

AGROBIODIVERSITY MANAGEMENT FROM A GENDER PERSPECTIVE

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GENDER DYNAMICS AND AGROBIODIVERSITY

UNDERSTANDING THE GENDER SPECIFIC VULNERABILITY CONTEXT

In Module 1 we learned that men and women play important, often distinctive roles, in the management and conservation of agrobiodiversity. Frequently, there is a clear gender differentiation in terms of labour division, roles and responsibilities in agriculture. This causes men and women to be responsible for the management of different aspects of agrobiodiversity having different purposes and demands. This in turn has an impact upon men's and women's knowledge of the management and utilization of specific elements of agrobiodiversity.

Module 2 emphasized the importance of analyzing agrobiodiversity within the wider livelihoods framework. The reality, in terms of gender relations and their linkages with agrobiodiversity, is far more complex. Moreover, a number of trends and shocks impacting upon the management and conservation of agrobiodiversity and local knowledge should also be analysed (please refer to Module 2, Figure 1 Sustainable Livelihoods framework).

- ⦿ **Change in dietary habits:** Culture and cultural values are, and have been, the driving force of biodiversity management and conservation. This is because cultural diversity is closely related to biological diversity. In other words, food cultures and dietary habits are an important aspect of people's culture. The role of women in the domestic sphere includes cooking, preparation of meals and often entails the growing of specific crops. A woman's task is mainly the gathering and preparation of wild plants and their management (Howard, 2003). With the increasing availability of convenience food, such as pasta and bread, it is found that local food habits are changing in rural communities. In many cases, the increasing workload of women contributes to the change in diet, as women have less time to spend on food preparation. This is especially true in women-headed households because of migration or HIV-AIDS. Changing dietary habits can lead to the erosion of women's related knowledge of processing, preparation and storage, as well as to the erosion of plant diversity, family food security and health (Howard, 2003).
- ⦿ **Replacement of local crops:** Local crops, intended for production-for-use, are commonly replaced by introduced crops for commercial purposes. This often means men take over from women. Among others, this change may have repercussions on the ability of women to meet household obligations, including traditional food provision, food security and plant diversity. For instance, a case study from Mali (Wooten, 2003) showed that the changes in horticulture production, surrounding Bamako, led to a change in crops and to a change in the roles of men and women. Commercial horticulture production took place in the fertile river basin. Women, therefore, had to find other places to grow their traditional plants required for sauce production. Over the past few decades gardening, which was once closely associated with women and the food economy, has become a man's affair and a commercial venture.



- ⊗ **Development of market infrastructure:** There is a rising trend towards the integration of communities and individuals into markets. With this move towards the increased commercialization of agriculture, modern technologies and innovations have created high external-input dependent systems, which have often bypassed women. Reasons are many, including women's limited access to credit facilities and to information, because of the lack of training opportunities. In many cases, these development trends have had a neutral effect on women, or have led to the displacement of women's agricultural activities. Women had to move to increasingly marginal land, leading to the replacement of local crops and animal breeds. This in turn can have major implications for household food security.

- ⊗ Today, in many parts of the world, the trend is towards **an increase in the feminization of agriculture**. As men's participation in agriculture declines, the role of women in agricultural production becomes ever more dominant. War, sickness and death, caused by HIV/AIDS, have reduced rural populations. Another major cause of the feminization of agriculture is male migration from rural areas to towns and cities in search of paid employment, in their own countries or abroad. In Africa, for example, the male population in rural areas is falling rapidly, while the female population remains relatively stable. In Malawi, the rural male population plummeted by 21.8 percent between 1970 and 1990. During the same 20-year period, the rural female population declined by only 5.4 percent. This trend resulted in an increase in the proportion of households headed by women. Now, approximately one-third of all rural households in sub-Saharan Africa are headed by women. Studies have shown that women heads of household tend to be younger and less educated than their male counterparts. Generally, they have less land, less capital and lack labour for farming. These changes often lead to adjustments in cropping patterns and farming systems (FAO. No date).

Shocks, within the vulnerability context, have an impact on gender relations and interaction with other livelihood assets. HIV/AIDS is an important example of this because millions of households across Africa have been affected.

For households that are dependent on agriculture, the consequent intra-household re-allocation of labour can lead to a decline in crop production, which can result in food insecurity and an overall decrease in financial assets. Households may then respond with a further range of coping strategies. For example, in Uganda, a farming household's typical initial response is to change the mix of farm products. This would be to first focus on producing enough for subsistence; then to grow a surplus to sell in the market (Armstrong, 1993). Another common response is to reduce land under cultivation, resulting in reduced outputs (FAO, 2003). A recent case study from Uganda, showed that this was particularly evident in affected female-headed households, which cultivated only 1.3 acres on average, compared with affected male-headed households cultivating 2.5 acres on average (FAO, 2003).



