because as the livelihoods and incomes of farmers in general and women agriculturist in particular are eroded they are displaced from productive roles, women in agriculture and their status is further devalued while patriarchal power of those who control assets and benefit from asset transfer due to globalization is increased and other social process are triggered which result in increased violence against women.

The violence associated with replacement, devaluation and disempowerment takes the form of intensive violence, increasing incidence of rape, female foeticide and growth in trafficking of women. Women also bear the ultimate burden of four suicides, since they are left to look after their households without assets but with the burden of indebtedness.

The paper seeks to study the effects of globalization in agricultural sector in India with reference to women. Whether the entry of multinational companies in seed production and distribution and the consequent effects of patenting under the WTO regime, are effective in providing good quality seeds at affordable prices? Whether the growth-oriented policies of government instead of contributing have taken away whatever control women had over traditional occupations like agriculture? Whether with the decline in State's interventionist role the marketization of the economy has led to an increased burden for women and in turn increased the inequalities between regions, men and women, destruction of biodiversity and increased feminization of poverty? (Increase of women among the poor, to the point where there were more women among the poor than men.)

## IMPACT OF WTO ON WOMEN



(Taken from impact of WTO on women in agriculture – Research Foundation Science and Technology, New Delhi)

**Displacing small farmers (especially women) by dumping of highly subsidized agricultural product from North to South:**

The Uruguay Round Agreement on Agriculture (URAA) was a turning point in the reform of the agricultural trade system. The three main areas of Agreement were: A) Market Access-Developing Countries

were required to reduce tariffs by 24% in 10 yrs. B) Domestic Support to agriculture was also to be reduced and C) Export subsidies to be reduced. These three sets of disciplines on agricultural policy are sometimes referred to as the three “pillars” of the URAA. However, this led to the destruction of small farmers’ local food production capacities. ‘Market access’ and ‘reduction of domestic support’ are basically policies that allow TNCs to displace the small producer. Under the policy of ‘market access’ (Draft Final Agreement on GATT, GATT Secretariat, Geneva, December 1991.) countries were forced to allow free import of food grain and remove all restrictions on imports and exports. ‘Market access’ is thus an instrument for the conversion of the developing countries’ subsistence production of food into a ‘market’ for TNCs. Similarly, by relating domestic policy to international markets through clauses on domestic support, GATT facilitates the shifting of subsidies from poor producers and consumers to big agribusiness.

This has been India’s experience under World Bank / IMF Structural Adjustment which forced the government to reduce domestic support and to import wheat. In 1991, India exported 672,000 tonnes of wheat at the cost of over Rs.178 crore. Under the pressure of import liberalization and structural adjustment, however, India imported 2.5 million tonnes which gives a \$30 per tonne subsidy to its exporters. Despite the US subsidy, the cost of imported wheat after adding transport and handling charges was higher than would have been the subsidy the government paid to Indian farmers – this amounted to Rs.260 per quintal (one quintal = 100 kg) of wheat, but imported wheat from North America costs Rs.560 per quintal. Indian farmers’ movements are therefore demanding that, rather than import wheat and subsidize multinational corporations (thereby draining foreign exchange and increasing debt), the government should raise the domestic support prices.

However, US food grain is cheaper not because it is produced more efficiently at less cost but because despite high costs of production, US corporations and the US government can subsidize and fix prices. Lowering food prices in the US is achieved by precisely those measures such as subsidies, which the World Bank, IMF and GATT want removed in Third World/developing countries through their conditionality.

Recently some initiative has been taken by the Government of India in the case of food subsidies. US has agreed not to press for penalties even if India’s food subsidy breaches cap. Therefore, no penalties would be laid till WTO members work out permanent solution on how to calculate food subsidies. This allows India to roll out its welfare schemes, including food security plan (Hindustan Times, Patna edition, Nov. 14, 2014).

