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Social Development

# WATER RESOURCE MANAGEMENT & GENDER

## SUMMARY

This briefing note is one of a series, produced by WWF-UK, to help develop understanding and awareness around the importance of gender analysis in natural resource management programmes.

The briefings, include summaries from case studies around the world, looking at lessons and experiences from integrating gender perspectives to a lesser or greater extent in programmes. The format is deliberately succinct and not too technical to enable the reader to access an initial understanding of natural resource-gender dynamics.

Other briefings in the series can be found here:

[wwf.org.uk/what\\_we\\_do/making\\_the\\_links/women\\_and\\_conservation](http://wwf.org.uk/what_we_do/making_the_links/women_and_conservation)

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Many programmes fail to recognise differences between men and women with regard to their demands on, access to and control over water resources and capacities. This reduces the ability to better understand and appropriately address water issues. The development of Integrated Water Resource Management strategies and plans presents unique opportunities for enhancing the equal participation, representation and rights of women and men in the water sector. It also provides the opportunity to improve the effectiveness and sustainability of those strategies.

Key lessons

- Involve all the people who are directly engaged in collecting, using, managing and developing water resources – from the household level and upwards. Gender awareness, improved gender equality, and the participation of women are not only a means to more effective policymaking and programming, they should also be a key goal of integrated approaches to water resources management.
- All projects should include an initial analysis of men and women's different needs and uses of water resources. Projects should involve both men and women as key stakeholders in decision making, to ensure that issues that affect women as well as men are part of analysis, programme and project planning, implementation, and evaluation.

Applying gender analysis in programme design helps water sector programmes to implement projects and allocate resources better; to meet the different needs of women and men and marginalised groups; and to achieve a positive environmental impact. Efforts to manage water resources sustainably and ensure long-term water availability must include an effective analysis of both men and women's needs. This will ensure that projects protect ecosystems effectively and ensure environmental sustainability.

## BACKGROUND

Water is arguably the most vital natural resource. Integrated water resources management (IWRM) is a process that aims to ensure water, land and its related resources within a catchment or ecosystem are used, managed and developed sustainably. It seeks to balance the use of resources for economic and social welfare with the protection and conservation of water, based on principles for sustainable development.

There are significant differences between the way men and women use, access and manage water. Addressing gender and water together acknowledges these differences and seeks to ensure that the contributions of both men and women are recognised and targeted appropriately. This will enable programmes to:

- share benefits from the use of water;
- make progress towards more sustainable use of water; and
- maximise social and economic benefit from sustainable use of water.

These are becoming increasingly urgent issues in situations where water is becoming scarcer, and competition between users is growing.

## WATER RESOURCE MANAGEMENT - THE IMPORTANCE OF GENDER

Some approaches to water resources management can result in environmental degradation from overexploitation of water resources, inappropriate allocations among competing users, inequitable distribution of benefits and burdens, and inadequate operation and maintenance of infrastructure. Additionally, insufficient involvement of either women or men has hindered programmes and projects that aim to address sustainability in water resources management. Community participation and management approaches have failed to address these issues, largely because communities are often seen as a collection of similar people with a common purpose.

Involving women as well as men, and considering their different uses of and interaction with water, can increase the effectiveness and efficiency of integrated water resources initiatives. There's strong evidence that a project is more likely to achieve what its planners hope – namely sustainable use of water – if women and men (both rich and poor) are active participants and decision makers.



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Links between gender and elements of IWRM include:

- Women and men reduce environmental sustainability in different proportions and by different means as they have different uses of, access to, control over water and interests in water management. But, when such differences are properly understood, we can target actions at those who have real influence over the issues addressed. For example, men are more reliant on water as a commercial resource, such as for irrigation. Women are generally more responsible for providing water for domestic use – such as for drinking, cooking and washing.
- Women and men have different indigenous knowledge that helps to identify interventions that are suited to local natural and social conditions – for example, identifying less vulnerable water sources and more effective project management schemes.
- Responses to foreseen and unexpected changes in water resources and the environment are more effective when all members of a community can express their ideas about how to respond to the challenge. Under these conditions, women have been effective in ecological restoration initiatives that reduce vulnerability to droughts and floods.
- Women's and men's participation facilitates freshwater ecosystem maintenance and protection. Each member of society has an interest in promoting a healthy environment. When these interests are made transparent, it improves the chances of finding feasible solutions and handling different needs through dialogue and negotiation. This allows potential or existing conflicts around water to be addressed and resolved, and for the project to have a positive environmental impact.

