

Gender mainstreaming in natural resources management: why and how?



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Gender mainstreaming in natural resources management: why and how?

This paper is written for CSOs working in natural resources management in the South and North, who are interested to (further) address and integrate gender issues in their activities. It aims to provide CSOs with insights and examples and methods to mainstream gender in their work, specifically in water and land use management activities.

Introduction

Both ENDS' mission is to strive for social justice and a sustainable environment by connecting and empowering Civil Society Organisations. To address gender issues is therefore an integral part of the mission of Both ENDS: social justice includes equal rights and opportunities for men and women. At the same time, gender equity is not only a fundamental human right or a question of social justice, but is also instrumental and a prerequisite for achieving the goals of sustainable development.

In our view, the key to reduce and prevent poverty and achieve sustainable development is to empower poor and marginalised groups in order to regain and protect their access to and control over natural resources. Access to and control over natural resources is unequally distributed all over the world and strongly related to unbalanced power relationships. These include differentiated power relationships between men and women.

This paper is written for CSOs working in natural resources management in the South and North, who are interested to (further) address and integrate gender issues in their activities. It aims to provide CSOs with some insights and examples and methods to mainstream gender in their work, specifically in water and land use management activities. It intends to answer 3 questions:

- Why is gender important in environment and development work, and in natural resources management in particular (land, water, forest, commons)?
- How can you address gender issues in water and land use management activities?
- Where to find more information and tools to support you?

While the first chapter provides some theory and background on the concepts of gender and gender mainstreaming, the focus of the paper will be on a number of concrete examples of and tools for addressing gender inequity issues.

We certainly do not pretend to be comprehensive. The paper is merely a reflection of our current findings and insights in the role of gender in natural resources management. We invite all of you to provide your feedback on this paper, as well as your suggestions and ideas to continue working (together) on this issue.

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1. Gender in development

What does gender and mainstreaming mean, how did thinking about gender in a development context evolve over time, and what can be said about the current status of gender inequity in the world? This chapter provides some useful background and answers to these questions.

1.1 What does gender and mainstreaming mean?

In many languages, the English term 'gender' has no equivalent. What it refers to is the different norms and values placed on men and women in a group or society. While 'sex' refers to the biologically determined differences between men and women, 'gender' refers to the socially determined characteristics. These characteristics can change over time, vary within and between cultures, and relate to differences in power, access, voice, behaviour, rights, and tasks.

There are different ideas and opinions about what gender mainstreaming is. A definition that is least threatening to people who like to stick to the status-quo is the recognition of existing divisions of labor, rights, natural resources and voice – and adjusting projects, interventions and policies to these divisions. An understanding of gender mainstreaming that is more often used by gender analysts, and one that is adhered to by many UN organizations, explicitly includes objectives of gender equality and recognizes the need for transformative measures to change existing inequities. It recognizes that some contentious changes are required to achieve real gender equity, such as land- and water rights reforms.

Gender mainstreaming thus means *considering* and also *addressing* the differences in roles, needs and capacities of, and benefits and burdens for men and women. Addressing gender inequity as a crucial and integral part of a much-needed focus on social and power inequities, also based on class, caste, race, age, education, religion, and health.

Gender-specific interventions can target women exclusively, men and women together, or only men, to enable them to participate in and benefit equally from resources development and management efforts. These are necessary temporary measures designed to combat the direct and indirect consequences of past discrimination. Mainstreaming is not about adding a 'woman's component' or even a 'gender equality' component into existing activities or projects. It goes beyond increasing women's participation; it means bringing the experiences, knowledge, and interests of women and men to bear on the development agenda.

Gendered beliefs are deeply embedded in educational, political and economic systems and gender belongs to the core ways in which people identify themselves and others. This is why gender mainstreaming is an intrinsically time-consuming activity; it involves changes in norms and values, in cultural styles and normal ways of doing things, in traditions and beliefs, in people's sense of self and in their understanding of others. Such changes often meet with resistance, also because there are vested interests to uphold and reproduce existing ways.

Because gender mainstreaming is about changing the normal and cherished ways of doing things, it requires additional financial and human resources and high-level political will. Gender mainstreaming is not something that can be consigned to 'watchdogs' in one specialized office, but *all* professionals and researchers must have knowledge and awareness of the linkages with gender, so that they can – as a minimum – identify and recognize where and how gender matters in their areas of work.

1.2 Women and gender from the '50s

In the '50s and '60s the economic role of women was mainly seen as a reproductive one and as housewives and bearers and caretakers of children. Their productive role in agriculture was neglected. Development theories were general, did not incorporate the gender concept, nor natural resources.

In 1970, E Boserup asked attention for the specific role of women in the household economies of rural Africa. The work entitled *Women's role in Economic Development*¹ is "the first investigation ever undertaken into what happens to women in the process of economic and social growth throughout the Third World", according to the foreword in the 1989 edition by Dr. Swasti Mitter. Mitter says "It is [Boserup's] committed and scholarly work that inspired the UN Decade for Women between 1975 and 1985, and that has encouraged aid agencies to question the assumption of gender neutrality in the costs as well as in the benefits of development". Boserup introduced basic household concepts, where man controlled cash crops and were responsible for general household expenditures, while women were responsible for food crops and for daily expenditures of her children.

Anthropological literature asked specific attention for local differences in control over natural resources. In so called peasant societies land and permanent agriculture are controlled by male elites, while hunter-gatherer societies depend more on harvesting communal natural resources. Peasant societies, like in the Asian river valleys or in the cereal growing societies tend to have centralized households, where males dominate the granaries and the labor process. In hunter-gatherer societies both control over resources as households are more diffuse, giving more space to women. In the seventies theories on migration labour of males to mining or plantation areas dealt with the impact of absence of males upon local communities in general, but also upon the position of women.

In the early '70s the concept of Women in Development (WID) was introduced. The recognition of women's contribution to economic development first became institutionalised in the departments and project components of donor countries. By the mid- '70s, WID had started to become a more or less respected area of study. In 1976, the UN declared a Decade for Women, which greatly enhanced activities around women and development. The number of publications on women and development topics has steadily increased ever since.

Since the late '80s a transition from WID to Gender and Development (GAD) has taken place. The WID approach is associated with the concern to increase women's participation and benefits and the recognition of women as a human resource for development. Gender and Development represents a transition that includes the concepts of WID to 'not only integrate women into development', but looks further to the potential that development initiatives can have in transforming unequal social/gender relations and their ability to empower women, by strengthening and extending the power base of women.

In the nineties the impact of policies of privatisation on the position of women received attention as it appeared that women were especially hard hit. Privatisation diminished the role of the formal state sector, pushed women into the informal sector, but also diminished the support of males to their households. This meant a double burden upon women. Also attention was given to the impact of the large scale projects of the international financial institutions, as it appeared

¹ London, Earthscan, 1970, ISBN 1-85383-040-2

that these benefited national commercial interests, but harmed household interest especially regarding water and livelihoods.

At the same time, since the early '70s, environment has slowly become an important issue in international development policy, followed in the '80s by the recognition that environmental problems affect women in very specific ways. Especially in the areas related to water, sanitation, energy and health, areas where women often play an important role.

1.3 Gender inequity in the world

The fact that today the majority of people living in poverty is female (up to 70%), and that access to education, training, and employment, land and property, as well as decision-making is still limited for women as compared to men, reflects the global reality of gender inequality.

Women's human rights are easily neglected, as is shown by the everlasting incidence of violence against women. In situations of conflict, emergency and disaster, women are often hardest hit. For most societies in the present world, discriminatory social structures and attitudes, at personal, community and institutional levels, persist in deeply entrenched patterns of gender inequality. Many women encounter steep barriers related to their family and socio-economic status. Generally women work longer days, combining household and reproductive tasks, with productive activities and income generation. Single parents, refugees and other displaced women, and migrant workers confront additional stumbling blocks. Many women suffer from diseases and chronic health problems stemming from poor nutrition and health care provision. Current trends further deepen the gap: globalization and privatisation, poverty, insecurity, structural adjustments, lack of basic assets, fundamentalism, violence, conflict, wars, HIV/AIDS, and global and local environmental problems.

According to the United Nations:

- *More than two-thirds of the people in the world living in absolute poverty are women.*
- *Women perform 67% of the labour in the world, but are the worst paid, earning only 10% of the global income.*
- *Women own less than 1% of all property in the world.*
- *66% of all illiterate people are women.*
- *Women occupy 10% of all parliamentary seats.*

CEDAW, New York, 25 July 2005

Persistent customs and traditions have kept women in inferior positions in the countries that recently submitted their national reports to the CEDAW (Convention on the Elimination of All Forms of Discrimination against Women) committee. Particularly migrant and refugee women, women belonging to ethnic, racial, or religious minorities, and especially rural women, who are over 50 per cent of some populations, had consistently low levels of education, employment, health care and decision-making roles.

