

# China – UK, WRDMAP Integrated Water Resources Management Document Series

## Thematic Paper 6.3/2: Assessing the Impact of IWRM on Women’s Status and Conditions

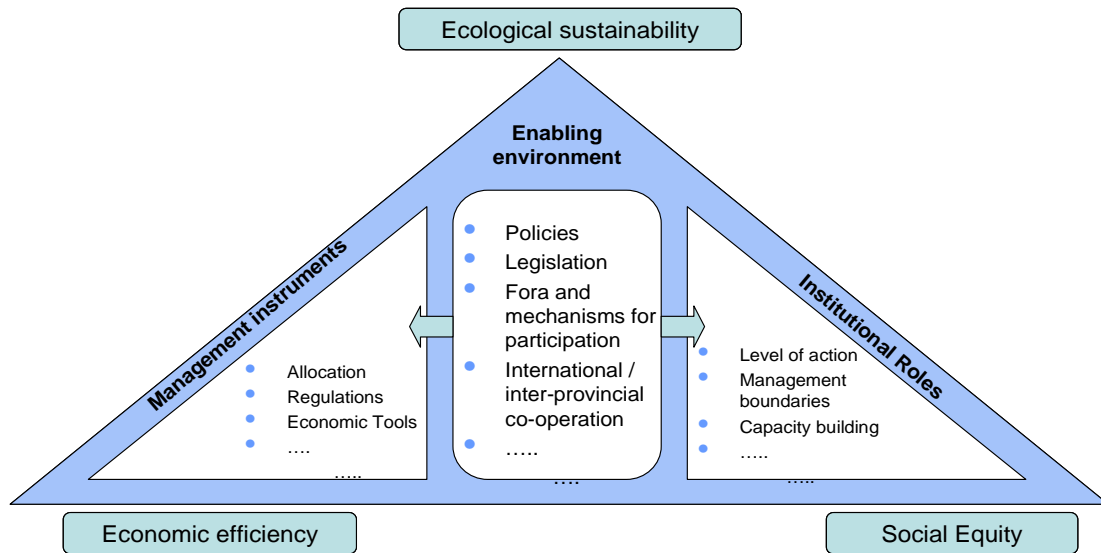
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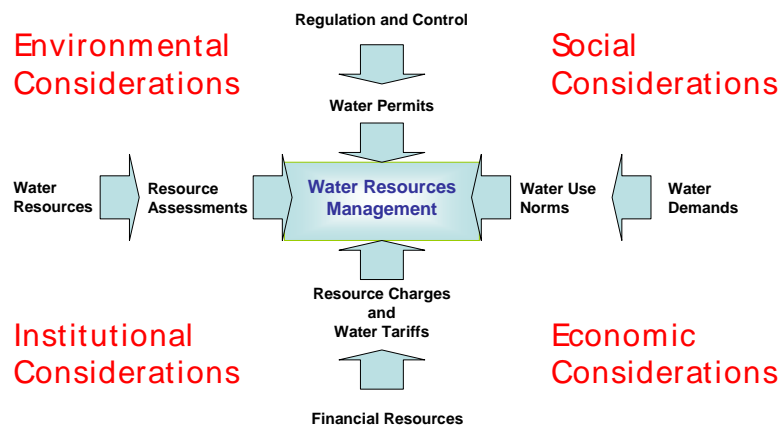
6.  
Water  
Saving  
Society

# Integrated Water Resources Management (IWRM)

*(Basics after Global Water Partnership)*



## Driving Elements of Integrated Water Resources Management



*(Second figure after WRDMAP)*

**Summary:** Involving both women and men in integrated water resources management (IWRM) can improve the effectiveness and efficiency of management. Participation by women and men improves project performance and improves the likelihood of sustainability. Most work done in the past on gender issues in relation to IWRM has been in connection with specific projects or activities such as rural water supplies or irrigation management.

This document summarises international and national experience related to gender issues and water resources management at river basin level. It draws on more detailed local level activities to inform the process of influencing planning and implementation of river basin management

The document is based on the case studies in Gansu and Liaoning Provinces, showing how women's knowledge of local conditions, their experiences of the impact of IWRM policies, and their ability to disseminate information on IWRM are crucial for implementation.

The document is structured around the following topics:

- Introduction – concepts of gender and IWRM, and international and local experience in these topics
- Important issues – covering rural and urban water management, wider stakeholder participation and dissemination of information related to IWRM
- Promoting women's participation in rural and urban areas, and within higher level management organisations

The Ministry of Water Resources have supported the Water Resources Demand Management Assistance Project (WRDMAP) to develop this series to support WRD/WAB at provincial, municipal and county levels in their efforts to achieve sustainable water use.

# 1 Introduction

## 1.1 Background

This document describes the importance of addressing gender issues affecting women in Integrated Water Resources Management (IWRM). It aims to show how IWRM can have a positive impact on the working conditions and status of women. The document assesses the ways in which women as stakeholders can participate in decisions on IWRM design and implementation, and on the benefits accruing to IWRM from this participation.

The document draws on analyses of women's conditions and gender issues in the context of water resources management undertaken in two case study areas in Gansu and Liaoning. These analyses included social assessments, village meetings, surveys, stakeholder consultations, workshops and training sessions. These findings are synthesized with related observations from other parts of China and internationally, in order to provide general guidance on gender issues.