It has been observed that some AIDS-affected households have turned to livestock production as an alternative to crop production. This strategy was adopted when soils became infertile and crop management practices too demanding for the available labour. Other households sell cattle more frequently to pay medical bills and funeral expenses. A trend has been identified whereby households raise smaller stock, such as pigs and poultry, which is less labour-intensive and is often readily available to women. A shift has been identified where farmers change from cultivating labour-intensive crops to those needing less labour, are drought-resistant and that can be cultivated throughout the year, such as cassava and sweet potato. A reduction in the cultivation of cash crops has been observed. Farmers choose to focus available labour on the production of secondary subsistence crops, often to optimize household food security (White and Robinson, 2000).

The response of a household that is affected by HIV-AIDS is to return to local crops and livestock-based agricultural systems. This illustrates how shocks can impact upon gender relations and the management of livelihood assets.

Key points

- Men and women play important, but often distinctive roles, in the management and conservation of agrobiodiversity. There is an obvious gender differentiation for labour division, roles and responsibilities in agriculture.
- A number of trends and shocks impact the management and conservation of agrobiodiversity and local knowledge. These also influence gender relations.
- Culture and cultural values are, and have been, the driving force of biodiversity management and conservation. Changing food culture and dietary habits can lead to the erosion of women's knowledge of processing, preparation and storage. It can also lead to the erosion of plant diversity and family food security and health.
- With the tendency towards more commercialized agriculture, modern technologies and innovations have created high external-input dependent systems. These often rely on introduced species and varieties, which have introduced changes in gender roles.
- Changes within the household composition affect available labour resources and have a profound impact upon agricultural management practices and agrobiodiversity.
- Shocks, such as HIV-AIDS, within the vulnerability context, have an impact on gender relations and the interaction with other livelihood assets.



3.1 PROCESS SHEET - NOTES FOR THE TRAINER



OBJECTIVE: Fact sheet 3.1 aims to raise participants' awareness of the importance of considering and understanding the context in which agrobiodiversity management and conservation takes place. The understanding of the dynamic nature of this context is crucial for planning a successful and gender-sensitive intervention.

LEARNING GOALS: The participants understand the impact of trends and shocks on agrobiodiversity and recognize the relevance of gender relations within this context.

PROCESS

- 1) The participants should be encouraged to explore the issues, raised in fact sheet 3.1, based on their own working experience. The trainer could facilitate this process by forming three groups; they would explore possible shocks, trends and seasonality that could affect the management of agrobiodiversity from a gender perspective. The groups could sit together and 'buzz' their ideas, which would then be presented, after a short time period, to the plenary. This exercise may take 1 hour in total.
- 2) Afterwards, the trainer could complete the findings with other key issues highlighted in the fact sheet. At this stage, it is important to relate the discussion to the Sustainable Livelihoods Framework introduced in Module 2. If possible, a chart of the Livelihoods diagram (Figure 1) should be available throughout the course.
- 3) The trainer could facilitate a podium discussion, to explore positive and negative effects of gender changes on agrobiodiversity. This discussion should not take more than 1 hour, including a short preparation time.

OUTCOMES: The participants have experienced the usefulness of the livelihoods framework. They have used it to explore the impact of the context on agrobiodiversity management and gender relations.

TIME ALLOCATION: Minimum 3 hours

VALUES AND BENEFITS OF AGROBIODIVERSITY FROM A GENDER PERSPECTIVE

In order to understand the values and benefits of agrobiodiversity, from a gender perspective, it is important to look at the different values and benefits of agrobiodiversity in general first. There are two main categories of values to be identified: use-values and non-use values¹. The former can be divided into three main subcategories:

- ⑥ **Direct use-values** refer to the benefits resulting from actual use, such as for food, fodder, shelter, ritual, medicinal and commercialization. These values can be further divided into *income values* and *non-income values*. This distinction is important for understanding the gender differences.
- ⑥ **Indirect use-values** are the benefits derived from ecosystem functions; including adaptability to marginal environments and contribution to nutrient cycling. Also, the cultural and social values obtained from agrobiodiversity (e.g. social status).
- ⑥ **Option values** are derived from the value given to safeguarding an asset for the option of using it at a future date. These may be seen as a type of insurance value, against the occurrence of new diseases or climate change.