Human Development Report 2005 (UNDP) reports on Gender inequality

- Gender disparities are among the deepest and most pervasive of inequalities.
- Nowhere are power inequalities and their consequences more clearly displayed than for women.
- For example: the higher mortality rates among girls and women in India from birth to about age 30 inverts the normal demographic gender balance, pointing to structural inequalities in nutrition, healthcare and status.
- Income inequality reinforces unequal health outcomes for women.
- Gender-based inequalities, including infant mortality, link back to wider life chance inequalities.
- These very visible disparities in human development are the product of deeper structural inequalities, including less visible inequalities in power.
- Women experience inequality in power relative to men from the household level to the national level, where they are universally underrepresented in legislative bodies, organs of government, and local political structures.
- Women, especially those with low incomes, tend to have less control over household resources, less access to information and health services and less control over their time.
- These factors are closely linked to their nutritional status, the quality of care they receive and the nutritional status of their children. (UNDP, 2005, p.81)

International affirmation of women's rights in environment and sustainable development

- 1979 The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) becomes the first international bill of women's rights. It obliges signatory Governments (180 state parties by March 2005; or more than 90% of the UN states) to take action to promote and protect the rights of women.
- 1985 The United Nations Third World Conference on Women and associated NGO Forum in Nairobi produces the Nairobi Forward-Looking Strategies, which recognize women's role in environmental conservation and management.
- 1992 The United Nations Conference on Environment and Development produces the Rio Declaration and Agenda 21. It recognizes women as a 'major group' in sustainable development and makes specific provisions to advance their position (Agenda 21, chapter 24). Rio Principle 20: "Women have a vital role in environmental management and development. Their full participation is therefore essential in achieving sustainable development."
- 1995 The United Nations Fourth World Conference on Women in Beijing and the affiliated NGO Forum in Huairou offered the Platform for Action to achieve gender equality in 12 key areas, including environment. Section K: "Women have vital role to play in the development of sustainable and ecologically sound consumption and production patterns and approaches to resource management."
- 2000 The Millennium Declaration promises "to promote gender equality and the empowerment of women as effective ways to combat poverty, hunger and disease and to stimulate development that is truly sustainable". MDG 1: eradicate poverty and hunger; MDG 3: promote gender equality; MDG 7: ensure environmental sustainability.
- 2002 The World Summit on Sustainable Development (WSSD) in Johannesburg produced the Johannesburg Plan of Action that confirms the need for gender analysis, gender specific data and gender mainstreaming in all sustainable development efforts, and the recognition of women's land rights. The Declaration states: "We are committed to ensuring that women's empowerment, emancipation and gender equality are integrated in all the activities encompassed within Agenda 21, the Millennium Development Goals and the Plan of Implementation of the Summit."
- 2003 The eleventh session of the UN Commission on Sustainable Development decides that 'gender equality will be a cross-cutting issue in all forthcoming work up until 2015'.
- 2004 UNEP (United Nations Environment Programme) organizes the first Women As the Voice for the Environment (WAVE) conference, in cooperation with the Women Ministers for the Environment and WEDO (Women's Environment and Development Organisation).
- 2005 The 13th UNEP Governing Council endorses a Resolution on enhancing Gender Equality in Environment.

2. Gender and natural resources management

Though much literature and examples exists on gender in sectors such as health and education, specific literature on the role of gender in natural resources management seems rather limited. This chapter provides some key observations on the relationship between gender, environment and natural resources management (NRM) in different type of societies, specifically focusing on land use and water management.

2.1 Key elements of gender in NRM

When analysing gender equity in relation to NRM, four elements are important:

- 1) *Roles and needs*: Men and women perform different tasks and roles in different societies, which lead to women and men having different experience, knowledge, talents and needs. Gender analysis explores these differences so policies, programmes and projects can identify and meet the different needs of men and women. Gender analysis also facilitates the strategic use of distinct knowledge and skills possessed by women and men.
- 2) Crucial for achieving gender equity in NRM is equal *access and control* of men and women over the available resources in a particular community, village, or region. Often, both access and control over resources are unequally distributed, or access may be equal, but not control, i.e. both women and men may be able to access irrigation pumps, only men may decide on when and for what type of crops the irrigation water is used.

Access refers to the ability of women/men to use a resource.
Control refers to the ability of women/men to make decisions about and derive benefits from resources.
- 3) With control and ownership often comes *voice and power* in decision-making. In politics and institutions at all levels, women are often weakly represented. In other cases women can participate in meetings and discussions on the way resources are managed, but their actual decision-making power is limited due to the social and cultural setting. In water user associations in patriarchal societies for example, women are afraid or not allowed to speak up.
- 4) Finally, natural resources management may have very different *impacts on and benefits* for men and women. Policies on natural resources management are often so-called gender-neutral: described in general terms without taking into account the different impact on and benefits for women and men. In practice, these policies may be beneficial to some, but detrimental to others. For example, the conversion of natural forests into large-scale plantations provide profits to large companies, but threatens access to Non-Timber Forest Products (NTFPs), food and clean water of communities that depend on the forest. The cultivation of soy and palm oil competes with local food production, and large dams threaten local supply of fish and water. These outside interventions have a harmful effect on people's livelihood. Since women play an important role in subsistence farming and water management, the interventions have a direct impact on women's livelihoods and therefore on their families and their social position in the community.

Commercial shrimp farming in Bangladesh

An example of an intervention with a specially negative impact on women and children, is the expansion of commercial shrimp farming in the Southwest Coastal Area of Bangladesh. This kind of shrimp farming has led to a restriction in access of local people to land and water resources, which were previously common property. Especially women and children used to collect plants and leafy green vegetables from roadsides and fallow agricultural lands near the coast. This supplement household food was a regular source of nutrition for the community, especially for the marginal poor. Now that the areas are restricted by the commercial shrimp farmers or under water, most of these plants are gradually becoming extinct and poor families and women-headed households are deprived of nutritious food. Moreover, in shrimp farms, women are often maltreated in various ways; they are discriminated in wage rates, sexually harassed, and verbal abuse and physical violence is a widespread phenomenon. They often face a low prestige in society as a result of working in the shrimp sector.

2.2 Gender relations in NRM in different societies and times

Large variations in gender relations exist between societies with different availability of natural resources. With changes in availability of resources, the gender relations usually also change.

Tribal or lineage based societies often have a low population density and abundant natural resources (land and forests). This was true for many parts of Africa and the peripheral regions of Asia and Latin America. Agriculture was practiced via shifting cultivation using simple means like the hoe while harvesting produce from the commons was important². Males dealt with clearing land, warfare and hunting, while women were responsible for reproductive tasks. Despite the unequal position, women had a degree of independence and controlled subsistence food cultivation, although this activity demanded a considerable amount of their time.

In India, women of the tribal Adivasi people used the commons for their income. This permitted them to organise themselves in strong women groups (Sangham), that developed a variety of functions³. This was different from nomadic societies, in which vast pasture areas were used, but knew centralised households dominated by males who controlled the cattle. Cattle keeping is strongly associated with polygamy, patrilineal inheritance, chiefly rule and militaristic tendencies related to cattle raiding⁴.

The gender balance changed with increasing scarcity of natural resources due to growth of population, spread of agriculture by plough or irrigation or cash crop cultivation. In these "peasant" societies, resources started to be controlled by male dominated chieftaincies or states. Households were dominated by these institutions, while within the households males started dominating women by transferring property from father to son and by controlling the cultivation of crops.

For example, the Asian river valleys saw the development of centralised control over irrigated land by states, especially in plough agriculture. Households became centralised, with male heads dominating land, water, cattle, labour and revenues.

² See E Boserup *Womens role in Economic Development*, 1970; D Bryceson, *Women Wielding the Hoe*, 1995

³ www.ddsindia.com/www/sangams.htm

⁴ See Bryceson, 1995, p 12

Women labour was increasingly restricted to household land, also because the commons lost its importance as source of revenue.

Also in Europe and Asia, the spread of plough agriculture caused development of centralised households, with males controlling cultivation and marketing of crops and transfer of property⁵. In general cash crops promote centralised control by males. This is for example valid for cultivation of cotton in the dry areas of Asia and Africa. Women household members supply labour while the cotton is sold by male heads of households to buyers linked to a city or export market.

In forest societies with a chiefly tradition, rights to the forests are mostly dominated by male elites, like chiefs or elders of the lineage or male heads of household. Tree planting is done by males, while women are excluded by cultural taboos. In hunter-gatherer societies, males control hunting and also the hunting of honey from wild bees. Women gather many non timber forest products (snails, mushrooms, herbs).

Variations in gender balance often depend on the dominant household crop. Cultivation of coffee or cocoa is mostly dominated by the male head of the household, who control the harvesting, processing and marketing of cocoa. This is explained by the fact that cocoa is an export crop. But on the other hand oil palm cultivation gives women more space, as palm oil in Africa is mostly sold on the local market. Males own the oil palm trees, but women are crucial in processing and receive part of the oil. Women succeed in establishing wholesale trade in oil palm. At the same time however, in Asia and other parts of the world, current large-scale palm oil plantation are controlled by men, as this palm oil is meant for export.

The increasingly large-scale, state or private led exploitation of natural resources (mining, plantations) in the world had considerable impact on gender relations. On the one hand this created a considerable migration of young males to the mining and plantation areas and marginality in the migration areas. The absence of males gave extra space to women, but it also increased the poverty of communities, as investments in natural resources (soil fertility) lacked behind as well as investments in local irrigation systems. This stagnation in the migration areas increased poverty and increased the work load of women. On the other hand establishment of mines or plantations in the tribal areas had direct impact on local communities. They were pushed off their lands, which had especially negative impacts on women.