In addition to the three “pillars”, a new Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) was signed. The SPS provides for countries to take measures to protect human, animal, and plant health, while at the same time establishing rules to prevent countries from using arbitrary and unjustified health and environmental regulations as disguised barriers to trade. The draft also states that standards will be set by international agencies such as Codex Alimentarius, Dupont, Chevron, Monsanto Merck, American Gnanud, Mitsubishi, Shell or advisors to Codex, which are strongly influenced by TNCs. In addition, according to the draft, ‘contracting parties shall ensure that sanitary and Phytosanitary measures based on scientific principles are not maintained against available scientific evidence’. Together, these principles, means that

GATT can apply standards to regulate import and export for the convenience of TNCs. On such criteria, tailored to fit TNCs' interests, genetically-engineered organisms introduced by TNCs can be treated as 'safe', and organic food exported by the developing countries can be treated as 'unsafe'.(Lang)In India, it is said that 1% of the food it grows is processed.Global giants fail to see that99% food processing is done by women at the household level.In the name of hygiene, India's mills and 'ghanis' are being forced out of business, pushing millions into poverty. These and many such lethal interventions will have to be dealt with at various levels, people's movements and voices of women will have to be heard.

### **Intellectual Property Rights and ownership of seeds:**

Intellectual Property Rights (IPR) is another instrument in the GATT agreement which will dispossess rural women of their power, control, and knowledge. IPRs in GATT and other international platforms aim to take seed out of peasant women's custody and make it the private property of TNCs. "I do not despair ever, for I guard one seed, a little live seed that I shall safeguard and plant again." (Shiva, Shroff, Lockhart, Page unnumbered) This song sung taken from a Palestinian Poem 'The Seed Keeper'. It reflects the important role of women as custodians of the seed and its significance for food security and autonomy. By adding 'trade related' to IPRs GATT has forced issues of the ownership of genetic resources and life forms on to the agenda of international trade through TRIPs.

At the conceptual level, Trade-Related Intellectual Property Rights (TRIPs) are restrictive, being by definition weighted in favour of transnational corporations. People everywhere innovate and create. In fact, the poorest have to be the most innovative, since they have to create their means of survival while it is daily threatened. Women have been important innovators and protectors of seeds and genetic resources.

Limitations to the ownership of intellectual property rights, as construed in the trade negotiations, operate on a number of levels. The first is the shift from common to private rights: the preamble of the TRIPs agreement states that intellectual property rights are recognized only as private rights. This excludes all kinds of knowledge, ideas, and innovations that take place in the 'intellectual commons', in villages among farmers, in forests among tribals. TRIPs therefore a mechanism to privatize the intellectual commons and de-intellectualize civil society, so that in effect, the mind becomes a corporate monopoly.

The second limitation is that intellectual property rights are recognized only when knowledge and innovation generate profits, not when they meet social needs. According to Article 27.1, (Draft Agreement, GATT) to be recognized as an IPR, innovation must be capable of industrial application. Only profits and capital accumulation are recognized as viable uses of creativity. Under corporate control and the 'de-industrialization' of small-scale informal sector production, the social good is discounted.

The most significant limitation of IPRs is achieved by way of the prefix 'trade-related'. Most innovation by women is for domestic, local and public use, not for international trade; MNCs innovate for the sole purpose of increasing their share in global markets and international trade; and TRIPs and GATT will only enforce

MNCs' rights to monopolize all production, distribution and profits at the cost of all citizens and small producers world-wide of which women form a significant number.