Despite all the benefits of an approach that clearly addresses the needs and utilises knowledge and skills of both men and women, there are still major obstacles to women participating in and benefiting from improved management of water resources. For example:

- Poor rural women are usually more affected when the environment suffers from a lack of water, as they lose their local means of subsistence. For example, in droughts, poor women have to travel longer distances to collect food, water and wood. In addition, men may migrate away from communities due to resource shortages, generating increased burdens on an even higher proportion of women.
- Many women find it hard to speak out about their water resource problems and needs. Allowing women's participation in water management will be one of several factors that need to remedy this situation.

In day-to-day practice, water managers often fail to recognise how valuable a gender approach may be and when to use it, and what the ultimate impact both socially and environmentally could be.

## POSITIVE ENVIRONMENTAL IMPACT - THE BENEFITS OF A GENDER APPROACH

A gender approach, which takes into account the different needs and knowledge/skills of both men and women, can contribute to protection and restoration of the environment and prevent further damage to watersheds. In addition, such an approach can help reduce negative impacts and improve coping mechanisms for drought and flood events, whether caused by climate variation or climate change. These benefits may also extend to water supply, sanitation, agriculture, and the social and economic development of society. Water management programmes should consider that:

- **A gender approach gives a better assessment of the situation, the causes of damage and the impacts.** More appropriate and acceptable solutions can be devised if water resource management considers and responds to the different roles and needs of men and women. Many women as well as men have found that restoring the forest, grasslands, wetlands and other natural features is the best way to protect water in the long term. Women and men contribute to better reforestation and watershed protection projects with greater community ownership of the benefits.
- **It's important that both men and women participate.** Not only will the skills and knowledge of both sexes be taken into consideration, but information on water resource management can be targeted to and shared by both men and women.
- **Local ownership and responsibility for natural resources should be improved.** This has the potential to allow the rural poor and women to contribute to and participate in good ecosystem management, and gain benefits as a result. Such actions can reduce gender inequalities and bring social and economic benefits to people while improving nature's capacity to regulate and clean water resources.



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## SOURCES

*Diana Milena Guio-Torres and Paul Taylor, March 2006. Why Gender Matters. A Tutorial for Water Managers. CAP-Net & Gender and Water Alliance*

*Mainstreaming gender in integrated water resources management strategies and plans: practical steps for practitioners. Technical Brief 5., 2006, Global Water Partnership*

*Olav Kjørven Ethne Davey, November 2006. Mainstreaming Gender in Water Management. Gender and Water Alliance & UNDP*

*CSD NGO Consortium, April 2005. Integrated Water Resource Management*

## Meeting women's and men's water needs in Guatemala's El Naranjo watershed

### BACKGROUND

The watershed of the El Naranjo river is located between the departments of San Marcos and Quetzaltenango in Guatemala. It's an area where water used to be plentiful and clean but is now scarce and polluted.

The communities that depend on this water have a variety of different water needs. For example, men use water mostly for their animals, irrigation and construction, whereas women need water for domestic tasks such as cooking, cleaning and washing. Women also spend a lot of time and effort every other day hauling the water they need. These various needs have generated conflicts which have raised many challenges for local authorities and leaders regarding the current state of legal regulations, and their application to the administration of water.

Unless mechanisms are established to promote sustainable use and effective management of water resources the continued impact on the environment will be negative. To improve access to and control over water resources, men and women needed to be organised to manage funds for community and environmental projects, as well as to advocate for their needs in decision-making.

### THE PROGRAMME AND PROJECTS

Fundación Solar is a private development organisation in Guatemala that promotes the creation of social capital among stakeholders so they can manage renewable natural resources in an integrated and sustainable way. In its model, women are equal participants in promoting equity and efficiency in the management of water resources.

In 2002, Fundación Solar started a three-year project in the area with the support of NOVIB (Oxfam Netherlands) to promote peace through the construction of a more sustainable relationship between the community and their resources. It was supported by several international and local NGOs and focused on the rights and obligations of users, service providers and local public authorities. The project aimed to empower and encourage local leaders and authorities to develop joint plans for sustainable water management, taking into account communities' needs. This was supported by researching trends in water use, training municipal authorities and grassroots leaders, and supporting social planning and organisation processes.

### PROGRAMME OUTCOMES

- *Joining together under a single objective:* Before the project, people worked independently and looked after their own interests. They



fought over water resources. Now 10 legal associations have been formed. They're devoted to promoting social strategies to improve integrated water resource management. The beneficiaries include over 74,000 men and almost 78,000 women.

- *Training, sensitisation, and men's and women's participation:* The project provided training and sensitisation sessions in the communities. People expressed their interest in the training and the organisational processes. Workshop topics included caring for the environment and the watershed, reforestation, gender equity, conflict resolution and organisation. Now, people are much more open to the ideas, problems and needs of others. Women comprise 51% of the community association members, and several women are on the board of directors. They set an example for other women in their communities.