2.3 Gender inequity in land use and water management

Roles and needs

Women's needs regarding water and land resources (management) are different from those of men, related to their tasks and roles. Their needs are usually not only pressing regarding domestic use, but also for subsistence agricultural production and to engage in economic production, including agriculture and micro-enterprise.

Related to water resources, ensuring women's access to safe water for domestic and productive use is a fundamental prerequisite for a community's well-being and for gender equality. In many societies, women and girls collect every liter of water for cooking, bathing, cleaning, maintaining health and hygiene, raising

⁵ See J Goody, *Production and Reproduction*, a comparative study of the domestic domain, 1976

small livestock and growing food; they assume what can be the time-consuming and dangerous duty of supplying water needs of their households, spending up to 4-5 hours per day burdened under heavy containers and suffering acute physical problems, especially in drought-prone areas.

Dublin principles

In 1992 the important role of women in all aspects of water management was explicitly recognized as one of the four Dublin principles. Since that time gender mainstreaming has been one of the main issues on the agenda of water-related policy discussions – such as the World Water Forums and CSD12 and 13 - and IWRM programmes. Awareness is increasing on the importance of a gender approach in the water sector. In 1999 this resulted, e.g., in the establishment of the Gender and Water Alliance. However, in practice gender issues are often addressed as an afterthought, and continue to be a major challenge in today's water projects.

Access and control

As described before, access and control over land and water resources are often unequally distributed over men and women. Women tend to control those resources that are freely available, while males control resources that are scarce.

In forest societies for example, women's needs can be in direct conflict with those of men due to different access rights. Males control access to trees, while women depend on the gathering of Non-Timber Forest Products (NTFPs) and of fuel wood and water. Women therefore would prioritize conservation of forests, while men may be interested in selling wood to supplement their income.

Generally, when agriculture becomes more industrialised, tasks within the agricultural sector change. In many cases women become less involved in the production, thus losing part of their responsibility and right of income from the crops.

Voice and power

With ownership and decision-making over land, water and livestock remaining predominantly in the male domain, women are often excluded from participation in water and land conservation and development projects, from agricultural extension work and from overall policy-making processes on water and land issues.

Land tenure laws and legal systems often show gender disparities in ownership and rights, distorting women's access to environmental assets in many parts of the world. Legal tenure is important as it influences who can make formal decisions about land use, who is consulted on development plans, and who has access to other supportive services (e.g. credit and extension).

At the same time, women are often active change agents for sustainable resources management, e.g. cleaning up rivers, maintaining watershed areas and raising awareness on environmental issues in communities. Women are the guardians of biodiversity world-wide. They are the majority of the small-scale farmers and responsible for food security and water supply for their families and communities. Therefore, they are most concerned, committed and knowledgeable about the natural resources on which they depend. To ensure their knowledge and skills are effectively used in land and water conservation and management, the active involvement of women in decision-making processes is a prerequisite.

Impacts and benefits

Land and water-related policies and plans often have gender-differentiated impacts. Interventions can disproportionately affect women by increasing their workloads, or making it impossible to fulfil the basic needs of the household. Women for example cope with disproportionate economic and social impacts from dam construction. Dam construction often comes with land expropriation or land and water privatisation. This restricts the access of communities directly depended on them to water and land resources, and forces women to walk further for collect water. Similarly, women face a higher exposure to water-borne diseases and pollution, since they are in regular contact with poor-quality water, as has been the case with arsenic-infused well water in Bangladesh. Seventy percent of the world's blind are women, who have been infected, directly or through their children with trachoma.

In the same way, the privatization of water resources and water services has been severely questioned because of its impacts on water availability, quality and affordability for the poorest sections of society, and women in particular. When (clean) water is scarce or privatized, people must buy it, frequently without any guarantee of quality. High prices swallow large proportions of family income. Poor women and girls end up with contaminated supplies, and usually girls are the first to leave school. Particularly the gender dimensions in disaster situations, such as flooding, landslides, droughts, are more and better understood these days. The realities in which men and women live make the impact of disasters gender-differentiated. There are gender-based differences in coping with disasters, in disaster preparedness, survival strategies and mitigation. See also the box on the impact of the tsunami in 2005 and the gender dimensions of climate change.

Gender and the tsunami of 2005

It has been widely observed that in many areas women have been disproportionately hit by the tsunami and its after-effects, both in terms of life loss, as loss of means of existence. Many more women than men died in the tsunami. This has several reasons: many women did not know how to swim or to climb in trees (conservative Islamic society does not encourage them to engage in physical activity); women tried to rescue their children and other family members; they were too embarrassed to take off their saris; they were with their children in their homes near the beach (whereas many men were in the field or on sea). This resulted in major demographic changes: in Aceh for instance, more than 75 per cent of those who died were women, resulting in a male-female ratio of 3:1 among the survivors.

Existing gender related power inequalities in the coastal regions have, in many respects, been exacerbated by the tsunami disaster: e.g. in terms of tenure arrangements, access to resources, credit and aid. The tsunami increased the vulnerability and unequal position of women: as many mothers died, problems arose with infant mortality; 'scarcity' of women results in early marriage of girls; neglect of girls' education; sexual assault especially of women who lost their home and live in transition camps (where there is often a lack of privacy in the latrines for example); trafficking in women; etc.

Many women in the affected villages play an important role in the household, but also in small-scale fish processing, livestock rearing, vegetables growing and as fish -, food - or handicraft vendors for example. Much of their work is unpaid and therefore neglected or underestimated as an essential part of the families income. The immediate plans of most governments and other aid in the affected areas were directed at rebuilding the fisheries (compensating for the loss of boats and cages etc) with financial help reaching the men, and with minimal help to assist women in rebuilding their livelihoods (e.g. support for post-harvest activities). However, women's contributions are very important for rehabilitation activities. They possess essential knowledge and skills related to local natural resources management. There have been reports that some women have emerged stronger than men in the tsunami aftermath, taking up the responsibility of rebuilding their lives and the ones of family members.

Gender aspects of climate change

Global climate change is expected to have serious impacts on the world's natural resources and the livelihoods of those who depend on them. Climate related disasters and increasing climate variability force people to adapt. Gender is an important factor in climate change debates and particularly in adaptation to climate change. The relation between gender and climate change can in simple terms be described as follows:

1. The poor are most vulnerable to climatic changes and have the least capacity to adapt. As 70% of the poor is female, women will suffer disproportionately.
2. Women are disproportionately affected by diseases and disasters, both as persons as well as in their capacity as caretakers of family members;
 - Climate change will have major impacts on subsistence agriculture, because it has a relatively high dependence on natural endowments;
 - Climate change will have a major impact on water availability. Since domestic water use does not tend to get priority (yet) over others forms of water use (irrigation, large scale hydro, etc.), women will be disproportionately affected;
 - Climate change will cause an increase in malaria, and women are particularly vulnerable to malaria. Also, pregnant women are more vulnerable to diseases in general, and climate change will increase the occurrence of diseases;
 - The same goes for disasters: women tend to be less protected, and therefore will suffer more from the predicted increase in weather-related disasters.
3. Women play a much more important role in domestic water provision, subsistence agriculture, post-disaster management. They have a lot of practical knowledge about sustainable, small-scale land and water use, as well as of disaster management. This presents an opportunity as well as a risk:
 - Women have knowledge that has not been explored yet, and not translated into policies. This knowledge is a non recognised source of innovative ideas that will potentially increase adaptive capacities on local as well as national levels;
 - Current policy processes lack participation by women. Therefore, these processes neglect a potential source of innovative knowledge. At the same time, by not taking the potential and needs of women into account, they threaten to increase women's vulnerability to climate change, and decrease their adaptive capacities, e.g. by focusing on large-scale, high-tech and centralised 'solutions' that do not allow female participation in management and implementation.

2. Case examples on addressing gender in NRM

*Gender inequity in watershed in AR.Roppam village, Andhra Pradesh, India**

* for the full case study see www.bothends.org, or contact Hilda Coelho, crsdorg@sancharnet.in, CRSD, India

Gender issues in the Rayalaseema Watershed

A.R.Roppam village is located in the Rayalaseema Watershed in the Anantapur district, in the state of Andhra Pradesh, India. Anantapur district has one of the lowest incidences of rainfall in the entire Indian Sub-Continent. The district is in the heart of the Famine Zone with an exceedingly light rainfall, poor soils and precarious irrigation sources. The boundaries of the Rayalaseema watershed overlap with the boundaries of the state of Andhra Pradesh and Karnataka. In A.R.Roppam village, around 300 families possess 560 acres of individual lands and also 110 acres of common lands. Scheduled Caste and Backward Caste families outnumber the upper caste families.

Before the Centre for Rural Studies and Development (CRSD) became one of the implementing organisations at the field level for the Rayalaseema Watershed Development Programme (RWDP) in 1994, gender inequity was large.