Non-use values include the *existence value*, for biological communities or areas of scenic beauty. Often these are valued in crude terms; at the amount people are willing to pay to prevent a species from becoming extinct, or an area being developed (Funtowicz and Ravetz, 1994). The existence value is relevant to a much wider stakeholder group as it is not linked to any direct uses. For example, people may pay to see plant or animal life in another country or region that they cannot see in their own.

The range of values and benefits obtained from agrobiodiversity management are closely related to the underlying livelihood strategies and livelihood outcomes pursued by different people. (Please refer to Module 2, Livelihoods strategies and outcomes).

Direct use-values are of more immediate importance to agrobiodiversity management. We know that agrobiodiversity can only be sustained if the people who manage it will obtain benefits or direct use from doing so. We will, therefore, focus more on these types of values. Applying a more gender-differentiated perspective to direct use-values will help us to better understand the benefits obtained from managing agrobiodiversity.

Taking livestock management as an example, we know that men and women around the world participate in livestock production. However, men and women generally:

¹ For examples of these different values please see Anderson, S. 2003. Sustaining livelihoods through animal genetic resources conservation. *In* Conservation and sustainable use of agricultural biodiversity. Manila, CIP-UPWARD in partnership with GTZ, IDRC, IPGRI and SEARICE.



- ⑥ **Own different animal species.** Men tend to be responsible for cattle and larger animals and women for smaller animals, such as small ruminants and poultry.
- ⑥ **Have different responsibilities.** Regardless of who owns the animal, women are often responsible for the care of young animals, keeping stalls clean or milking. Men are occupied with herding, breeding and slaughtering. Or, women may be responsible for the day-to-day care and men for management and administration.
- ⑥ **Use different animal products.** In many societies, women use animals for milk and dairy products, whereas men use their meat, hides and for traction.

Both men and women benefit from the direct use-values obtained from keeping livestock. However, men often focus on income values, obtained through commercialization of livestock products or animals, whereas for women, in many cases, the non-income values are of greater importance (Anderson, 2003).

Similar aspects apply to women for the management of plant genetic resources. Here women are often in charge of the management and conservation of minor food crops. These are used for home consumption, rituals and medicinal properties. Often, these species are grown in home gardens, or they are intercropped in small areas of the main plots. Men are frequently in charge of the cultivation of staple crops and commercial crops, which take place in the fields outside the homestead. The following example, from a Bamana village in Mali, shows the gender roles and responsibilities found in crop production (see box 1).

[Box 1] GENDER ROLES IN CROP PRODUCTION IN A BAMANA VILLAGE (MALI)

The men in a Bamana village in Mali work collectively in their group's main upland field (*foroba*). This is located in a bush area a few kilometres from the settlement. Here, they produce a suite of staple crops including sorghum (*nyo* – *Sorghum bicolor*), millet (*sanyo* – *Pennisetum glaucum*), corn (*kaba* – *Zea mays*), cowpeas (*sho* – *Vigna unguiculata*), peanuts (*tiga* – *Arachis hypogaea*) and Bambara groundnuts (*tiganinkuru* – *Voandzeia subterranea*).

Women, on the other hand, are responsible for the cultivation and collection of plants for the sauces that flavour men's grain crops in the daily meals. During the rainy season, married women work individually in upland fields assigned to them by the *dutigiw* to produce *nafenw*, or 'sauce-things.' In most cases, women intercrop peanuts (*tiga* – *Arachis hypogaea*), cowpeas, kenaf (*dajan* – *Hibiscus cannabinus*), roselle (*dakumun* or *dabilenni* – *Hibiscus sabdariffa*), okra (*gwan* – *Abelmoschus* (*Hibiscus esculentus*)) and sorghum. They focus their cropping patterns on traditional leafy and vegetable items that complement the staples produced on the *forobaw*. The vast majority of women's crops are destined for direct consumption. From time to time, some items are sold to generate income, which is typically used to purchase commercial sauce ingredients such as bouillon cubes, vegetable oil or salt. In addition, to cultivating relish crops in upland fields during the rainy season, throughout the year women gather various wild or semi-wild plants from their fields or bush areas for use in their sauces. For example, they gather and process the leaves of the baobab tree (*Adansonia digitata*) to make a key sauce ingredient. They use the fruit of the shea nut tree (*Butryospermum parkii*) to make cooking oil and skin-care lotion. Women maintain these productive trees in their fields, and make use of species in the bush areas around the community. In this way a wide variety of wild and semi-wild greens are regularly used for their sauces.