The case studies included consideration of:

- Poverty alleviation and sustainable livelihoods
- Decentralisation
- Participation, communication and village level consultations in planning and management of water resources and water services.

The case studies were located in the Shiyang River Basin in Gansu Province, more specifically in Liangzhou District and Minqin County

in Wuwei Municipality and Yongchang County in Jinchang Municipality; and in the Daling River Basin in Chaoyang Municipality in Liaoning Province.

## 1.2 IWRM and gender



*Role of gender in IWRM*

### **What is gender**

Gender refers to the different roles, rights and responsibilities of men and women and to the relations between them. Consequently, it does not refer simply to men and women, but to the ways in which their qualities, identities and behaviours are influenced by the societies and social groups in which they live, and the organisations in which they work or which affect them.

Women and men are defined in different ways in different societies. The relations they share are known as “gender relations”. In most societies, these relations are hierarchical and tend to disadvantage women.

Hence gender relations are characterised by inequalities in access to choices and resources. These inequalities can be caused by a variety of factors – historical, religious, economic, and cultural.

Addressing inequalities in gender relations cannot be done in piecemeal, project by project way. A process of gender mainstreaming is required to

ensure that gender is taken into account at all times. Gender mainstreaming is defined by the UNDO as “*taking account of gender equality concerns in all policy, programme, administrative and financial activities, and in organisational procedures, thereby contributing to a profound organisational transformation.*” They go on to emphasise that “*this includes both the core policy decisions of the organization, and the small every day decisions of implementation*”. ([www.undp.org/women/mainstream/](http://www.undp.org/women/mainstream/)).

### **Box 1: Gender Mainstreaming**

Gender mainstreaming is a globally accepted strategy for promoting gender equality. Mainstreaming is not an end in itself but a strategy, an approach, a means to achieve the goal of gender equality. Mainstreaming involves ensuring that gender perspectives and attention to the goal of gender equality are central to all activities - policy development, research, advocacy/dialogue, legislation, resource allocation, and planning, implementation and monitoring of programmes and projects so that women and men benefit equally and inequalities are addressed and not perpetuated.

A strong, continued commitment to gender mainstreaming is one of the most effective means for the United Nations to support promotion of gender equality at all levels - in research, legislation, policy development and in activities on the ground, and to ensure that women as well as men can influence, participate in and benefit from development efforts.

There is a continued need, however, to complement the gender mainstreaming strategy with targeted interventions to promote gender equality and women's empowerment, particularly where there are glaring instances of persistent discrimination of women and inequality between women and men.

Source: 'Gender Mainstreaming', UNDP

There are recognised (GWA, 2001) to be three areas which are particularly important for implementing gender mainstreaming in the formulation of strategies and plans in practice:

- carrying out a good gender analysis as part of a knowledge base for decision-making,
- involving women as key stakeholders and anchoring them in the decision-making process, and
- using sex-disaggregated indicators

These are fully consistent with IWRM, since involving stakeholders – men as well as women - is a cornerstone of the IWRM approach.

Several steps are important in ensuring that women are effectively involved in the decision-making process:

- establishing a steering group with a critical mass of qualified, sufficiently senior women. Quotas (at least 30%) have been found to be among the most effective ways of ensuring the participation of women in decision-making structures of all sorts (from village councils to parliaments) the world over. However, making quotas work often requires capacity building and empowerment training.
- Core stakeholders should ensure the active and meaningful participation of both women and men in their own leadership structures.
- A gender mainstreaming unit should be set up within the relevant Water department, headed by a sufficiently senior

specialist with a sufficient and independent budget.

- Participatory platforms should be established and run in such a way that women's groups, particularly those that represent women living in poverty, are not just "heard" but rather that what they say has an actual *impact* on the decisions that are made.

### **What is IWRM?**

GWP define IWRM as “a process that promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.”

#### **Box 2: Key elements of IWRM**

- Enabling environment
  - Policies
  - Legislative framework
- Institutional roles
  - Organizational framework
  - Institutional capacity building
- Management instruments
  - Assessment of resources and needs
  - Options, interactions
  - Managing demand and supply
  - Social change instruments
  - Conflict resolution
  - Regulatory instruments
  - Economic instruments
  - Information management

In order to put these noble objectives into practise, GWP make recommendations for the institutional arrangements and management

instruments. These suggestions are structured as indicated above in Box 2.

### ***The importance of gender in IWRM***

The Global Water Partnership states that *“The central role of women in water resources management and the need for women to be more involved in decision-making at all levels clearly informs the Dublin Principles, and was also cited, inter alia, in Principle 20 of the 1992 Rio Declaration, in the 1995 Beijing Platform for Action, in the 2002 Johannesburg Plan of Implementation, and in resolution 58/217 of the General Assembly, which proclaimed 2005 to 2015 as the International Decade for Action, ‘Water for Life.’”*

Despite this recognition and a high-level commitment to increased involvement of women in water use and management for almost two decades, progress has been limited, and most of this progress has been in the area of domestic water supply and sanitation, and to a lesser extent in local management of irrigation.