Illiteracy amongst women was 95%. They worked as agricultural labourers for a pittance – Rs10/- per day while their men received Rs. 30/- per day. The women had no assets in their name except the few dalit women who owned houses given by the government. Only four women owned land. They also owned a few grams of gold, which their maternal homes gave them during marriage. There were eight women-headed households.

Early marriage for girls, i.e., at the age of 11 years or at puberty was the norm. Girls discontinued school after VI or VII grade. Many children had dropped out of school. The girls had less food and eat mainly millets, and a sauce with eggplant, tomatoes and lots of chillies.

Fuel wood was available about one kilometre away in the nearby reserve forest. Women had to spend three hours to fetch firewood enough for three days. The village is tucked away in a valley and is surrounded by hills and hillocks. There is no surface water at all - no lake or ponds.

Though women were skilled in sowing, weeding and thrashing paddy, they had only a few days of employment, as the lands with irrigation facilities were a meagre 34 acres. The remaining land was dry land. Four women knew how to make leaf plates which they sold the leaf plates in bundles in the nearby town and made a paltry sum.

Domestic violence was common. In fact, one single woman was tied to a tree and beaten up for adultery in 1993. The general health condition of women and children was low. Superstitions and ignorance around pregnancy and delivery existed. The nearest health care sub centre was 7 kms away. Women did double labour, they worked in the house - cooking, cleaning, washing clothes, caring for the sick and young ones; and worked long hours in the fields. So, they were chronically tired and under weight. Women are responsible to fetch drinking water from the government owned hand pumps installed in the village. As they were married off very young, by the time they were in their thirties, they looked aged. Women had no decision making power on how to spend their earnings, nor the crop to be grown, and for that matter, no decision

making power on most matters affecting their lives. Women were never organized and no voluntary organization earlier had even worked with them.

It was clear to CRSD that these gender inequity issues needed to be addressed in the water programme. They focused specifically on the empowerment of women and the dalit. See for an elaboration on their specific activities to address these issues also chapter 3.

Addressing these gender issues

CRSD translated the intention of incorporating gender issues into the watershed programme into clearly defined policy and programme inputs:

- a) Employing a women coordinator along with the male coordinator for ensuring women's participation.
- b) Having an equal representation of men and women on all the working committees.
- c) Involvement of women staff in all the training programmes.
- d) Trying hard to incorporate the gender perspective in all the training programmes.
- e) Payment of equal wages to both men and women.
- f) Working out benefits for the landless and single women.

From the beginning CRSD viewed self-help groups as an essential building block through which women would be incorporated into the programme. During the first initial nine months of the watershed implementation, several meetings, exposures and trainings were conducted which helped to form self-help groups among backward castes women. As an entry point to organising them, thrift and credit activity was started in these groups. This proved a good strategy as women met regularly almost once a week. During these meeting many other issues could also be discussed. Five self-help groups have been formed.

To make things easier and accurate for grassroots organizations and field workers, five areas for monitoring of performance were collectively selected, of which Women's Empowerment was one. See below the monitoring criteria.

| | |
|----------|--|
| 5 | Women empowerment |
| 5.1 | <i>Leadership in institutions like committees & positions (%)</i> |
| | <i>a. Village level</i> |
| | <i>b. Mandal level</i> |
| | <i>c. District level</i> |
| | <i>d. Region level</i> |
| 5.2 | <i>Increase in Annual income (C.P.R. and other income generating activities)</i> |
| 5.3 | <i>Reduction in work load (hours in a day)</i> |
| | <i>a. Getting of water</i> |
| | <i>b. Getting of fuel</i> |
| | <i>c. Getting of fodder</i> |
| | <i>d. Family related works</i> |
| | <i>1. Cooking</i> |
| | <i>2. Cleaning of house</i> |
| | <i>3. Cleaning of mulch animals</i> |
| | <i>4. Feeding of animals</i> |
| | <i>5. Cleaning cattle sheds etc</i> |
| | <i>6. Bathing & cleaning of children</i> |
| | <i>7. Cleaning of utensils</i> |
| | <i>8. Washing of cloths</i> |
| 5.4 | <i>Participation of males in female activities (% of families)</i> |
| | <i>1. Cooking</i> |
| | <i>2. Cleaning of house</i> |
| | <i>3. Cleaning of mulch animals</i> |

| | |
|--|--|
| | <i>4. Feeding of animals</i> |
| | <i>5. Cleaning cattle sheds etc</i> |
| | <i>6. Bathing & cleaning of children</i> |
| | <i>7. Cleaning of utensils</i> |
| | <i>8. Washing of cloths</i> |

Also, much focus was put on skills development and exposure visits. In all the trainings conducted and visits planned, the involvement of women is more than 50%. This has helped to develop their understanding on the watershed issues and has enhanced their capacity to articulate. Thus their participation in the committee has improved qualitatively. Training women separately on women's issues and on the strategies to tackle them along with women leaders from other clusters of villages, leadership skills were developed in many women including single and dalit women. It was at the separate technical skills training that women participated actively in an enabling environment.

Finally, CRSD addressed gender inequity issues directly by ensuring men and women were paid equal wages and the benefits of the programme were equally shared among the men and women. Landless women could also participate in a land lease option to teach women organic farming and ensure food security.

Though the activities faced many challenges and convincing the men, it has been very successful. Women became leaders who could articulate well about their issues and demand for their rights, as seen in seeking equal wage and loans from the government. Also, women and girls became responsible for maintaining the hand pumps. And as they now also own sheep, goats and buffaloes and can access loans they are more respected in their families. The community has come to a considerable degree of acceptance of the values of the programme, such as equal contribution towards the works done and payment of equal wages for men and women, and a significant degree of acceptance of women taking initiative in doing what was previously considered a man's domain.

The main lessons to be learned from the perspective of CRSD are:

- Traditionally men are seen as farmers and targeted as such. Women who are also farmers (but may not own the land) and agricultural workers are usually pushed aside. This programme shows the possibility to recognize and integrate women's skills, knowledge and abilities into mainstream watershed development. Managing commons and establishing rights for landless is possible if the Project Implementing Agency chooses to do so and is committed to ensuring equity for deprived sections of society.
- A clear gender policy is essential to guide a watershed programme.
- Developing women's leadership as a strategy ensures enhanced participation of women in non-conventional areas of intervention.
- Effective representation of women in all committees can be ensured by training and increasing their numbers. Separate women's organizations to strategise on attaining due entitlements and to support women in Watershed Committees will increase their efficacy.
- Caste representation in committees has proved a useful strategy to involve people from all communities.
- Process documentation is an important part of implementation especially when we are talking about development models and sharing experiences.
- Selecting a few clear indicators for monitoring ensures accuracy and is more practical for grassroots organizations.

*Women and Control over Forests in Asunafo, Ghana**

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Introduction

The forest reserves in Asunafo district, Brong Ahafo region of Ghana consist of six forests measuring a total of 800 km² and each reserve is the origin of a river. The reserve is managed by the forest service, which develops the management plans and issues and monitors logging concessions to wood companies. The forest service works within the context of the national government that by law aims for sustainable exploitation of the natural resources of Ghana, either its forests or its mining resources. In practice illegal exploitation is widespread. Of importance is that Brong Ahafo is a hierarchical and male dominated society. Chiefs traditionally have a strong position in communities and still exert control over access to forests. Households tend to be male dominated, as the cultivation, processing and marketing of the dominant cash crop cocoa is a male activity. Young males threaten the forest reserves as they supplement their income by hunting for bush meat by using bushfires. Women aim for protection of forest resources as they use the reserves in Asunafo as a source of Non-Timber-Forest Products (NTFPs), fuel wood and water.

Gender equity in Community Forest Committees

The 1994 Ghana Forest Law created conditions for sustainable management of the remaining forest and gave the communities a role in its management. The Department for International development (DFID) supported the Ghanaian government in establishing conditions for community involvement. From 1998 the NGO Rudeya assists communities living in the support zone of the reserve in establishing community forest committees (CFC's) that should assist the forest service in forest management. Rudeya aims for gender equality in the CFC's, by aiming for equal representation of women and by supporting women interests in resource management. This is considered important as women in Brong Ahafo culture lack confidence to express themselves in the presence of men, also at village level. From 2002 Rudeya established 50 CFC's in the villages around the reserves of Asunafo. The CFC's assist the forest service in bush fire prevention, agroforestry and should formally be consulted in decisions to log trees. They formally have a right in part of the revenues that are obtained by the logging firms. Payment should be regulated in the social responsibility contracts (SRC's), which should be agreed between the logging firms and the individual villages. The 50 CFC's supported by Rudeya consist of seven members each. Thanks to Rudeya's gender policy half of these 350 members are women, as well as ten of the fifty chairpersons. Rudeya assists women in defending their particular interests in the CFC's. Women oppose logging as this limits their access to NTFPs, while they insufficiently benefit from logging revenues. Women are also concerned to protect the rivers as these provide water for drinking, cooking, bathing and washing clothes. The women in the CFC's try to ensure that other women do not clear vegetation and farm close to the rivers. The women in the CFC's also try to protect the river by planting trees along its borders. Women in the CFC's also aim for SRC's to be used for social purposes, like schools, and not for individual purposes, like football fields.