Source: Wooten, 2003.



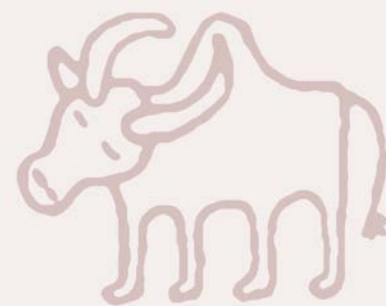
However, these responsibilities can and do change. For example, with male out-migration, women may take over men's roles and decentralization may shift emphasis from milk to meat production. Moreover mechanization, and other technical innovations, may involve men in what were formerly women's production systems.

To appreciate and understand the different values and benefits obtained from agrobiodiversity from a gender perspective, the following four key aspects are important:

- ⑥ determine the current division of labour and ownership of different crop/livestock components;
- ⑥ assess the role of crops/livestock in the household economy for both men and women. For example, women may use crops/livestock and livestock products for family food consumption, generating income, investing their savings or as security against future economic or personal risk;
- ⑥ take into account different uses of crops/livestock in the local economy – for example, traction, meat, milk, manure, hides, wool or ceremonial uses;
- ⑥ include processing/marketing of crops/livestock and livestock products, in which women often play a key role.

These gender-based differences reflect the different livelihood strategies and outcomes adopted and pursued by men and women, and exemplify the different values obtained from doing so. Rural women's key role, as food providers and food producers, links them directly to the management of genetic resources to secure family food production. At the same time men's role, as income earners, links them more often to cash crops and improved species and varieties.

For **indirect use-values** it is important to consider the social status obtained by managing or owning a certain resource. Status, within the community or society, can be defined as an indirect use-value. The status of men and women is often defined by their access and control over plant and animal resources. Rearing chickens in the backyard, for instance, in many places is a criterion for the social status of the family. A case study in Botswana revealed that over 80 percent of backyard chicken-keepers are women, and that the absence of chickens is seen as an obvious sign of poverty (Moreki, 2001). This example shows that rearing chickens results in direct use-values (eggs, meat) and in indirect use-values, such as social status. In Botswana, as in many other African regions, chickens are generally regarded as livestock raised by women. This is mainly because they are perceived to be of lower commercial value than other kinds of livestock (cattle and goats) (Moreki, 2001). A man's status in such a society may be defined by the number of cattle he keeps or similar criteria.



In the introduction we said that **option values** are derived from the value given to safeguarding an asset. This provides the option of using the asset at a future date. It is a kind of insurance value against the occurrence of, as an example, new diseases or climate change. It is difficult to assess whether people are aware of this type of value, or to what degree this may influence their management practices. There are examples nonetheless of farmers cultivating, or at least not eliminating, wild plant species in their fields. They know these plants may be important for their food security if the main crop fails. In this sense they recognize the option value of these wild species.

Key points

- The range of values and benefits obtained from agrobiodiversity management are closely related to the underlying livelihood strategies and livelihood outcomes pursued by different people.
- Direct use-values are of more immediate importance to agrobiodiversity management. We know that agrobiodiversity can only be sustained if the people who manage it will obtain benefits or direct use from doing so.
- Applying a more gender-differentiated perspective to direct use-values will help to better understand the benefits obtained from managing agrobiodiversity.
- Both men and women benefit from the direct use-values obtained from keeping livestock. However, men more often focus on income values obtained through commercialization of livestock products or animals. In many cases, non-income values are more important to women.
- In terms of indirect use-values it is important to consider the social status obtained by managing or owning a certain resource.
- Option values are derived from the value given to safeguarding an asset. This provides the option of using it at a future date. It is a kind of insurance value against the occurrence of, for example, new diseases or climate change.



OBJECTIVE: Fact sheet 3.2 aims to introduce the different values and benefits obtained from agrobiodiversity, and to stress the differences, from a gender-differentiated perspective. Its objective is to broaden the participants' understanding of different potential values. It also links these values to overall livelihood strategies and outcomes adopted by different actors.

LEARNING GOALS: The participants understand the difference between direct and indirect use-values and non-use values and are able to identify potential values for different livelihood strategies and outcomes.