Yet the development of IWRM strategies and plans presents opportunities for enhancing the participation, representation, and rights of women throughout the water sector and thus for improving the effectiveness and sustainability of sector strategies, plans and activities. The way gender issues related to the

IWRM approaches described in Box 2 are indicated in Figure 1.

IWRM stresses the importance of using water resources to optimise economic and social welfare. This optimisation inevitably requires addressing social and gender disparities through promoting equitable access to and control over resources, benefits, costs and decision-making between men and women.

IWRM planning can both be influenced by women’s conditions and gender relations, and can have an impact on them. This is highlighted in most of the important documents on IWRM. For example, the seminal UN Conference on Environment and Development held in Rio (1992) argued that IWRM can assist in promoting *“equitable access to and control over resources, benefits, costs and decision-making between men and women”*.

Much of the focus for gender in the water sector has been in detailed activities at local level, such as participation in WUAs. This is undoubtedly very important and provides a basis for higher-level activities.

However, another main challenge for mainstreaming gender in IWRM is to move beyond gender sensitivity at a local project level, and to ensure that gender is also addressed in planning and management at river basin level.

Figure 1: Gender considerations in IWRM

<b>IWRM</b>		<b>Gender considerations</b>
<ul style="list-style-type: none"> <li>• <b>Enabling environment</b> <ul style="list-style-type: none"> <li>– Policies</li> <li>– Legislative framework</li> <li>– Financing and incentives</li> </ul> </li> <li>• <b>Institutional roles</b> <ul style="list-style-type: none"> <li>– Organizational framework</li> <li>– Institutional capacity building</li> </ul> </li> </ul>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p><b>Enabling environment</b></p> <p>Policies recognise gender issues</p> <p>Women's involvement in all organisations</p> <p>High level awareness / understanding of gender</p> </div>	
<ul style="list-style-type: none"> <li>• <b>Management instruments</b> <ol style="list-style-type: none"> <li><b>1 Assessment of resources and needs</b> <ul style="list-style-type: none"> <li>• Water resources knowledge base</li> <li>• Water resources assessment</li> <li>• Modelling in IWRM</li> <li>• Water management indicators</li> <li>• Ecosystem assessment</li> </ul> </li> <li><b>2. Options, interactions (for IWRM)</b> <ul style="list-style-type: none"> <li>• Basin Management Plans</li> <li>• Risk assessment and management</li> <li>• Social, Env and Econ. Assessment</li> </ul> </li> <li><b>3. Managing demand and supply</b> <ul style="list-style-type: none"> <li>• Efficiency of use</li> <li>• Recycling and reuse</li> <li>• Efficiency of supply</li> </ul> </li> <li><b>4. Social change instruments</b> <ul style="list-style-type: none"> <li>• Education curricula</li> <li>• Communication</li> <li>• Awareness raising</li> </ul> </li> <li><b>5. Conflict resolution</b> <ul style="list-style-type: none"> <li>• Conflict management</li> <li>• Shared vision planning</li> <li>• Consensus building</li> </ul> </li> <li><b>6. Regulatory instruments</b> <ul style="list-style-type: none"> <li>• water quality</li> <li>• water quantity</li> <li>• water services</li> <li>• Land use</li> </ul> </li> <li><b>7. Economic instruments</b> <ul style="list-style-type: none"> <li>• Pricing of water and water services</li> <li>• Pollution and environmental charges</li> <li>• Water markets</li> <li>• Subsidies and incentives</li> </ul> </li> <li><b>8. Information management</b> <ul style="list-style-type: none"> <li>• Information management systems</li> <li>• Data sharing data</li> </ul> </li> </ol> </li> </ul>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Awareness of limitations of resources</p> <p>Women's involvement in demand forecasting</p> </div> <hr/> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>User Involvement in plans</p> <p>Recognition of local interests in plans (equity, access for vulnerable groups)</p> </div> <hr/> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Skills in new techniques for efficient use of water</p> <p>Training / information provided to the real farmers</p> </div> <hr/> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Awareness of all aspects of IWRM</p> <p>Strong, representative WUAs</p> <p>Water and IWRM in curricula</p> </div> <hr/> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Conflict avoidance/resolution by local participation</p> </div> <hr/> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Involvement in implementation of permit systems etc</p> <p>Social safeguards built in to regulatory arrangements</p> <p>Role of WUA in regulatory instruments</p> </div> <hr/> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Ensuring WUAs adequately financed</p> <p>Compensation for irrigation are reduction</p> <p>Subsidies (incentives for crops, greenhouses, etc)</p> </div> <hr/> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Data sharing and cooperation</p> <p>Information on markets, crops, water savings</p> </div>	

### Box 3. Why does 'gender' matter for IWRM

*"In most developing countries women and girls are responsible for collecting and using water for household purposes while mainly men make decisions about water resources management and development at both local and national levels".*

Source: 'Gender and Water', UNDP

## 1.3 International experience

There is considerable international experience of gender assessments in IWRM, although many of the existing documents relate to local aspects of IWRM – particularly rural water supply and local management of irrigation (including participation in water users' associations). There are very few accounts available of experiences of incorporating gender into IWRM planning at higher levels

The case studies reported in this document were concerned with gender issues at various levels, including:

- IWRM Planning, by ensuring social issues were addressed, and by carrying out social impact assessments
- Local level implementation, through working with water user associations;
- Higher level implementing, by advising on working arrangements for longer term IWRM;
- M&E designing and testing systems, for monitoring implementation.