In practice, women interests are difficult to pursue, as the CFC's appear to have limited influence. In practice only nine SRC's are concluded between a logger and a CFC, out of a potential of 50 SRC's. The CFC's lack legal backing and the decision-making arena's on forests are not easy to influence. This is certainly true for the forest service, which is bureaucratic and often unwilling to recognise the

input of CFC's. Sometimes they are corrupt and connive with village chiefs and logging firms to practice illegal logging. This limits the influence of women on forest management. This certainly applies for higher administrative levels, such as the district forest forum and district council (see below)

In the villages Rudeya also trains women and female CFC members in domesticating NTFPs. The reserve is used by women and youths to gather for example snails or mushrooms. In the past snails were in abundance. Matured and big ones were collected leaving the juveniles for the next harvesting season. Presently, due to deforestation and over exploitation, snails are only found deep in the forest and domestication is an alternative. In total 220 people were trained of which 44 in snail farming and 43 in mushroom cultivation. Rudeya supports 27 women and 17 men in snail farming. Women manage their snail farms better than man, but they produce on a smaller scale and more destined for household consumption.

Gender equity at higher administrative levels

The 50 CFC's could influence management of the forest reserve in Asunafo via its District Forest Forum (DFF). This is supposed to be a neutral venue for forest stakeholders (like the forest service, the CFC's but also Rudeya) to discuss issues of forest management. Formally the DFF has to ensure that the forest service is actually working in line with its policy guidelines and responds to illegal forest use. The CFC's feed the DFF with necessary information on the forest reserves. The DFF in its turn builds the capacity of the CFC's by organising training workshops on issues like forest law, Social Responsibility Contracts and lobby. It ensures that the forest service assists the communities during SRC-negotiations. Rudeya aims for gender balance also in the DFF. The DFF of Asunafo is chaired by the Queen mother of the district capital of Asunafo (Goaso). Rudeya sensitised the other stakeholder of the DFF to increase women representation. As a result the number of women has increased from an initial 5 to 15, out of a total of 45. Also in the DFF the women have special interests, like protection of watersheds and household food security. But also in this arena gender goals are not easy to achieve. The CFC's are only one of the stakeholders, have only advisory or attentive powers, and are unable to make demand towards the ministry or start court cases. This means that gender interests are diffused and not articulated properly.

The same can be said for the District Council of Asunafo, which is the highest government body at district level. Some of its members are democratically elected and others appointed by the President of the republic of Ghana. Members are representatives of private enterprise (including logging industry), the chiefs, mostly of the cities and a limited number of representatives of the villages in the countryside. The district council decides on the use of revenues in the district, including use of national revenues and revenues from local logging. Most power is in the hands of the district capital and of a coalition of private enterprise and central government bodies. The villages in the periphery have little influence, as well as the women in the CFC's coming from these regions. Rudeya has set some important first steps towards gender balance in forest management in Osunafo district, especially by a fair representation of women in the CFC's en DFF. A vital next step is strengthening the position of the CFC's and the DFF towards the forest service and the District Council of Osunafo.

*Mainstreaming gender issues in community based seed production in India**

* for the full case study see www.bothends.org, or contact R. Murali, convenor@fansasia.net, MARI, India

Introduction

Modern Architects for Rural India (MARI) is a grassroots NGO, active in the area of Sustainable Agriculture, which focuses on facilitation of local self-reliance with regard to seed production, soil fertility and pest management in Andhra Pradesh, India. The organisation has started community-based seed production in 2001 in recognition of the fact that seed is a critical input in agriculture.

Warangal is one of the prominent districts in Andhra Pradesh. Almost two-thirds of population in the district is primarily dependent on dry-land agriculture. About 85 percent of the cultivators in the district are small and marginal farmers (< 2ha). Since 1998 there is a spurt in farmers' suicide deaths in the district, as a result of a deepening crisis in the agriculture sector. With the advent of green revolution, government aggressively promoted high yielding varieties and hybrid seeds as a package for achieving national food security. In Warangal District commercial crops (cotton, chillies) have grown from 2 percent (1970-71) to 40 percent (2003-04) while the food crop area has dropped from 92.60 percent to 42.58 percent during the same period⁶. Food security of the family got eroded leaving the women and children worst hit by malnutrition. This has led to disempowerment of women. Their knowledge and skills became irrelevant in the changed context, as procurement of seed from the market and deciding on which crops to be grown has become pre-dominantly a men's role. Consequently, the tasks of women were reduced to mere farm labour.

Role of women in community-based seed production initiative

Traditionally, women used to play an important role in seed selection and management. Women were responsible for taking care of farm-saved seed, selection, cleaning and processing of seed, drying at regular intervals, and storing. This traditional system ensured adequate power and space for women in deciding the cropping pattern of their family land holdings.

MARI developed a policy aimed to restore control over seed and agriculture production to women, and improve the household food security. As a first step, a Seed Growers' Association (SGA) was formed in fifty villages, with particular emphasis on women in order to reduce dependency on seed companies. The women who were already organized as Self Help Groups (SHG) for running thrift and credit activities and who were also adopting non-chemical practices of pest management were consciously selected and organized into cohesive village group for taking up activities of their own seed production. They undertook a problem analysis, looking into the demand for crops and varieties in the village, seed varieties available within the village (amongst fellow farmers) and gender concerns. Conscious effort was made to recognise and address the needs and aspirations of women farmers. This resulted in developing a crop season plan for seed production.

The seed production process started with the selection of men and women farmers by the SGA. The selected farmers were then supported with foundation/breeder seed to be used for 2-3 years depending on the performance of the seed. The crops covered under the community seed production were cereals (paddy), Millets (Sorghum and minor millets), pulses (Pigeonpea, black

⁶ Debt and Deep Well – report on farmers suicide deaths published by MARI 2000

gram, green gram, etc.) and oil seeds (castor, sesame and groundnut). During the crop season SHG members and farmers from surrounding villages were taken to the seed production plots. This helped the farmers to directly see the health and performance of the crops before making a decision on buying them. It also facilitated networking between seed producer and other farmers in the area and thereby the marketing of seeds. The seed producer will directly sell the seed to farmers.

Mixed versus women's Seed Growers Associations

MARI started in two villages: in Choutapally in 2001 where the SGA was formed with men and women, and in Kambalakunta Thanda in 2003. In this lambada tribal village the existing women's group was quite strong and asserted themselves to take up the seed production activity. As the men's thinking was much dominated by hybrid commercial crops they didn't take much interest in SGA, which was primarily aiming at food crops. Thus the association in Kambalakunta Thanda was formed only with women. In the Choutapally village the male farmers who were motivated to collectively take up Natural Pest Management work had also taken keen interest to take up seed production work. In this case, a woman was selected as leader to ensure women involvement in decision-making.

The difference noted in the functioning of the two groups was that the exclusive women's group was more cohesive, disciplined in SGA functioning and systematic in carrying out the production operations suggested by the project staff. The focus of this group was more on self-reliance and expansion of food crops production in their tribal habitations. Comparatively however the acceptance and purchase of seed from the mixed SGA is better than the exclusive women SGA. Partly this was also because a mixed SGA was focusing on heterogeneous villages while the women SGA was focusing on the tribal population which limited the marketing opportunities. In general, the mixed group demonstrated much higher strength in approaching the Government, research stations for foundation and breeder seed and could also reach out to much wider area in marketing the seeds. They could clearly understand the business opportunity for them in the seed production. But there were also conflicts and issues around domination of a few male farmers. Comparatively the acceptance and purchase of seed from mixed SGA is better than the exclusive women SGA.

Results

The SGA's gained the knowledge and means to save the communities from the mono-cropping of cotton and chillies. Women have developed the knowledge and leadership capacities, and regained their control over seeds and in deciding the cropping pattern. The seed production association has improved the local availability of seeds of diversified food crops, which restored the crop diversity and food security of small & marginal farmers. Women seed growers have made a remarkable contribution in reducing the market exploitation and improving the self-sufficiency of farmers with respect to seed.

They were also able to produce and supply in time quality seed to the small and marginal farmers. The farmers are able to procure seeds at lower costs than the price prevailing in the market⁷. In other words, the scope for exploitation by traders is reduced, as farmers can buy seed from their own local production society with credit support of SHG. On the whole, cumulatively about 4034 farmers have benefited from this project and 10247 acres area has been sown with seed (paddy, groundnut, black gram, sesame, red gram, cowpea, green

⁷ They can afford this, since they do not have operational costs unlike traders and companies

gram and vegetables) produced by the community SGAs. There is also mutual trust among the farmers and seed suppliers, as the farmers select seed by observing the health and performance of the crop in the field during the crop season.

The SGAs in Kambalakunta Thanda and Choutapally villages are now able to sustain and grow their seed production operations with advisory support and guidance of MARI. They are acting as learning centres for others. In 2005-06 MARI moved to four new villages (Himmatnagar, Uppugal, Tammadapalli (G), Kunoor) where 80 women have initiated seed production activities with the financial support from the Government of Andhra Pradesh. This initiative is under the supervision of the local village organizations of women self help groups.