- *Advocacy in water policy:* Water problems and needs still exist, but now people are more organised. As a result of their advocacy work, the water problems of rural and isolated communities are now being taken into greater account by the municipalities, and the impact of improved water resource management will be felt on a wider scale.

- *Income generation:* The associations are starting to generate some funds, which they're using for small environmental and community projects, such as a greenhouse. These small projects provide resources to invest in other projects, which enable the associations to meet the needs of more people.

## KEY FACTORS FOR PROJECT SUCCESS – ENVIRONMENTAL AND GENDER

*Creation of community associations:*

- The associations specifically addressed the various water needs of both men and women in urban and rural communities.
- Women represented over 50% of the members and participated actively in the associations.

*Awareness of gender difference and gender mainstreaming:*

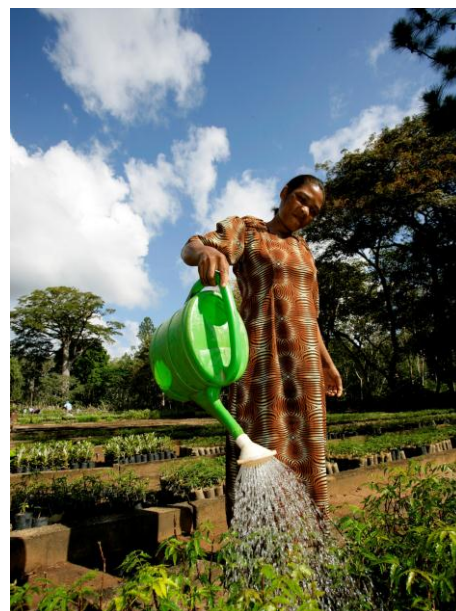
- Different water needs of men and women were taken into account.
- Awareness was raised that women are the primary water users and therefore needed to participate.
- Women participated in the organisation and decision-making processes as well as in building income-generating environmental community projects.
- Women were empowered through control over their incomes.

*Participatory processes:*

- Civil society designed municipal water policies.
- Guatemala's first association of municipalities was formed for the integrated management of water resources.
- Joint actions are taken by the municipalities and civil society regarding water resources.

## LESSONS LEARNED: THE IMPORTANCE OF GENDER, SUSTAINABILITY AND TRANSFERABILITY

The positive impact of the project came as a result of recognising different roles and water needs of men and women, and by the open participation of women in meetings and associations. As a result, all stakeholders were included and a programme that suited all beneficiaries was implemented. **Ultimately, this was therefore**



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**able to have a greater positive impact on water resource management and the environment. An essential part of this process was for women to be equal participants in defining and representing the communities' interests.**

The further success of the project is evident in its replication in other municipalities. The community education about water, the environment and societal roles has promoted positive change in other communities.

In the words of community member **Yolanda Pérez Ramírez:**

“For women, this has been a very important experience, because it was the first time that we were included in an organisation process and now people are listening to our problems... This has given us a lot of experience and others like to hear about it.”

#### **SOURCE**

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*Olav Kjørven & Ethne Davey, November 2006. Mainstreaming Gender in Water Management. Resource Guide. Gender and Water Alliance & UNDP*

## Water partnership networks and women in Pakistan

### Background

Ownership of water resources and access to them are issues that are key to preserving the environment. In South Asia, gender differences often distort access and rights to water. This can have a fundamental impact on the outcome of water resource programmes.

Understanding the different roles and needs of men and women is important. While women are responsible for collecting much of the water and managing food production for household consumption, their limited access to resources reduces their influence in establishing food and water security. In plans to address environmental issues, the role of women as beneficiaries or managers of water bodies is rarely considered.

### ENVIRONMENTAL IMPACT - THE DELTA REGION

Historically the River Indus discharged into the Arabian Sea via a huge delta with 14 main creeks. But the drying up of the Indus has permanently damaged the ecosystem. The sea has intruded as far as 150 miles up the river. The mangrove forest, which covered nearly 2,500 sq km has been reduced to 1,000 sq km. The drying up of the delta has also decreased shrimp and fish production significantly.

While the realities of water availability, the climate, weather, delta conditions and the market have changed, the way of managing farms and using water at farm level has not. About 45% of land is under cultivation. Poor management and distribution of irrigation water has also rendered a large area of land uncultivable and resulted in low crop yield. Thousands of local farmers whose livelihood depends on agriculture are facing economic hardship.

The Indus Delta Area Water Partnership (AWP) was established in June 2001 as part of the work of the Global Water Partnership. Its main objective was to promote water, food and livelihood security. Its members include local NGOs, government departments and national-level support organisations, as well as local farmers and stakeholders. The long-term vision of the partnership included:

- Revitalising the Indus delta ecosystem, coastal rejuvenation, agriculture, fisheries, economy and social development.
- Transforming the water sector into an integrated sector with complete coordination between departments and all relevant agencies, and ensuring the availability of institutions that address water-related problems in the area – thereby promoting water, food and livelihood security.