PROCESS

- 1) Brief introduction to the topic by the trainer, based on fact sheet 3.2 (max. 30 minutes).
- 2) The participants could then watch the FAO video on *Livestock diversity in Africa*, with the main focus being on different benefits obtained from livestock diversity. (20 minutes)
- 3) Afterwards, the participants could break up into groups to try to identify different categories of benefits and values. They could add further examples covering plant diversity from their own working background. (1 hour)
- 4) The findings of the group work will be presented to the plenary. The process will lead to the identification and organization of different categories of benefits and values. This organization process could then be complemented by the categories suggested in fact sheet 3.2. (1 hour)
- 5) Following, if time allows, the participants could discuss in plenary the importance of different categories of values for different livelihood strategies. This discussion could lead to a reflection on gender differences in terms of values and benefits obtained. (45 minutes)

OUTCOMES: The participants recognize the diversity of values and benefits obtained from agrobiodiversity for different people and different livelihood strategies. This will help them to further apply the livelihoods framework and increase their awareness of the complexity of agrobiodiversity management.

TIME ALLOCATION: 3-4 hours



RECOGNIZING GENDER ASPECTS IN AGROBIODIVERSITY INITIATIVES

GENDER RELATIONS AND POLICIES, INSTITUTIONS AND PROCESSES

A range of legal instruments exists that regulate the management and use of agrobiodiversity. Although they are established at the global level, it appears difficult to locate them at the local level. In many instances, extension workers, farmers and even researchers are unaware of their existence or their contents. It would be beyond the scope of this fact sheet to analyze these legal instruments in detail. However, we think managers and users of agrobiodiversity need to be aware of their existence and main purpose. This fact sheet will give a short overview to which extent gender issues have been taken up in international policies and agreements concerning agrobiodiversity. In this fact sheet, we will not go into the regional details concerning ratification of these legal instruments or existence of different national policies¹.

In terms of gender, these legal instruments do not make any attempt to discuss the gender implications of resulting policies and legal agreements. Only the Convention on Biological Diversity and the Global Plan of Action acknowledge the key role played by women, especially in the developing world, in the management and use of biological resources. It is a challenge for extension workers, researchers and farmers to understand the impact and meaning of these legal instruments in their daily work.

- ⑥ Since the 1930s there has been increasing official public concern about the loss of agrobiodiversity. The first international agreement on biodiversity, the **International Undertaking on Plant Genetic Resources (IU)**, was adopted by FAO in the early 1980s to protect plant genetic resources. The IU covers all Plant Genetic Resources and addresses the exploration, preservation, evaluation and the availability of plant genetic resources. A total of 113 countries have adhered to the IU; the provisions of the IU have always been voluntary – it was a non-binding agreement. The IU was renegotiated by the FAO Intergovernmental Commission on Genetic Resources for Food and Agriculture, resulting in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).
- ⑥ **The International Treaty on Plant Genetic Resources for Food and Agriculture** was finally agreed on by the 184 governments attending the FAO Conference in November 2001. Its objectives are the conservation and sustainable use of plant genetic resources for food and agriculture. It also covers the fair and equitable sharing derived from their use for sustainable agriculture and food security. The Treaty is in harmony with the Convention on Biological Diversity (see below). It officially came into force on the 29 June 2004. The Treaty covers all PGRFA and contains provisions for the conservation and sustainable use of plant diversity, international cooperation and technical assistance. The Treaty recognizes the enormous contribution farmers and their communities have made, and continue to make, to the conservation and development of plant genetic resources. This is the basis for Farmers' Rights. The Treaty also establishes a multilateral system of

¹ Further information on these aspects can be obtained in *Law and policy of relevance to the management of plant genetic resources* by S. Bragdon, C. Fowler and Z. Franca (Eds). 2003. Learning Module, ISNAR, The Hague, The Netherlands.



access and benefit sharing, which applies to over 64 major crops and forages selected based on the criteria for food security and interdependence among countries and regions. Benefits arising from the multilateral system will be part of the funding strategy of the International Treaty. Priority will be given to the implementation of agreed plans and programmes for farmers in developing countries practicing the sustainable management of plant genetic diversity. The Treaty is legally binding for all ratifying countries, requiring conformity of all national laws and regulations.

- ⑥ The **Global Plan of Action** (GPA) for conservation and sustainable utilization of plant genetic resources was adopted by 150 countries in the Fourth International Technical Conference on Plant Genetic Resources, held in Leipzig in 1996. The GPA is a supporting component of the International Treaty. This means that contracting parties to the ITPGRFA should promote its effective implementation, through national actions and international cooperation. The GPA provides a coherent framework, which identifies 20 priority activities in the fields of *in situ* and *ex situ* conservation, sustainable utilization as well as institution and capacity building (FAO, 1996). The GPA contains many references to the roles of women in the conservation of plant diversity. Moreover, it develops activities and measures to strengthen women's capacity to sustainably manage these resources. In particular, references are contained in the following priority activities²: on-farm conservation (para. 31, 33 and 43 of the GPA); promoting the conservation of wild crop relatives (para. 67 and 70); characterization and evaluation (para. 158); promoting the development and commercialization of underutilized crops and species (para. 189, 193, 203, 204); expanding and improving education and training (para 307).