Coming to patents, in the Patent Act of India, 1970, methods of agriculture and horticulture were excluded, and not patentable, whereas the TRIPs text includes these as patentable. Under the Indian Patent Act, only process patents can be granted to food, medicines drugs and chemical products, but under the MTO (Multi-Lateral Trade Organization), the developing countries will have to grant product patents also in this area. Article 27(1) states that 'patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step, and are capable of industrial application.'(Draft Agreement GATT)The international Convention of the Union for the Protection of New Varieties of Plants (UPOV) had maintained farmers' rights to save seed, but in a March 1991 amendment this clause was removed. The new clause in UPOV (and TRIPs) can be used to enforce royalty payments on farmers if they save their own seed. With the stronger intellectual property rights regime being conceived under MTO, the transfer of extra funds as royalty payments from the poor to the rich countries would exacerbate the current Third World debt crisis tenfold. This is ironical, since most plant diversity originates in the Third World, and seeds and plant materials that today are under the control of the industrialized world, were originally taken freely from the farmers to whom they will now be sold back as patented material. As a result, seed companies will reap monopoly profits, while the genius of the farmers of developing countries will go unrewarded and they will be banned from saving and using their own seeds. A prime example is the patenting by foreign firms of traditional Indian agricultural products like basmati rice, neem-used for centuries in India as a pesticide and fungicide-spices like turmeric, which is essential in Indian cooking, and vegetables like karela that have been traditionally used for reducing sugar levels in human bodies. Once the Indian agricultural sector was exposed to globalization, the genetically engineered crops tended to displace indigenous crops. Biotechnology has caused a shrinkage in the base of Indian agriculture, producing environmental dislocations. Further, by bringing products and processes within the ambit of patent laws, the Trade Related Intellectual Property Rights will deprive the population of the developing countries access to medicines at affordable prices.( Chari and Gupta 154).

IPRs in the area of seeds and plant material are in any case not easy to demarcate, since the genetic resources used by multinational corporations for claiming patents are the product of centuries of innovation and selection by farmers of developing countries, especially women.

### **Women and Biodiversity Conservation:**

Let us look at women's role in biodiversity conservation. The marginalization of women and the biodiversity go hand in hand. Agricultural development (supposedly due to globalization) works towards erasing diversity. Tribal and peasant societies' biodiversity-based technologies, however, are seen as backward and primitive and are, therefore, displaced by 'progressive' technologies that destroy both diversity and people's livelihoods. The separation of production and consumption, with 'production' based on uniformity and 'conservation' desperately attempting to preserve diversity militates against protecting biodiversity. It can be

protected only by making diversity the basis, foundation and logic of the technology and economies of production.

The logic of diversity is best derived from biodiversity and from women's links to it. The economies of many developing countries depend on biological resources for their sustenance and well-being. In these societies, biodiversity is simultaneously a means of production, and an object of consumption. The survival and sustainability of livelihoods is ultimately connected to the conservation and sustainable use of biological resources in all their diversity.

There is a general misconception that diversity-based production systems are low-productivity systems. However, the high productivity of uniform and homogenous systems is a contextual and theoretically constructed category, based on taking into account only one-dimensional yields and outputs. The alleged low productivity of the one against the alleged high productivity of the other is, therefore, not a neutral, scientific measure but biased towards commercial interests for whom maximizing the one-dimensional output is an economic imperative (Mies and Shiva 1985).

Crop uniformity, however, undermines the diversity of biological systems which form the production system as well as the livelihoods of people whose work is associated with diverse and multiple-use systems of forestry, agriculture and animal husbandry. For example, in the state of Kerala in India (its name derives from the coconut palm), coconut is cultivated in a multilayered, high-intensity cropping system, along with betel and pepper vines, bananas, tapioca, drumstick, papaya, jackfruit, mango and vegetables. The annual labour requirement in a monoculture of coconut palm is 157 man-days per ha, while in a mixed cropping system, it is 960 man-days per ha.

When labour is scarce and costly, labour displacing technologies are productive and efficient, but when labour is abundant, labour displacement is unproductive because it leads to poverty, dispossession and destruction of livelihoods. In developing countries, sustainability has therefore to be achieved at two levels simultaneously: sustainability of natural resources and sustainability of livelihoods. Consequently, biodiversity conservation must be linked to conservation of livelihoods derived from biodiversity.