This work was guided by international experience with these issues, but it was noted that many of the assessments of the impact of IWRM on women's conditions and gender

relations undertaken previously have been concerned with areas not directly relevant to the case studies. For example: many studies focus on the extent to which improving water supplies and sanitation will enhance abilities to realise several millennium development goals, and the importance of women in managing these programmes. Improvements in water supply and sanitation have multiples benefits including impacts on women's health and education. Such studies are thus of immense importance but not directly relevant to the broader aspects of IWRM covered by this document.

The most important issues which became apparent from the review of international literature and case study experience were:

1. In water resources management, inadequate involvement of both men and women often has hindered programmes and projects aimed at addressing sustainability. Community participation and management approaches have not always succeeded in addressing these issues because they have not taken into account sufficiently the fact that within communities, individuals and groups command different levels of power, wealth and ability to express their needs, concerns and rights. Where water resources are scarce, there will be competition for supplies, and those who are relatively disadvantaged may not benefit adequately. Unequal power relations in the community often place women in a disadvantaged position in relation to water resources, and it is essential that plans for management and participation address this by ensuring that allocations meet their needs.



2. Involvement of women in the management of water resources has been shown in a number of cases to have increased both the effectiveness and efficiency of this management. Reviews undertaken by a number of institutions (notably by the World Bank) have noted that where women's knowledge has been included in planning and practice, this has contributed to successful project outcomes. This has important implications for the contemporary Chinese context, where in recent years women have been playing an increasingly important role both in agricultural cultivation and irrigation.
  3. Research and reports of IWRM implementation also have highlighted the contrast between women's involvement in management of water at the local level and their lack of involvement in decision-making in organisations controlling and overseeing the use of this water (notably via water user associations). In particular, it appears that relatively poorer women are less likely to be elected to management positions. This paradox is relevant for the rural sector in contemporary China, where there is evidence of limited women's involvement in village decision-making alongside an increasing role played by women in cultivation.
  4. Water pricing is a critical component of IWRM. It is thus important to assess household willingness and ability to pay fees for water use. As was evidenced in assessments of urban communities in the city of Beipiao, Liaoning Province, there is considerable evidence that women in households play the major role in managing water – via managing domestic water use, organising water savings when necessary, and paying water bills from their management of household budgets. This highlights the importance of undertaking analyses of household water demand from a “gender” basis, examining the specific roles played by women in assessing willingness and ability to pay for increases in water prices.
  5. Another key issue is the views of government organisations, bureaus, non-governmental organisations, civil society organisations and water user groups on proposals for IWRM planning and plan implementation. Whilst research on IWRM has enabled understanding of the stakeholder approach to assessing the interests of these groups, and also provided examples of dissemination strategies to these various groups, it has been of limited use in advising on how to organise consultations with stakeholders, particularly in the Chinese context.
- The important issue of how to involve women members of stakeholder groups is not addressed much in the available literature and research. The focus is generally upon the constraints to women's participation – due to factors such as illiteracy, time constraints, cultural norms, and power relations. However, as was noted repeatedly by women in workshops and focus groups held in the case study areas in Gansu, there is great need for training to enhance women's ability to participate in decision-making – notably within water user associations- and for training in

financial areas such as budgeting, to enable them to become involved in decision-making by WUA executives, etc.

6. Women's participation in the management of organisations directly involved in water resources planning (particularly within MWR, Provincial WRDs, Municipality and County WAB / WRBs, hydrology bureaus, township level water resource offices, water management divisions, etc) should be carefully assessed. Assessment of their participation should cover issues such as:
  1. Does the organisation facilitate or hinder women's participation?
  2. To what extent are women's needs and perspectives discussed?
  3. To what extent is there an overall understanding within the organisation of the importance of the needs of women as water

users in water resources management?

Specifying the questions in this way makes it possible to identify ways in which women in key organisations can be involved to a greater extent than has previously been the case.

7. Within the current documentation on IWRM, there appears to be general agreement that social and economic impact assessments are incomplete without an overall assessment of gender differences. Undertaking a gender-based analysis enables planners to gain a more accurate picture of communities, their water use, households and water users. It was generally accepted that understanding the differences between men and women (concerning who does what work, who makes what decisions, who uses water for what purposes, who controls which resources, etc) is important for designing and implementing IWRM successfully.



*There is great need for training to enhance women's ability to participate in decision-making*

## 1.4 Chinese experience

The international assessment can be supplemented by important trends in the contemporary Chinese context.

One of the most important features is the substantial increase in migration levels in recent years. This involves not only migration from rural to urban areas, but also migration from relatively less developed, poorer urban to more developed wealthier urban areas. The salient features of this migration are that it is largely male, with a preponderance of those aged 18-30. The much smaller group of female migrants are mainly from this age group. This type of migration has resulted in many villages being composed increasingly of the elderly (many of whom are having to care for children left behind by their migrating sons and daughters), children, and women. In this situation, women are becoming increasingly responsible for cultivation, irrigation and the maintenance of the village infrastructure. Their role in decisions on the use of water for agriculture locally, ie below the production group level, has been enhanced.