- ⑥ The **Convention on Biological Diversity** (CBD), adopted in 1992, covers all components of biodiversity, from genes to species and ecosystems, and recognizes the importance of genetic resources and their conservation. In particular, in its preamble, the Convention has recognized the vital role women play in the conservation and sustainable use of biological diversity. Moreover, CBD affirmed the need for the full participation of women, at all levels of policy-making and implementation, for biological diversity conservation. In the Third Conference of the Parties in 1997, member states recognized the need to empower indigenous and local communities. Also, the necessity of building their capacity for *in situ* conservation and sustainable use and management of agricultural biological diversity, thus building on indigenous knowledge systems. This Convention is legally binding for ratifying countries (183 as of March 2002). As above, ratifying countries must adopt appropriate legislation/regulations and/or bring existing ones into harmony with the Convention. The Convention does not apply to non-ratifying countries. By its Decision V/5, the countries at the Conference of the Parties of the CBD have established a programme of work on agrobiodiversity. This decision describes the components of agrobiodiversity and recognizes that the special nature and features of agriculture biodiversity deserve distinctive solutions in terms of policy and programming. As described in the CBD, agrobiodiversity is essential to satisfying human needs for food and livelihood security. Moreover, there is great interdependence between countries in regard to genetic resources for food and agriculture.

² See www.fao.org/ag/agp/agps/pgr/default.htm



© The **Global Strategy for the Management of Farm Animal Genetic Resources** provides a technical and operational framework for assisting countries. It contains several key elements, such as the Global Inventory of Farm Animal Genetic Resources through the State of the World Report. This will facilitate the analysis of the level of endangerment of the world's resources, and the establishment of conservation priorities. The Strategy aims to assist countries in their efforts to characterize and monitor their resources. Programmes and action plans will be developed for the conservation and sustainable utilization of countries' resources. As States have sovereign rights over their own biological resources, they are also responsible for their sustainable conservation and utilization. States participating in the FAO global strategy for the management of farm animal genetic resources were invited to nominate a national focal point for animal genetic resources, and a national coordinator. These people are responsible for activities within countries concerning the management of animal genetic resources. They are also responsible for the country's contribution to global efforts, especially in exchange of information and data.

© The **Convention on the Elimination of All Forms of Discrimination against Women** (CEDAW) is another legal instrument, which directly addresses discrimination against women and commits member countries to put the objectives of the convention into practice. This Convention could provide a useful framework for the implementation of the above listed legal agreements. CEDAW, adopted in 1979 by the United Nations General Assembly, is often described as an international bill of rights for women. Consisting of a preamble and 30 Articles, it defines discrimination against women, and sets up an agenda for national action to end such discrimination. By accepting the Convention, states commit themselves to undertake a series of measures to end discrimination against women in all forms, including the:

- incorporation of the principle of equality of men and women in their legal system, abolition of all discriminatory laws and adoption of appropriate rulings prohibiting discrimination against women;
- establishment of tribunals and other public institutions to ensure the effective protection of women against discrimination; and
- ensuring the elimination of all acts of discrimination against women by persons, organizations or enterprises.

Countries that have ratified, or acceded to, the Convention are legally bound to put its provisions into practice. They are also committed to submit national reports, at least every four years, on measures taken to comply with their treaty obligations. Entering into force on 3 September 1981, as of March 2004 a total of 176 states are Parties to the Convention.

Despite this increased recognition of gender differences, and implications at the international level, little has been done to implement this knowledge in national policies and programmes for agrobiodiversity management and conservation.

As stated in the Report on the State of the World's Plant Genetic Resources for Food and Agriculture, the main cause of genetic erosion in crops, reported by almost all countries, is the replacement of local varieties by improved or exotic varieties and species. As old varieties in farmers' fields are replaced by the newer, genetic erosion frequently occurs. Genes and gene complexes found in the many farmers' varieties are not contained in the modern variety. In addition, the sheer number of varieties is often reduced when commercial varieties are introduced into traditional farming systems. This is similarly true for the replacement of animal genetic resources. The report acknowledges the negative impacts these processes have on small farmers, especially on women, who depend on genetic diversity for their livelihoods.