Women's work and knowledge is central to biodiversity conservation and utilization both because they work between 'sections' and because they perform multiple tasks. Women, as farmers, have remained invisible despite their contribution. Economists tend to discount women's work as 'production' because it falls outside the so-called 'production boundary'. These omissions arise not because too few women work, but too many women do too much work of too many different kinds.

Statisticians and researchers suffer a conceptual inability to define women's work inside and outside the house – and farming is usually part of both. This recognition of what is and is not labour is exacerbated by the great volume and variety of work that women do. It is also related to the fact that although women work to sustain their families and communities, most of what they do is not measured in wages. Their work is also invisible because they are concentrated outside market-related or remunerated work, and they are normally

engaged in multiple tasks. Gender studies now being published; confirm that women in India are major producers of food in terms of value, volume and hours worked (Mies and Shiva 1986).

In the production and preparation of plant foods, women need skills and knowledge. To prepare seeds they need to know about seed preparation, germination requirements and soil choice. Seed preparation requires visual discrimination, fine motor co-ordination, sensitivity to humidity levels and weather conditions. To sow and strike seeds demands knowledge of seasons, climate, plant requirements, weather conditions, micro-climatic factors and soil-enrichment; sowing seeds requires physical dexterity and strength. How to properly nurture plants calls for information about the nature of plant diseases, pruning, staking, water supplies, companion planting, predators, sequences, growing seasons and soil maintenance. Persistence and patience, physical strength and attention to plant needs are essential. Harvesting requires judgments in relation to weather, labour and grading; and knowledge of preserving, immediate use and propagation.

Women's knowledge has been the mainstay of the indigenous dairy industry also. Dairying, as managed by women in rural India, embodies practices and logic rather different from those taught in dairy science at institutions of formal education in India. Women have been experts in the breeding and feeding of farm animals, including not only cows and buffaloes but also pigs, chickens, ducks and goats.

In forestry too, women's knowledge is crucial to the use of biomass for feed and fertilizer. Knowledge of the feed value of different fodder species, the fuel value of firewood types, and of food products and species is essential to agriculture-related forestry in which women are predominately active. In low input agriculture, fertility is transferred from forest and farm trees to the field by women's work either directly or via animals.

In most cultures women have been the custodians of biodiversity. They produce, reproduce, consume and conserve biodiversity in agriculture. However, in common with all other aspects of women's work and knowledge, their role in the development and conservation of biodiversity has been rendered as non-work and non-knowledge.

Women have also been custodians of seeds. For eg. main cereal crop associates are called *akadi* in a Karnataka and women make all decisions relating to the *akadi* crop. In the words of a Lambani woman, 'What do (men) know about the *akadi*, they only know how to *besaya* (plough).' Due to women's involvement in the *akadi* crop traditional seeds are preserved over generations. Thus the central role of women in and sustainable use of natural resources has been overlooked in the studies on biodiversity, most of which has been done from the perspective of natural science. However in the most recent debates on environmental and development issues, women have gradually become visible. The emerging importance of participatory approaches in the context of applied research and practice has led to a growing interest in "indigenous" or "local knowledge" in resource management. However, in development work and nature conservation at the practical level, gender issues, if mentioned at all, are often considered as "special issues" or "further aspects." One implication of this is that "half or more of indigenous ecological science has been obscured by the prevailing invisibility of women, their work, their interests and especially their knowledge" (Rocheleau 1991, 157). The gendered roles have provided women with vital technical and traditional knowledge on managing natural resources,

particularly in terms of preservation and innovation. For e.g. women's work in agriculture lends them a vast understanding of crop and seed varieties and in turn how to adapt their food production to changes in weather patterns and food supply.

Gender does make a difference. Across the globe, women predominate as wild plant gatherers, home gardeners and plant domesticators, herbalists and seed custodians. Research on 60 home gardens in Thailand revealed 230 different species, many of which had been rescued by women from neighboring forests before being cleared.

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.