*Asserting gender justice of Adivasi women in Andhra Pradesh, India**

* for the full case study see www.bothends.org, or contact Bhanu Kalluri, bhanu_kalluri@yahoo.co.uk, Samata, India, <http://www.samataindia.org>

Introduction

The adivasis are a culturally unique indigenous population in India living in remote forest and hill areas. Andhra Pradesh is one of the states in South India which has a large adivasi population. The social justice organisation Samata works for the advocacy of adivasi rights and for the protection of the ecology of the Eastern Ghats hills in Andhra Pradesh. Initially, it started as a grass-roots social action group in 1987 in a small adivasi village and emerged as a larger advocacy and support organisation for tribal rights in India by 1997.

Threat

Rallavalasa village lies in the Visakhapatnam district in Andhra Pradesh. Until 1992, Rallavalasa was a tranquil adivasi village, when the community was served eviction notices on their lands. The village was merely informed that a big company was going to mine for calcite ore from under their fields. The Indian Rayon and Industries, a company with large operations in India and outside in the extractive industries, was given a lease of 120 acres near Rallavalasa village. Further, a 22 km stretch road cutting across thick forest and farmers' lands was undertaken by the government purportedly for the 'public' but with the objective of providing facility to the company for transport of ore by truckloads from the mine site to the processing plant 100 kms away near the sea. In the neighbouring area of Borra panchayat, their relatives of Rallavalasa were already facing serious problems from mining contractors who had grabbed the adivasis' lands and forced them to work as daily wage labour in their own lands. Adivasi women and children were invisibly working for low wages and were constantly vulnerable to the atrocities of mine contractors.

The women of Rallavalasa started to protest against the lease and asked Samata to assist them in their struggle. The women of Rallavalasa played a key role. They were instinctively aware that they would not get any jobs as their skills lay in tilling the land and harnessing the forest wealth. They understood that once they lost the lands, their communities would have to migrate, disintegrate and lose their security of food and shelter, their culture and social safety. The main occupations of the adivasi people are shifting cultivation (which is now reduced to settled cultivation in most places) and collection of forest produce. Socially, the adivasi communities live in cohesion with their traditions and although patriarchal in nature, provide larger spaces for women to participate in decision-making and economic activities as compared to mainstream Indian women. Agriculture is primarily for subsistence and consists of a wide variety of traditional food grains

while the forest produce collected is sold in the weekly markets and the cash is used for purchasing items of domestic requirements not grown by them.

In 1993, Samata put a team of activists to work in the villages with the local communities in building a strong movement. They worked through the women's groups (sanghams), which worked together in planning public demonstrations, roadblocks and other protests. Women, more than men, were eager to start a battle for their lands as they wanted their traditional livelihood of cultivating food for their families and break out of the ordeal of breaking stones for the contractors. Some of the women went right ahead building their new houses in the lands proposed to be bulldozed and dared the government and the company to prevent her. Women also put up a tight vigil in Rallavalasa village by setting up a roadblock, rushing with axes and chilly powder at the sound of a vehicle.

This battle was waged for four long years from 1993 to 1997 by the adivasi women while Samata mobilized extensive public opinion and support through adivasi students' unions, employees unions, local community based organisations and local media. Samata's work in building linkages with the larger media, human rights networks and the legal battle at the local courts and the High Court of Andhra Pradesh helped strengthen the people's movement

One of the important instruments in the legal battle was the unearthing of project information under question in the courts, which reflected the blatant violations that corporates adopt in the confidence of people's ignorance. It was evident that the company had occupied larger areas than legally sanctioned. For example, the permission for construction of road was only for 45 feet width, whereas a 90 feet wide road was constructed by encroaching on people's lands. The Environment Impact Assessment report of the company, which is mandatory under the Environment Protection Act of India, was produced only for the processing plant and not for the mine site but the mine related activities at the extraction site were underway with full government support without fulfilling these mandatory requirements

The women fought the mining companies and physically prevented them from occupying their lands for four years until the historic legal victory in the Supreme Court of India, the Samatha Judgement, was delivered in July 1997. It upheld Samata's argument that the mining leases granted by the government were illegal as they were in contravention of the Constitution and that transfer of lands by way of lease to mining companies was against the Fifth Schedule of the Indian Constitution.

A very important victory for Samata was the negotiation with the government in the compensation value for those families who had lost their lands for the road. From a mere Rs.1,500, the government finally provided a compensation of Rs.1,50,000 (a clear leap from 30 Euros to 3000 Euros) for each acre and this has set a precedent on rehabilitation costs of land compensation for future projects of any kind in the adivasi lands.

*Access to water changes the position of women of the Quebrada Grande Community, Costa Rica**

* for the full case study see www.bothends.org, or contact Haydée Rodriguez, hrodriguez@arca.co.cr, FANCA, Costa Rica

In 2000, women of the community of Quebrada Grande, in northern Costa Rica, began their meetings. As they say, that space "was an opportunity to talk about ourselves, as women, about things that one does not speak about in front of anyone."

Today no one remembers the exact reason for the first meeting, but what all women do know is that there was a need to create a space "by women and for women" because although many of them participated in other community organizations, their role was weak. While conducting these first meetings, an opportunity arose in late 2000 to organize the group in a formal way to be able access the National Learning Institute's (INA) resources available for groups of women carrying out productive activities.

In 2001, the women of Quebrada Grande successfully organized to qualify for INA support which allowed them to start with a project for production and marketing of tilapia fish. In the process they faced great obstacles, a lot of them linked to the unequal relations of power between men and women. For example, their husbands (or partners) did not want to accept this project for fear that they would neglect household tasks and the care of their children. However, the men in the community gradually changed their minds because women demonstrated it is possible to carry out all their activities without neglecting any of them.

Their capacity of organization allowed them to establish relations with organizations such as the Institute of Agrarian Development (IDA), National Learning Institute (INA), the Ministry of Agriculture (MAG), the National Association of Indigenous (ACICAFOC), and environmental NGOs. These relationships have transformed in economic benefits, and have served to make visible the possibilities of the Association to attract organizations and institutions to the community as a strategy for improving their living conditions. This ability to build bridges with agents outside the community contributed to the perception that the Association and the women that are part of it are effective in their activities.

Specifically, the main activities carried out by the Association are raising, processing and marketing tilapia fish, restaurant services and recreational spaces for national and international tourism. Existing infrastructure includes four tanks for rearing tilapia, a lounge / restaurant and a small plant for cleaning and packing tilapia.

The experience of the Association has clearly changed the position of the women. They now think and act as one of the political actors of the community, and they have shown the ability to create extra-territorial networks. Since the association is constituted according to the law, women members are now involved as legitimate and powerful actors in the process of negotiating with the government about the property rights over the land where they live and have their business. They are now seen as women leaders, key stakeholders and productive members of the community. As a result of this long process, they are no longer afraid to participate and be heard as decision makers in the community.

In Quebrada Grande there have been no conflicts over the use of water. The water used for production of tilapia is taken and managed directly by the Association from a source located in the Wildlife Refuge of Quebrada Grande (a community reserve of 119 ha) which is in process of being recognized formally in an Executive Order by the Ministry of Environment, Energy and Telecommunications (MINAET). The main concern of the Association is focused on preserving not only the quantity but especially the quality of this resource for their operations.

This is an important case that shows the relationship between access to water for productive purposes, and women's position in the community. Access to clean water for a productive project became the generator of large benefits in terms of a general shift in the perception of men of women's work, and the recognition of the political and organizational capacities of women, as well as a clear contribution to community and household welfare.

3. Gender mainstreaming in water and land use

In relation to natural resources management, gender mainstreaming means taking into account the differences in rights and responsibilities of men and women in water management and land use, empowering women in decision making structures at all levels, and assessing policies on their impacts and benefits for different social groups, poor-rich, urban-rural, men-women.

A widely excepted approach towards gender mainstreaming is the so-called 'two-track' approach. On one hand it is important to integrate gender concerns into your regular work and activities on natural resources management. At the same time, specific attention should be directed to empower women and strengthen their position directly.

This can also be seen in the examples described in this paper. They all address gender inequity issues in their water management approaches or forestry management, but at the same time put efforts in empowering the women by forming self-help groups or organising specific training or skill development for women and girls.

Though gender mainstreaming is highly context specific and a dynamic process, one can distinguish some main elements needed to consciously address gender issues in water and land use activities. Water and land use practitioners should at least:

1. Start by carrying out a comprehensive gender analysis

Take the time and get in the resources and expertise to first do a proper analysis of the gender relations in the households, community or region you work in (differentiated access and control over resources; decision-making structures, legal/institutional/customary laws and regulations at local and national levels; policies, investments and interventions that have a negative effect on gender equity on the ground etc). Only when a proper analysis is done, appropriate answers can be found.

Gender analysis?

A gender analysis is a systematic methodology that provides an understanding of the relationships between men and women, in terms of activities, access to resources and control over resources and benefits and constraints and opportunities they face relative to each other. It helps to clarify the specific and often different capacities, needs, vulnerabilities and coping-strategies of men and women. Established patterns of gender inequality should be explored, exposed and addressed.