Nonetheless, there are still many examples of national policy and development projects that promote commercial production. These focus on a few major cash crops, which threaten existing agrobiodiversity and food security. The more production is managed for commercial purposes, the more high-yielding varieties and breeds are used. In turn traditional risk reduction, the use of a wide diversity of varieties and breeds, becomes less important. Many local varieties and breeds are still categorized as low-performing and inferior by national extension services and research organizations. Therefore, national policies provide incentives for the use of modern varieties and breeds. This may lead to the irreversible loss of genetic diversity or it may impact upon traditional and established gender roles and responsibilities. The following example from Mali highlights the impact on agrobiodiversity use and gender roles (see box 2).

[Box 2] COMMERCIAL GARDENING IN MALI

In a Bamana village in Mali, women's subsistence production, which is based on local plant biodiversity, came into increased competition with men's production of exotic crops for the market. During this process, women's production was marginalized or even lost. Women were traditionally responsible for producing or collecting the traditional plant varieties, used to make sauces and relishes that they historically produced in home gardens. However, a market-gardening regime has developed in the community. This is directed towards satisfying a growing urban demand for fresh produce rather than local domestic requirements. Market gardening typically involves non-traditional fruit and vegetable crops. Middle-aged men dominate the garden leadership.

Source: Wooten

Due to modern technologies and changes in perceptions, women have lost their influence over production they traditionally controlled. Access to resources has been lost to men, who benefit from extension services and can buy seeds, fertilizers and the required technologies. In this way, women lose their status and self-determination; they are not compensated in any way.

The above case study shows that agrobiodiversity is threatened because it is **not** used, not because it is overused, as is the case with many wildlife or wild plant species. Modern research, development and centralized plant breeding have mostly ignored and undermined the capacities of local farming communities' innovation and improvement of local plant varieties, which has often led to their replacement.

Conventional breeding programmes tend to focus heavily on 'broad adaptability'. This is the capacity of a plant to produce a high average yield over a range of growing environments and years. Unfortunately, genetic material that produces very good yields in one growing zone but poor yields in another tends to be quickly eliminated from the breeder's gene pool. Yet, this may be exactly what small farmers in some areas need. The resulting 'improved' varieties often require heavy doses of fertilizer and other chemicals, which most poor farmers cannot afford. Moreover, professional breeders often work in relative isolation from farmers. They are sometimes unaware of the multitude of preferences – beyond yield and resistance to diseases and pests – of their target farmers.



A few of the dozens of plant traits of interest to small-scale farmers are ease of harvest, storage, taste, cooking qualities, how fast a crop matures and the suitability of crop residues as livestock feed. Despite this wealth of knowledge, conventional breeding programmes have limited farmers' participation to the evaluation of and comments on a few experimental varieties prior to their official release. Participating in this way leaves few farmers feeling ownership of the research, or that they have contributed their technical expertise. If farmers had been given the chance to assess critically varieties reaching on-farm trials, many would have been eliminated from testing years earlier. Farmers – and in many cases, women farmers – have been the chief engineers of crop and variety development for thousands of years. Today they continue to actively select and breed most crops. These include the so-called minor or underutilized crops that are so important to family nutrition.

However, many encouraging examples exist where farmers are involved in crop improvement and breeding. One alternative approach for developing countries is **participatory plant breeding**, as it has been recognized that conventional breeding programmes have brought little benefit to agro-ecological and socio-economical marginal environments. Such an approach can potentially contribute to the conservation and sustainable management of plant genetic resources.

The principal aims of participatory plant breeding are to create more relevant technology and equitable access. However, depending on the organizations involved, there are often other objectives. For example, large-scale breeding programmes run by international or national research agencies may wish to cut research costs. Other organizations, such as farmer's groups and NGOs, may wish to affirm local people's rights over genetic resources. They may produce seed, build farmers' technical expertise or develop new products for niche markets, such as organically grown food.

Key points

- A range of legal instruments exist that regulate the management and use of agrobiodiversity. In terms of gender aspects, these legal instruments do not make any attempt to discuss the gender implications of resulting policies and legal agreements.
- Plant genetic resources were initially seen as humanity's common heritage. The Convention on Biological Diversity gave nations a sovereign right over their genetic resources and requires prior informed consent for their use (UNEP, 1992).
- The view of PGRs, as common property, is rapidly changing to perceiving them as objects of trade.
- Despite increased recognition of gender differences, and implications at the international level, little has been done to implement this knowledge in policies and programmes for agrobiodiversity management and conservation.
- Agrobiodiversity is threatened because it is not used, not because it is overused, which is the case for many wildlife or wild plant species.
- There are many examples of national policy and development projects that promote commercial production. They focus on few major cash crops, thus threatening existing agrobiodiversity and food security. Changes have been observed in gender roles and responsibilities.