The majority of plant biodiversity research is not gender sensitive. This has led to incomplete or erroneous scientific results with respect to the diversity, characteristics and uses of plants, and the causes and potential responses to genetic erosion. Integrating women's traditional knowledge into botanical and ethnobotanical research, and protecting all informants' rights, are critical for improved knowledge and management.

In spite of the fact that an increasing number of experiences are highlighting the sustainable manner in which women use biological diversity, it is often true that women do so without equitable participation in the access and control of such resources. There is a tendency to ignore the natural spaces predominantly used by women in favor of those used by men, and to undervalue non-commercial (mostly female) production spaces in favor of commercial (mostly male) production spaces.

Therefore, it is necessary to make visible the gender-differentiated practices and knowledge of women and men in their relations with biodiversity resources. The United Nations Conference on Environment and Development in Rio de Janeiro in 1992 and the United Nations Women's Conference in Beijing 1995 were important impulses that stimulated interest in the gendered nature of biodiversity management and conservation. The Convention on Biological Diversity, which was signed at the Rio Earth Summit in June 1992, explicitly recognized in its preamble "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 policy-making and implementation for biological diversity conservation" (UNEP 1992, 2). (Zweifel, NWSA Journal Vol. 9 No 3, 1997).

Despite considerable efforts over the past fifteen years at national and international forum, such as the Convention on Biological Diversity, 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. Making visible the various roles women play in biodiversity conservation, sustainable use of resources and survival of the human species is only the beginning.

According to the FAO, the promotion of a long-term strategy of conservation, utilization, improvement and management of genetic resources diversity for food and agriculture requires:

- Recognition and consideration of the gender-differentiated roles, responsibilities and contributions of different socio-economic groups.
- Recognition and valuing of men and women farmers' knowledge, skills and practices and farmers' rights
- 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
- 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
- Enhanced access of women farmers to land and water resources, to education, extension, training, credit and appropriate technology
- The active participation by women, as partners, decision-makers and beneficiaries
- Adherence to the above points will facilitate the provision of appropriate support to the different actors, protect local men and women's interests, enhance food security and enable the development and implementation of sustainable, effective and equitable agro-biodiversity programmes. (Women and Biodiversity, from wikigender.org).

### **Conclusion:**

The challenge for the next generation is the safeguarding of agro-biodiversity by paying greater attention to diverse and integrated agricultural systems, especially those managed by women that provide food and livelihood security. 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 the enhance crop and livestock production, productivity and sustainable agriculture.

The U.N. Secretary General in his report on Harmony with Nature(20 April,2011) has elaborated the imperative need to take the 'route back to future' which involves 'reconnecting with nature'. There has to be a paradigm shift in the discourses on development by redefining the society and nature. The measurement matrix of GDP and GNP has to be replaced by real wealth, welfare, well-being and happiness. Aristotle distinguished between 'chrematistics' the art of making money and 'oikonomio' – the art of living. Ecology and economics are both derived from the word 'oikos' – home. Economics need to return 'home' to its roots in earth and society. This will lead to the recognition of women's work in sustenance and lend recognition to the knowledge of creation and production of indigenous communities.

I end with a song sung by the women of Garhwal during the Chipko Movement.

“What do the forests bear?

Soil, water and pure air

Soil, water and pure air

Sustain the earth and all she bears.”

#### ***LIST OF ABBREVIATIONS:***

1. WTO - World Trade Organization
2. GATT - General Agreement on Tariffs and Trade
3. TNCs - Transnational Corporations
4. MTO - Multi Lateral Trade Organization
5. AoA - Agreement on Agriculture
6. URAA - Uruguay Round Agreement on Agriculture
7. IMF - International Monetary Fund
8. IPR - Intellectual Property Rights
9. TRIPs - Trade Related Intellectual Property Rights
10. MNCs - Multinational Companies
11. FAO - Food and Agriculture Organization
12. UPOV - Union for the Protection of New Varieties of Plants
13. SPS - Sanitary and Phyto Sanitary

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