Gender analysis implies:

- assessment of the roles and needs of women and men, including gender-based labour division
- understanding gender-differentiated systems for access to resources, labour, uses, rights, and the distribution of benefits and products
- focusing on gender relations, not just on women (looking at differences, inequalities, power imbalances, differential access to resources between women and men)
- knowing that gender is a factor that influences how people respond both individually and collectively
- perceiving the gender dimensions of institutions at all levels of society
- in each context, ideally using participatory methodologies

A number of tools to do a gender analysis can be found in the next chapter.

A gender analysis usually includes:

- A stakeholder analysis: who are the stakeholder, i.e. who are the resource users, who is or should be involved, who benefits, who is impacted, (this can include the environment as a 'stakeholder'?)
 - Resources use analysis: what are the resources in your area of operation (or outside which influence the resources in the area), i.e. surface -, ground -, saline -, wastewater, land, commons; how much resources are used and for what purposes (domestic water use, subsistence farming, export etc); how are the resources divided/allocated over the users?
 - Power analysis: ways and strategies to formally & informally access and control natural resources, power relations at household, community or higher levels, spheres of influence, decision-making structures, role of culture and religion, etc.
2. Make use of this analysis in design, implementation and monitoring of water and land use projects, programmes and activities. Explicitly address the (gender) inequity issues, i.e. by ensuring involvement of all stakeholder groups (men and women of different age groups and classes) through a facilitated dialogue process from the start; ensuring equal access to benefits of the project or activity; ensuring equal wages. See also annex 1 for a checklist for gender sensitive projects. Developing gender specific indicators can help to monitor progress.
 3. Empower the marginalized social group (e.g. the women or the indigenous group) directly, i.e. by creating self-help groups, networking, training, skill development, etc, etc.
 4. Involve (local) social/gender experts or women's groups in projects and programmes from the design stage. Gender experts and women's groups have crucial expertise on ways to address gender inequality. At the same time, gender experts sometimes may speak a different 'language' than practitioners in the field, using jargon or terms or tools which are too abstract for practitioners. It is therefore important to work together for a longer period, understand each other and find a common language.
 5. Lobby at political levels for the right environment for social changes and achieving equity.

Conditions for success of gender mainstreaming

(Seagar & Hartmann, 2005)

- (1) An institutional culture that is open to gender perspectives, and willing to undertake self-assessment necessary to overcome obstacles for mainstreaming gender perspectives.
- (2) Gender-mainstreaming identified as a cross-cutting responsibility
- (3) Gender mainstreaming is understood as a continuous, fluid, and evolving responsibility.
- (4) Careful and consistent use of available gender-differentiated data, indicators and analysis, and deployment of adequate resources to support the collection of these.

Annex 1: Relevant organizations and websites

Useful websites

- <http://www.un.org/womenwatch/daw/cedaw/>: Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)
- www.eldis.org/gender/: Eldis aims to share the best in development, policy, practice and research.
- <http://www.siyanda.org/>: Siyanda is an on-line database of *gender and development materials* from around the world. It is also an *interactive space* where gender practitioners can share ideas, experiences and resources.

Relevant European and international organizations and networks

- ATN (African Trade Network) – twnafrica.org/atn.asp
- APRODEV (Association of Council Churches related Development Organisation in Europe) – e.g. gender and trade - www.aprodev.net
- APWLD (Asia Pacific Forum in Women, Law and Development) - <http://www.apwld.org/>
- AWID (Association for Women's rights in Development) – <http://www.awid.org/>
- ENERGIA – international network on gender and sustainable energy – <http://www.energia.org/>
- FEMNET (African Women's Development and Communication Network) - www.femnet.or.ke
- Gender Action – www.genderaction.org
- Gender and Water Alliance – www.genderandwateralliance.org
- GENTA (gender and trade network), active in Africa
- IGTN (International Gender and Trade Network) – <http://www.igtn.org/>
- IUCN– <http://www.genderandenvironment.org/>
- Mama Cash – independent financial fund for women – <http://www.mamacash.nl/>
- UNIFEM (UN Development Fund for Women) – <http://www.unifem.org/>
- WECF (Women in Europe for a Common Future) – www.wecf.org
- WEDO (Women's Environment and Development Organisation) advocacy on trade, globalization and sustainable development policies – <http://www.wedo.org/>
- WEN (Women's Environmental Network) UK – www.wen.org
- WfWfW (Women for Water Partnership) - www.womenforwater.org
- WIDE (Women in Development Europe network) – www.wide.org
- WILPF (Women's International League for Peace and Freedom) – <http://www.wilpf.org/>
- WIN (Women's International Network) – www.feminist.com/win.htm
- WOCAN (Women Organizing for Change in Agriculture and Natural Resource Management) <http://www.wocan.org/>
- ZARD, Zambia Trade Network

Annex 2: Gender concepts and definitions

| | |
|--|--|
| <p>Gender</p> | <p>Gender refers to the roles and responsibilities of men and women that are created in our families, societies and cultures. Gender roles and expectations are learned; they can change over time and vary within cultures. It is not biologically pre-determined or fixed forever.</p> <p>The concept of gender includes the expectations about the characteristics, likely behaviours and aptitudes of men and women, boys and girls (femininity and masculinity).</p> <p>Systems of social differentiation such as political status, class, ethnicity, wealth, age, physical and mental ability etc. modify gender roles. When applied to social analysis, the concept of gender reveals the patterns of subordination and domination between women and men.</p> |
| <p>Sex</p> | <p>Sex relates to the biological differences between women and men.</p> |
| <p>Division of Labour</p> | <p>Gender division of labour refers to the areas of work in the household, community, and society allocated or deemed appropriate for women and men, boys and girls.</p> <p>Gender division of labour is specific to particular communities, social groups and periods of time.</p> |
| <p>Productive and reproductive gender roles</p> | <p>Productive role is associated with generating income and contributing to the household and national economy</p> <p>Reproductive role: Biological (child bearing, early nurturing) and household: work related to daily maintaining of the family and household.</p> |
| <p>Community role</p> | <p>Community role involves contributing to (organizing and participating) in social/cultural, civil society and political events and processes.</p> |
| <p>Access to resources</p> | <p>Refers to gender based differentiation of access to productive/social resources such as land, production inputs, technology, credit, markets, income, information, training, education, health services</p> |
| <p>Control of Resources</p> | <p>Control refers to the differential ability to make independent decisions to the use and management of the resources</p> |
| <p>Condition</p> | <p>Condition refers to the differential day-to-day physical/social situation of women's and men's lives</p> |
| <p>Position</p> | <p>Position refers to the differential status and level of influence/power of women and men and of different economic groups</p> |

| | |
|----------------------------|---|
| Practical Needs | Practical needs are the immediate, material needs related to gender roles and individuals that are required for daily living and that can be met through short-term practical solutions |
| Strategic interests | Strategic interests relate to improving the position and equality of disadvantaged societal groups, involving longer-term processes that change restricting laws, policies, structures and attitudes. |
| Gender Equity | <p>Equity is the process of being fair to men and women. To ensure fairness, measures must be put in place to compensate for the historical and social disadvantages that prevent men and women from operating on a level playing field.</p> <p>An equity approach recognizes women's disadvantages and includes pro-active, women-focused measures to increase women's capacity, experience and opportunity – to create a more equal playing field. Equity is a means of achieving equality.</p> |
| Gender Equality | <p>Women and men have equal conditions for realising their full human rights, for contributing to and benefiting from economic, social, cultural and political development.</p> <p>Gender equality refers to equal valuing by society of the similarities and the differences of men and women, and the roles they play. Gender equality is based on women and men being full partners in their home, community and society.</p> |
| Empowerment | Empowerment is a process of building capacity, confidence and experience to exercise greater control over the social, economic and political aspects of one's (or a group's) life |

Annex 3: Gender sensitive projects: a checklist

1) Project objectives explicit on gender

- Do project objectives explicitly refer to men and women?
- Are target beneficiaries been described/analysed according to gender? Have target groups and others directly or indirectly associated with the project identified their own needs, concerns and priorities?

2) Project design based on gender analysis

- Has a gender/livelihoods analysis been carried out, in which data and information has been gathered distinguishing between men and women regarding:
 - o The **gender division of labour** (the roles, views and responsibilities of men and women in use and management of resources, main sources of income and their respective dependency on the ecosystem targeted by the project).
 - o Men and women's **access to and control over resources** ((customary land use rights, tenure, credit, grants)
 - o The **gender based skills and capacities** and other relevant **social, cultural, religious, economic, and demographic factors** and trends (power relations, vulnerability, status)
- Is the project design based on the results of a gender analysis? I.e. does the project build upon women's and men's knowledge and skills, and acknowledge they have different roles, responsibilities, vulnerabilities, needs and priorities?

3) Equal access and control of the benefits and project impacts

- Will men and women have equal access to benefits of the project or will groups of either women or men be disadvantaged (e.g. will it lead to inadequate and unequal access to resources (land, water, information), diminish income earning opportunities, or change socio-economic positions)? If so, are the reasons for this clear and acceptable, and what remedial measures are/can be taken?
- Will women's or men's workloads increase as a result of project involvement?

4) Equal participation and decision making power

- Will women and men have equal access and decision-making power in project planning, consultation and implementation? Are project communication channels equally accessible to both women and men?
- Have constraints to women's and men's participation in project activities been identified? Have strategies been identified to overcome these constraints?
- Will any separate activities be needed for women to ensure that they participate, and that they are not disadvantaged by the project?