3.3 PROCESS SHEET - NOTES FOR THE TRAINER

OBJECTIVE: Fact sheet 3.3 aims to introduce important international policies and legal agreements, which are relevant to agrobiodiversity management and conservation. Furthermore, it presents the impact of policies and institutions on agrobiodiversity management and conservation as well as on gender roles and responsibilities.

LEARNING GOALS: The participants are aware of the existing international legal framework, and reflect upon the influence of policies and institutions on gender responsibilities in agrobiodiversity management.

PROCESS

The session begins with an introduction, by the moderator, of the different legal agreements and policies. In order to involve participants from the beginning they could be invited to name known legal frameworks. During this session, the trainer should emphasize that these legal frameworks are mainly discussed at the policy level. Nevertheless, these need to be communicated to all other levels to inform people of their rights and responsibilities. One important task for the trainer is to identify the ratification status of the different countries represented at the workshop.

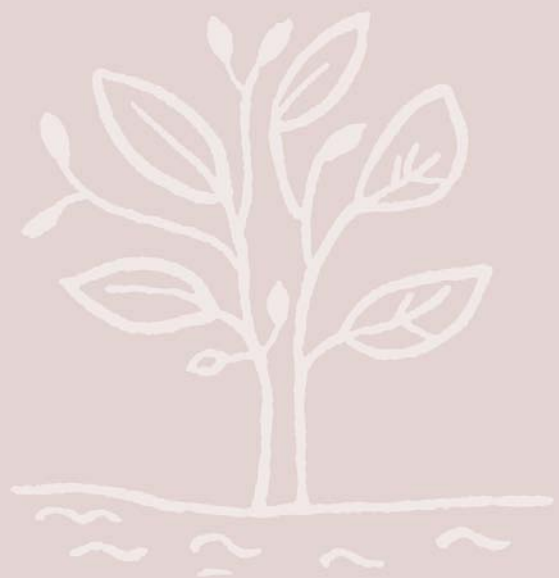
- 1) If time allows, the trainer could distribute the relevant articles of the different legal agreements and let the participants read through them in small groups. Afterwards, the key points could be presented by the participants. (1 hour)
- 2) Processes are more directly relevant and visible at the community level. These can be induced by external organizations or by people themselves. Participants are invited to share experiences from their work background on processes and initiatives that try to empower local people to manage and benefit from their agrobiodiversity. (1 hour including discussion)
- 3) The trainer should again encourage the participants to reflect upon gender differences in terms of potential impact of the processes and initiatives identified.

OUTCOMES: The participants are aware of the existence of key international regulations and have identified important issues covered by them. Furthermore, they have reflected upon gender implications of potential processes and initiatives.

TIME ALLOCATION: Minimum 3 hours.

Note: If further information on laws and policies is required, please refer to Bragdon, S., Fowler, C. and Franca, Z. (eds). 2003. Laws and policy of relevance to the management of plant genetic resources. Learning Module. The Hague, The Netherlands, ISNAR.

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- 📖 IK Notes, No. 44. May 2002. The contribution of indigenous vegetables to household food security.
- 📖 Wooten, S. 2003. Losing ground: Gender relations, commercial horticulture, and threats to local plant diversity in rural Mali. *In* Howard, P.L. (Ed). 2003. Women and plants, gender relations in biodiversity management and conservation, UK, ZED Books.



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Web sites

- FAO Web site on Plant Genetic Resources: www.fao.org/ag/agp/agps/pgr/default.htm
- FAO Web site on Agrobiodiversity: www.fao.org/biodiversity/index.asp?lang=en
- FAO Web site on Gender, Agrobiodiversity and Local Knowledge: www.fao.org/sd/links
- International Undertaking on Plant Genetic resources (IU): www.fao.org/ag/cgrfa/IU.htm
- ITPGRFA or International Seed Treaty: www.fao.org/AG/CGRFA/ITPGR.htm
- Global Plan of Action, Leipzig, 1996: www.fao.org/WAICENT/FaoInfo/Agricult/AGP/AGPS/GpaEN/leipzig.htm
- Convention on biological Diversity: www.biodiv.org/convention/articles.asp
- Global Strategy for the Management of Farm Animal Genetic Resources: www.fao.org/ag/cgrfa/AnGR.htm
- CEDAW: www.un.org/womenwatch/daw/cedaw