In a similar fashion, male out migration from relatively poorer urban communities is resulting in women taking more of the decisions on domestic water use. Although it has always been the case that women in the household tended to manage the budgets, it was usually the man who took responsibility for making the payment to the water company. In poorer communities this now appears to be changing, accompanied by a trend for women on neighbourhood committees to try and negotiate directly with water supply companies on the supply and quality of water.

In addition, given that many women are now having to be involved to a greater extent in cultivation, irrigation, and infrastructure maintenance, as well as household work, and supporting their elderly relatives, it could well be the case that they have less time to participate in decision-making at the village level. Hence they might actually have less influence over decisions than previously.

This leads to a focus on a number of potential areas of likely gender importance for IWRM, centred on issues of community participation, women's involvement in local water management, ability and willingness to pay for water, stakeholder assessments and consultations, women's roles in key organisations for IWRM, and on the importance of gender-based assessments.

In what follows, we summarise our experiences, based on our WRDMAP gender and social assessments, stakeholder consultations, training workshops, information from counterpart colleagues, and on the many discussions held between national, provincial and international consultants in the case study areas. In the case of each topic, we draw out the main conclusions and suggest recommendations for future IWRM implementation.

## 2 Key Issues for Gender and IWRM

### 2.1 Women and water use: the rural sector

There has been a significant migration of labour in recent years. From 200-2007, for example, in Gansu Province, whilst overall per capita incomes for

rural households almost tripled, the vast majority of this increase came from migrants, with income from local employment hardly experiencing any increase. In Minqin County, currently approximately 80% of the male population migrates, compared with 20% of the female population (the latter migrating largely with their families).



*Wuwei, Gansu Province*

This has several consequences of importance:

- Women have to devote more of their time to agricultural tasks, in all areas, from planting to harvesting. Additionally, they are involved to a much greater extent in organising water locally, most importantly for irrigation below the production group level. More of the outlets from the channels to the fields appear to be managed by women, who are also undertaking most of the field irrigation. In Minqin, for example, on average 70-80% of the field irrigation is undertaken by women, although the larger canals are still managed mainly by men
- In income terms, however, women remain in a secondary position in the household, since the money they are bringing into the household is less than the money earned by their husbands from migrant out-work.
- Hence, despite their increasing workload and responsibilities in organising cultivation locally, women's status generally remains lower than their husbands, both within the family and the overall village community.
- This maintenance of male status, based on received family income, enables the perpetuation of a paradoxical situation, whereby, despite their predominant role in the organisation of cultivation and irrigation locally (ie below the production group level), women still have very little involvement in decisions concerning the

overall use of water in their areas, since these decisions are made at the village level (either through the village committee or through the water user association), and above, where the composition is overwhelmingly.

- It thus appears that implementation of policies for water use at the local level is being undertaken without the involvement of many of those who are actually involved in organising this. Clearly, this impact is variable. In Minqin County, for example, women's involvement in irrigation is lower in its relatively poorer, more distant areas where there are lower levels of migration than in areas closer to the county town.

This situation of increasing involvement of women in cultivation and local irrigation, and their growing responsibilities in these areas, alongside their limited involvement in decisions affecting cultivation, was raised repeatedly by women in village interviews, discussions, focus groups, workshops, stakeholder consultations, and in training sessions.



*Women typically have to devote more of their time to agricultural tasks in all areas, from planting to harvesting.*

## 2.2 Women and water use in urban communities

Important gender-related issues can also be seen in urban communities. For example, in the case of the Beipiao Water Supply Company (WSC) studies of customer relations and service levels indicated several trends important for understanding women's roles in domestic water use in poor urban communities.

In these communities, male migration is an important factor, with (on average) in the two communities assessed in Beipiao, approximately 20% migrating. Women have traditionally been responsible for paying water fees, but water collection previously was shared with men much more than is currently the case. Now, following increased levels of migration, approximately 90% of water collection is undertaken by women. In some cases, this can be extremely arduous.

In Dongshan community, for example, water is supplied between 1 and 5 am. During this time, pressure is low, and supply intermittent, with water captured and stored in stone jars or buckets, overseen at regular intervals by household members. In Tianyuan community, collection times are better, from 4-6 pm, but collection has to be overseen. Since most families live in six storey blocks, and pressure is low, water for the upper levels has to be carried several flights of stairs. Most of this oversight and carrying is done by women, who may also boil some of the water before consumption, due to its poor quality.

It is clear that women play a key role in the collection, management, use and payment of water. Yet, in most cases this role does not seem to have been

recognised by the Water Supply Company. In focus group discussions, in Dongshan Community, women described how their only contact with the WSC was when fee collectors arrived in households, how they received no information on supply or pricing, and few responses to their individual and collective complaints. In Tianyuan community, the situation appeared a little better, but due largely to the combined efforts of the Community Committee, with its largely female composition.

It is important that the changing role of women in water use in urban communities is recognised, that this is institutionalised in formal arrangements between WSCs and water user groups, and that WSCs improve their relations with their domestic water user customers. Restructuring and modernising WSCs to improve their efficiency and implement demand management relies considerably on sound decisions on the appropriate institutional arrangements, taking account of the needs of poor urban communities.

## 2.3 Gender issues in stakeholder consultations

An issue of crucial importance for IWRM and its implementation is the need to design appropriate interventions, carefully targeted and with, mitigation measures where needed to protect those adversely affected by these interventions.