5) Availability of gender expertise, capacity and resources

- Is gender expertise available throughout the project?
- Is there an acceptable gender balance in the project team?
- Are there women's groups or other NGOs active in the target area who focus on gender issues?
- Are project resources and the applicant's capacity adequate to ensure that both men and women participate in and benefit from the project?

- Is there a need to increase the capacity of the applicant for gender-sensitive planning and implementation?

6) Adequate project monitoring

- Have targets been set for men's and women's participation and benefits?
- Have gender-sensitive indicators been identified?
- Will all data collected be paying attention to differences between roles and rights of respectively men and women?
- Will there be on-going consultation with community groups, including women's groups, directly or indirectly affected by the project?

Based on/ for further reading:

Australian Agency for International Development, *Land, Environment and Coastal zone management*: <http://www.oecd.org/dataoecd/2/46/1896496.pdf>

Canadian International; Development Agency, *Coastal zone management & equality between women and men*:

[http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/Policy/\\$file/12zones.pdf](http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/Policy/$file/12zones.pdf):

ADB gender checklist Agriculture:

http://www.adb.org/documents/manuals/gender_checklists/:

Annex 4: Gender analysis methods

Harvard Analytical Framework

The Harvard Analytical Framework is a tool to collect data at the community and household level. It has three main components:

1. An activity profile that determines 'who does what?' with sex-disaggregated data which includes gender, age, time spent and location of activities.
2. An access and control profile ('who has access and who controls what?'), which identifies the resources and benefits used to carry out the work in the activity profile and access and control over their use, by sex.
3. An analysis of influencing factors ('how does gender influence the profiles?'), which charts past, present and future factors that influence gender differences in the above two profiles. These can include factors of change or constraints or opportunities that impact women's equal participation and benefits.

See also:

- A Case Book: Gender roles in Development Projects, edited by Overholt, Anderson, Cloud, and Austin (1985, Kumarian Press, West Hartford, Connecticut); or
- <http://www.ilo.org/public/english/region/asro/mdtmanila/training/unit1/harvrdfw.htm>

Gendered resource mapping

Gendered resource mapping is a method of visually presenting who uses, and who has access to and control over different natural resources. These resources may be pastoral lands, water, trees, minerals, plants, and so forth. When working with the community, producing a participatory resource map may take several days or weeks.

The first step in gendered resource mapping is to list the various resources that are present in and around the community, and used by the people. Next, indicate for each resource who has rights of access or ownership. Note that different people can assert different rights over one resource. A single tree in Kenya, for example, may have a male "owner", be cared for by a woman borrowing the land on which the tree is found, provide fruits to her and to another woman who lived on that plot when the tree was planted, and furnish small sticks and other fuel to all in good standing in the community. The map-maker will need to find a way to represent all these different uses and rights on the map.

In the field, key informant interviews, focus groups, transect walks with local women and men, and participant observation may all be used to collect data about the landscape and rights of use and control. Once the information is collected, there are several options for converting it into useful and representative images. Researchers may try to do this on their own, generating diagrams, sketches, and maps based on the data collected from narrative sources and observations. The advantage of doing so is that it may represent the best match of media and skills with informants and researchers. Particularly when informants are elderly or without formal school experience, they may be much more eloquent, and feel more at ease, expressing their ideas verbally rather than visually. This can be true whether they are asked to use paper and pen to create images of their landscapes, or "found" materials such as leaves and pebbles.

Many researchers working in rural areas, however, have preferred to encourage representatives of various resources user groups to develop images themselves. Again, there are decision to be made as to whether or not the researcher should guide the sketching and mapping exercises based on his or her specific interests; whether and when women should be asked to make maps separately from men; and at which scales local images should be created. No matter who is actually doing the drawing, the process can be more or less interactive, depending on the

time available for gathering data and the patience of both researchers and local informants. Maps drawn by researchers on the basis of local interviews and observations, for example, can be brought back of informants for comment, editing, and enhancement. Images produced by various user groups can also serve as a basis for further interviewing. A related method for eliciting and summarizing information about access to and control over features in the landscape is using felt boards and symbols of plants, animals, buildings, and other landscapes features, both built and natural. Using these boards, small groups of men and/or women can recreate the past, explain the present, or create new landscapes.

In creating maps, we have to keep in mind that no single map is "correct" or "final". As social and ecological conditions change, the terms on resource use and management may be renegotiated, necessitating the redrawing of our maps.

Activity profiles and calendars

The development of activity profiles and calendars is closely linked to resource mapping and can be done in sequence. In drawing up activity profiles, one first lists all activities and tasks that women (wives, daughters, grandmothers) and men of those families perform on a typical day. These activities would be elicited from women and men during focus group sessions. Think about roles in the household and the community, and about reproductive (related to child birth and care), productive (labor to produce food, obtain goods, or earn cash), and community (politics, social work, organization) tasks. Next one would list who is responsible for what activity.

Even though one of the sexes may have the final responsibility over a certain (production) sector, another person may take part in manual labor or in decision making. In the Suriname interior, for example, women are the primary responsible for subsistence agricultural production, but men may help decide where a new field will be planted, burn the field, and may occasionally or regularly lend a hand. Drawing up profiles helps understand who does what, who is responsible for what, and if necessary, what are alternatives.

Activity profiles can be turned into calendars by asking when a certain activity is performed. For people not used to thinking in months, one can also work with rainy and dry seasons, or descriptive phrases such as 'when the first rains fall'. The Calendars can be drawn with the community, and have different shapes; as a line, a circle, something with different layers, different colors for activities performed by women and men, etc. An example is provided below.

On gendered resource mapping, activity profiles and other tools see also:

- Slocum, L., L. Wichart, D. Rocheleau and B. Thomas-Slayter. Eds., 1995. *Power, Process and Participation: Tools for Change*. Intermediate Technology Publishers. London, <http://140.232.1.5/~rslocum>

Stakeholders analysis

The goal of a stakeholders analysis is to gain a better understanding of the positions of, and relations between, all persons and institutions that may be directly or indirectly affected by a project or have the power to affect it. The first step in a stakeholders analysis would be to list all stakeholders or people with certain interests in the project. This can occur through key informant interviews and group interviews.

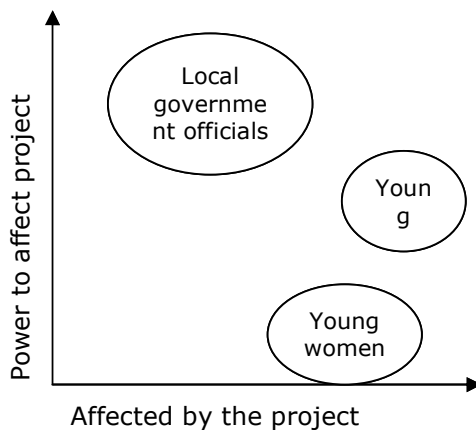
Next one would try to establish connections between these people and define their level of interest. This may be done in different ways. In might use matrixes, diagrams, graphs, or descriptions (see examples below), In ranking or ordering

the stakeholders in some sort of model, it is useful to use index cards or pieces of paper that can be physically moved.

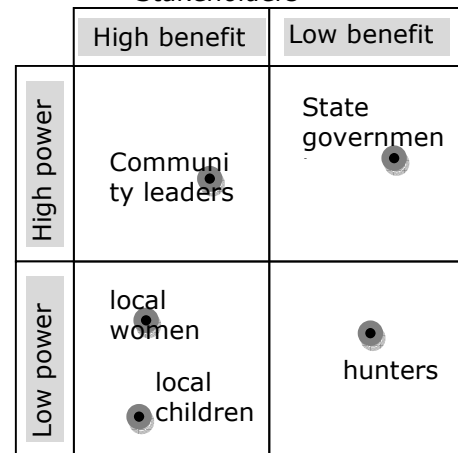
Stakeholders table

| | Power to affect decisions | Expected positive effects from the project | Expected negative effects from the project | Conflicting interests with... |
|--------------------------------|---------------------------|--|--|-------------------------------|
| Elderly women in the community | | | | |
| Local government officials | | | | |
| Community leaders | | | | |
| Etc. etc.... | | | | |

Stakeholders graphs



Stakeholders



Problem Tree development

Problem tree development is a tool to guide a group of people in identifying and discussing the roots and effects of a certain core problem. The first step in this process is identifying the problem. Many issues that people may consider problems may in fact be caused by one core problem. For example, poor harvests by subsistence farmers, having to walk too far to the subsistence plot, and frequent flooding of the fields may both be outcomes of a deeper core problem: poor access to suitable land for subsistence agriculture. Once the problem and the immediate effects have been listed, we can 'climb the tree' to look at indirect effects of this problem. If women farmers spend more time walking, for example, they may have less time to fetch water or need to rely on others to be home when their children come from school.

The core problem may have various causes or roots, such as –in the mentioned example– increasing infringement of mining on agricultural lands, the lack of land rights for women, and the higher importance attributed to commercial activities. The roots, in turn, may have deeper-laying roots. It is useful to work an actual cut-out tree which is stuck to the wall when doing this exercise, but one can also opt for drawing a more abstract schema.