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## WATER RESOURCE MANAGEMENT AND THE IMPORTANCE OF GENDER

The programme took a number of key steps to address the water resource issue. Our approach that included both men and women in the programme:

- All stakeholders participated fully in the development of a model for water management in the delta.
- The Women and Water Network (WWN) was established as a 'women only' platform.
- We made gender a mainstream consideration. This ensured that all water issues, policies strategies, programmes and actions were discussed, planned and implemented in ways that best supported both women and men. It also helped to minimise or curtail any adverse impacts on women.

The WWN, working with the Indus Delta AWP, addressed the need to empower women to participate effectively in AWP. It envisaged a network of women and women's organisations working with water-related issues, and their capacity for handling water issues effectively. Women are also expected to influence policies, plans and actions in the water sector, and to promote integrated water resources management that addresses the needs of both men and women.

## CONCLUSIONS AND LESSONS LEARNED

The example of the Indus Delta AWP shows how consideration of gender differences addressed both poverty and environmental issues in a positive way. By including both men and women in the process, and being aware of their different needs, the project was able to empower both men and women to conserve the quantity and quality of freshwater and terrestrial ecosystems. This also contributed to alleviating poverty.

### Source

*Gender and Water Alliance, December 2006. South Asia: Addressing Water and Poverty at the Grassroots: A Case Study of Area Water Partnerships and Women and Water Networks in South Asia*

# Water management and conservation in Jordan

## INTRODUCTION

Jordan is an arid to semi-arid country. It's considered as one of the 10 poorest countries in water resources globally. The scarcity of water in Jordan is the single most important constraint to the country's growth and development, because water is not only a factor for food production but also a very crucial factor of health, survival and social and economic development. The water shortage is caused by the unsustainable use of groundwater. Too much water is drawn from highland aquifers, which results in a lowered water table in many basins, and declining water quality in some. This contributes to major environmental problems such as deforestation, soil erosion and scarcity of water resources – exacerbated by frequent droughts.

## WATER RESOURCE MANAGEMENT AND THE IMPORTANCE OF GENDER

There have been many efforts in Jordan by national governmental, non-governmental and international organisations to improve the management and conservation of water resources.

Projects and programmes over the past years have focused on involving local communities, and especially women's involvement in water resource management. The organisations working on these issues have recognised that women's involvement in water resources management and conservation is vital for conserving the precious water resources of Jordan.

Many organisations, especially NGOs, have realised that women play an important role in the positive impact of water resource management and conservation activities. Women are most often the collectors, users and managers of water in the household, as well as farmers of irrigated and rain-fed crops. So, considering and including women in water resource management programmes ensure that their role and important contributions aren't overlooked. This helps to avoid the continuing unsustainable management of water resources.

Research in Jordan has identified that programmes which involved women in their activities were very successful in achieving their objectives. They had a greater impact on conserving water resources and helping local communities to achieve acceptable living conditions and to adopt the sustainable use of water resources.



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Many factors contributed to women's positive role in these programmes, such as:

- Women have proved to have a great ability to learn and practise new skills and methods of water management and conservation.
- Women's participation in water resource management programmes helped to transmit messages of water conservation and management to other community members. This promotes the spread of information and better understanding of water management issues by all.
- Women in rural areas of the country are able to be educated and to implement new techniques in water conservation and use the precious water resources wisely.
- Women's knowledge about water resources issues has been increased. Women trained in new skills in water conservation and management become able to efficiently manage and use the available water resources. And they're able to design and implement water management and conservation programmes.
- Women can play an important role in water resources management and conservation through their participation in local and national NGOs, especially those that work for environment protection, natural resources conservation and water resources management.

Because of these roles, women have developed considerable knowledge about water resources, including the quality and reliability, restrictions and acceptable storage methods. As such, women's involvement is key to the success of water resources development. To achieve such results, initiatives need to be aware of these roles in water resource management and fully consider how the involvement of both men and women can be best used to have a positive environmental impact. Before women's contributions can be fully recognised, there needs to be awareness of a number of constraints to women's involvement in water resource management. For example:

- Women lack access to economic resources, supports and incentives in water-related activities, especially agriculture.
- Women need encouragement and support to contribute effectively to water and natural resources conservation efforts.
- There's a lack of participation by women in decision-making processes in water resource management – and lack of awareness of associated bylaws and legislation.
- There's a lack of analysis of the roles and interactions of both men and women in the different policies and programmes related to water management and conservation.

## SOURCE

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*Samira Smirat, 2006. Role of Women in Water Management and Conservation in Jordan. PLAN:Net*

*Jordan-Amman*

### FOR MORE INFORMATION

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