A pre-requisite for such a design is a stakeholder analysis followed by stakeholder consultations. These will outline the main interests of each stakeholder group in the project, describing the gains to each group, and specifying the possible risks to them of implementation.

The latter point is particularly important. Whilst bringing potential benefits by addressing equity issues, reducing conflicts between water users, protecting shallow well owners and poor households, and enhancing community management, many activities aimed at improving water management as a whole can create problems for some groups of water users. These problems can arise from increases in water prices, reductions in irrigation supplies and coverage, and generally from changing allocations between users. Where negative effects are possible, appropriate mitigating strategies need to be developed.

Stakeholder assessments and subsequent consultations identified the need for simplified management and improved co-ordination between bureaus and agencies. This is particularly in relation to support for demand-led approaches, expertise in participatory methods, and on impacts of changed water allocations. Stakeholder user groups stressed the need for improved reliability and predictability of supply, the importance of creating enabling frameworks for addressing conflicts, the impact of possible reductions from current levels of supply, and on improved opportunities for participating in decisions on water supply and use.

The most important issues identified in the stakeholder analyses which related to women's conditions were:

- access to information on water-saving,
- consultation on issues such as water-pricing, and
- participation in decisions on the management of water.

## 2.4 Women's organisations and IWRM dissemination

It is apparent that women's organisations play an important role in promoting water-saving in the Shiyang River Basin. For example, the Women's Federation, with its branches at county, township and village levels, was working closely with several of the bureaus on water and water-related issues, communicating water saving ideas to its members. It was also instigating its own water-saving projects, funded largely by charities.

Working with the Water Affairs Bureau, the Women's Federation produced documents for use at the village level - on the reasons for greenhouse construction, on how to train women to equip them for greenhouse cultivation, and on the strategic basis for well closures. The Federation was also active in producing articles on water saving measures in urban areas, notably in papers such as the Wuwei Daily. It also co-operated with the WAB on a series of water related projects for women, notably on the construction of water tanks in villages, and worked with the WAB on television programmes promoting water saving.

Although important dissemination is being undertaken by women's organisations, in co-operation with the bureaus, there appears to be limited co-operation between the Shiyang River Basin Management Bureau, and women's organisations such as the ACWF. This possibly reflects its status as a new organisation, and its emerging relations with the WABs and WRBs, since the situation in Chaoyang in Liaoning Province is somewhat different. There the WAB and WRBs co-operating more closely with the ACWF at the county level, particularly in relation to drought management

plans and water saving strategies for domestic water users, notably via the press and media.

Whether in disseminating information on the benefits of water-saving, or in advising on mitigation (moving into new crops, diversifying, greenhouse construction, etc), women's organisations have a key role in disseminating information for IWRM. This important role should be specified in and the relations required between the water affairs bureaus, and other bureaus with the ACWF to implement strategies for IWRM should be clearly stated.

In urban settings it was readily apparent that water quality and the reasons for price increases were the major issues for domestic household customers of the WSC. It was also apparent that household members saw these primarily as topics to be discussed with the WSC through their Community Committees, with their largely female composition.

It is recommended that these community committee organisations become the main channels through which information is disseminated and exchanged between the water supply companies and their urban domestic customers, including matters related to complaints, water pricing, water supply and quality.

## 3 Promoting Women's Participation

### 3.1 Rural water use

Participation in water user organisations, and particularly in rural water-user associations, has been a major issue raised in stakeholder consultations. Within this, women's participation has been a particularly important issue at both township and village levels.

For most of the primary stakeholder water users in the rural sector in the Gansu case study areas, the information they receive on IWRM plan implementation and their ability to raise issues of concern in relation to this implementation is via their water user association (WUA) or village committee. A key issue is, therefore, the extent to which there is a basis for WUAs to influence IWRM, and the depth of participation by farmers in these organisations. To what extent can farmers' views be represented, and to what extent can they participate in decisions taken on water use? Are women farmers and women members of farming households disadvantaged in this participation, when compared with men?





*Women farmers, Wuwei, Gansu*

Each of the farming households in a water user group or production team elects a leader and sometimes one or two other representatives for the group in which the household is located. This representative is usually a male member of the household. Typically, a WUA will comprise 10-12 WUGs, but the number is very variable. Leadership of the WUA is exercised by an Executive Committee typically of six members, nominated by the village committee and the party committee. The WUG leaders then approve these nominations. The Director of the WUA is also the village leader. The Vice-Director usually is nominated by the Director. This was the arrangement found in Minqin, although it may differ from other counties or municipalities

WUA policies are introduced from outside, via the executive committee, and then communicated downwards. Consequently household members often regard WUAs with a degree of caution – seeing them as vehicles for

the collecting of fees and for ensuring a successful implementation of unpopular policies of land reduction and well closure. There is often only real discussion at the production team/ water user group level – for example, over the specific allocations of water to households.

There is very limited effective participation in WUAs, and the responsibilities of WUAs are also fairly narrowly circumscribed. However, this limited process of representation and participation in WUAs affect women to a greater extent than men. For example, despite the heavy involvement by women in water use at the local level, and despite their increasing role in cultivation, there were no women members on the WUA executives in Minqin. This male predominance is reinforced by a system of voting in which the household head casts the vote in the WUA. With the exception of a very small number of female-headed and elderly households, this necessarily excludes women from voting.

Similarly, major decisions on water use are taken by the water user group leaders, who in Minqin are overwhelmingly male. As one might expect, given this system, attendance at WUA meetings is largely male, with women having to carry out household tasks after completing agricultural work.

Predictably, few women (and probably few men either) have much knowledge of their WUA and its operation, or of policies being implemented by the WUA which would impact their daily lives. This is potentially a serious omission since many measures aimed at saving water are being introduced and will significantly affect farm households. These consist of well

closures, land reduction, greenhouse development, the introduction of IC Cards and household water use certificates, together with a planned re-issuing of abstraction permits and an increase in the amount of surface water through upstream transfers and water allocations.

These policies are aiming to address water resource problems by substantially reducing ground water use, converting agricultural land to forestry and grazing land, and reducing farm land. Well closures and accompanying land reduction policies are having a significant impact on livelihoods with farmers expressing concern at reductions in their incomes. The implementation of water savings plans is leading to reductions in irrigated area and to a smaller proportion of total water use being allocated to agriculture. To compensate for losses in income, farmers are being encouraged to construct greenhouses. This, however, is largely an option currently taken up by wealthier households. Middle income households construct fewer greenhouses, and poor households none. Farmers are concerned that they do not have the necessary skills, or sufficient knowledge of market conditions.

Water Rights Certificates have also been distributed to households. WUAs manage the distribution of certificates and organise water user groups to collect the required fees. IC Cards are also being introduced – quite rapidly, with concerns amongst farmers that they do not fully understand the procedures involved in their use, and that they may be losing water as a result of the new system. There are particular concerns about the impact of these measures on poor households,

who will be struggling to pay the required water fees.

It is essential that information on these policies and their implications be widely and effectively disseminated and understood by all water users (particularly poor women and men). Water users should be involved in their implementation, and in the details of any mitigation measures required. This support may be difficult to attain currently, particularly given the limited understanding, consultation and participation by women, despite their importance in both cultivation and irrigation.

Consequently, given the need to establish effective participation, and the current limited degree of participation in WUAs, it is important to derive a meaningful basis for IWRM. This could include activities to:

- Facilitate the expression of women's interests, and meet the need to enhance their level of representation within WUAs and WUGs; at least 25% of the household representatives should be women (this may need to be specified in WUA charters).
- Ensure at least four of the Water User Executive Members are directly elected by Water User Group Leaders, and that there at least one woman is elected to the Executive.
- Provide substantial capacity building amongst women within the WUAs. This should cover for example, knowledge of central and local government policies in relation to farmers rights and land use rights; participation in water use and management; policies for water saving; cost-

benefit analyses for cropping investment; water management –based on experiences of managing surface and groundwater and its conjunctive use elsewhere in China; enhancing communications skills; training in conflict management.

- Each WUA executive, in consultation with WUG leaders, appoint at least two community representatives, whose task will be to increase awareness of the importance and potential impact of IWRM policies on farmer's livelihoods, and particularly amongst women. These facilitators can be WUA members, who will then receive appropriate training on increasing levels of awareness. In addition to their main task – of facilitating information exchange between women, and ensuring that relevant knowledge of recent policies and their impact is disseminated within the WUA - their work should also include developing an awareness within households of the WUA constitution, regulations, representation, aims, organisation and activities.
- Develop operating procedures that recognise the different approaches to participation favoured by women, ensuring that public meetings are held in ways that encourage their involvement, and that changes to irrigation operation at field level allow for women's other activities (eg: allowing for women's involvement in household work and children's education, just as allowance is made for male needs for

migration and off-farm employment).

These recommendations, above, are aimed at increasing women's participation in WUAs. However, it should be noted that there is also weak participation by the majority of men. Similar recommendations would apply to increasing participation by all members of the community.

### **3.2 Promoting gender issues with stakeholder organisations**

For those stakeholders involved with the Water Affairs Bureaus, Water Resource Departments, the Shiyang River Basin Management Bureau and related bureaus, the most important gender issue emerging from stakeholder consultations was the need for systematic co-ordination in designing and implementing river basin and IWRM planning.

Lack of expertise in particular areas such as demand management specifically in relation to women's conditions was also found to be an important limitation.

Guidance for promoting a gender-sensitive approach to IWRM is outlined below:

#### 1. "Mainstream" Gender

- Water sector staff and leading members of stakeholder groups should be aware of the importance of gender issues in water resources management.
- Water sector staff should be sensitive to gender issues throughout the project cycle - in design, implementation and monitoring.
- Water sector staff should analyse and be aware of the

- differential impacts of project activities on men and women.
2. Promote women's participation in decision-making in community organisations and WUAs, for example by:
    - Ensuring that women are represented at both the production group and executive levels, with a minimum of 25% representation.
    - Promoting women to deputy and deputy director positions.
    - Developing ways for women to express their needs, interests and views on water use and management decisions affecting their daily lives.
    - Consulting the Women's Federation on the roles played by women in water use and management.
  3. Carry out training on IWRM and Gender for staff in water sector organisations, and leading members of stakeholder groups, covering:
    - The need to understand the roles and needs of women in water use and management,
    - An awareness of women's needs to be promoted through IWRM,
    - The role of the Women's Federation in decision-making and training. (If necessary, particular attention must be paid to make sure the Women's Federation fully understands the water sector and the importance of IWRM.)
  4. Checks to make sure that information on Water Use and Management is provided to both men and women:
    - Effective channels should be developed for providing women with the fullest possible information.
    - Women's views and opinions should be sought on this information provision.
    - Meetings should be held at times and in locations that are suitable to both men and women, and women's attendance at meetings should be actively encouraged.
    - Water sector staff responsible for IWRM implementation should ensure that women have been consulted on throughout IWRM.



*Promote the role of the Women's Federation in water resources decision-making and training*

## 4 Conclusions

Women locally play important roles in water management, yet this is not accompanied by meaningful representation or participation by women in decisions on the use and management of water. This paradoxical situation is found in both urban and rural village communities, whether for the local organisation of cultivation and irrigation or for the organisation of domestic water use.

This paradox prevails despite the important contributions of women's organisations in the dissemination of information on water saving in general, and on particular water-saving policies.

The limited involvement of women in local management of water is, not surprisingly, made more significant by

even less involvement in planning at river basin or provincial level. A process of mainstreaming gender at these higher levels is of critical importance for ensuring that:

- local activities to improve women's participation are supported by government and water sector organisations; and
- progress made at a local level through measures outlined in this document is reflected in sustainable river basin management.

Successful IWRM requires an ongoing involvement by stakeholders in implementation at the local level. Their knowledge of local conditions, their experiences of the impact of IWRM policies, and their ability to disseminate information on IWRM are crucial for implementation.



*Successful IWRM requires an ongoing involvement by stakeholders at the local level, including the involvement of women*

Both rural and urban communities are essential stakeholders in carrying out these tasks. Consequently, a vital part of IWRM is to ensure their participation, both in consultations and in organisations implementing IWRM locally. This is a topic on which there is considerable national and international experience and guidance available.

Additionally, for IWRM to be implemented efficiently through a meaningful involvement of women as water users, it is essential that staff involved in IWRM design and implementation be both fully aware of the potential impact of IWRM on the status and conditions of women, and of the important contributions that women can make.

Achieving this can be done through promoting gender awareness, which will also enable staff in the water sector (from national down to township levels) to assess the extent to which their own organisations are facilitating women's participation, thereby enabling women to be involved as fully as possible in IWRM design and planning at river basin level. The Women's Federation can play an important role in this regard.

Although many initiatives are thought to be 'gender neutral', this is rarely the case. Programmes often bring new resources (training, tools, technology, etc.). Whether someone is male or female can influence whether he or she can take advantage of these opportunities. Programmes need to enable both women and men to benefit equally from water initiatives. Gaps between rich and poor women can often increase as a result of development interventions.

An initiative can also serve to reinforce existing inequalities, even when there

may be opportunities to help support people's efforts to build more equitable societies and economies. The importance of specific attention to gender and diversity issues is all the more critical given the generally low profile of these issues among many water professionals.

## Document Reference Sheet

### Glossary:

IWRM	Integrated Water Resources Management
Gender	Gender refers to the different roles, rights and responsibilities of men and women and to the relations between them
Mainstreaming	A globally accepted strategy for promoting gender equality. Mainstreaming involves ensuring that gender perspectives and attention to the goal of gender equality are central to all activities - policy development, research, advocacy/ dialogue, legislation, resource allocation, and planning, implementation and monitoring of programmes and projects

### Bibliography:

'Gender and Water.' Water Governance, Environment and Energy. United Nations Development Programme. <http://www.undp.org/water/crosscutting/gender.html>

'Gender Mainstreaming.' Women's Empowerment. United Nations Development Programme. <http://www.undp.org/women/mainstream>

### Related materials from the MWR IWRM Document Series:

Thematic Paper 2.2	Stakeholder Participation in IWRM Planning
Example 2.2	Initial Stakeholder Analysis for Shiyang River Basin IWRM Plan
Advisory Note 6.2/1	Administrative Steps for Developing Strong WUAs
Advisory Note 6.2/2	WUA Institutional Document Guides
Advisory Note 6.2/3	Village Level Planning of WUAs
Advisory Note 6.2/4	Promoting and Training WUAs
Thematic Paper 6.3/1	IWRM, Irrigation and its Social Context
Advisory Note 6.3/1	Social Monitoring

### Where to find more information on IWRM – recommended websites:

Ministry of Water Resources: [www.mwr.gov.cn](http://www.mwr.gov.cn)

Global Water Partnership: [www.gwpforum.org](http://www.gwpforum.org)

WRDMAP Project Website: [www.wrdmap.com](http://www.wrdmap.com)

## China – UK, WRDMAP

### Integrated Water Resource Management Documents

Produced under the Central Case Study Documentation Programme of the GoC, DFID funded, Water Resources Demand Management Assistance Project, 2005-2010.

#### Documents will comprise of:

Thematic Papers

Advisory Notes

Manuals

Examples

Training Materials

IWRM Document Series materials, English and Chinese versions, are available on the following project website

WRDMAP Project Website: [www.wrdmap.com](http://www.wrdmap.com)

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6.  
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