China – UK, WRDMAP
Integrated Water Resources Management Document Series

2. IWRM

EG2.2: Initial Stakeholder Analysis for Shiyang River Basin IWRM plan

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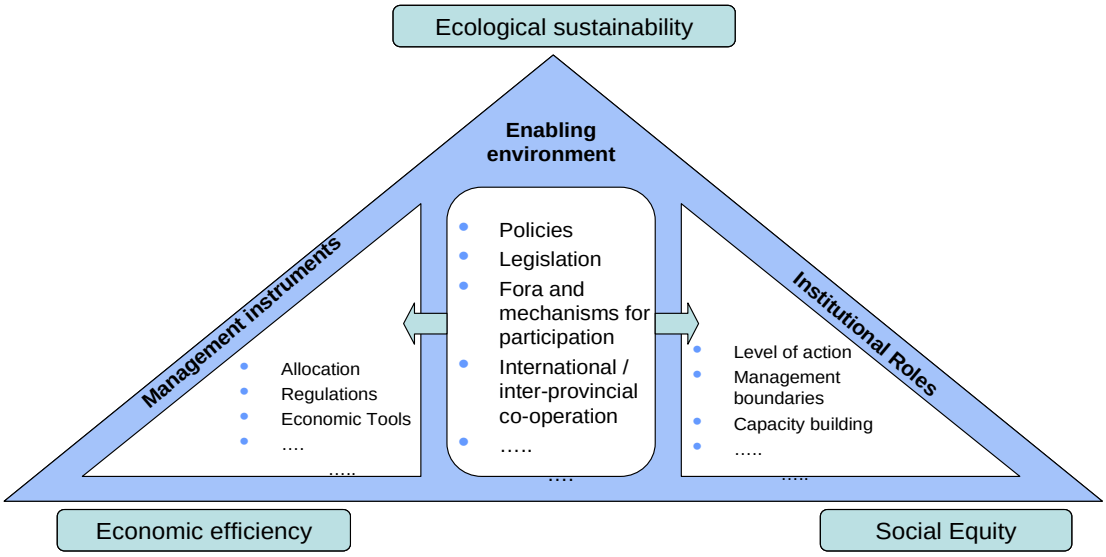
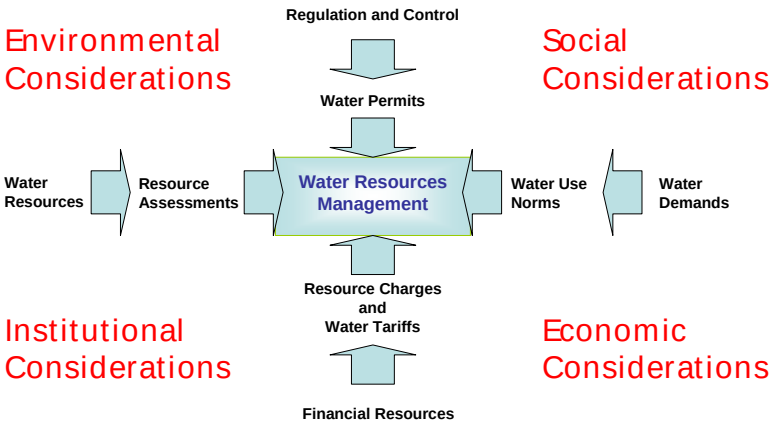
Integrated Water Resources Management (IWRM)

(Based after Global Water Partnership)



Driving Elements of Integrated Water Resources Management



(Second figure after WRDMAP)

Summary: The principles of integrated water resources management (IWRM) emphasise stakeholder participation. The question for water resources managers is how best to involve stakeholders in the planning process and in day to day management for implementation.

A stakeholder analysis is seen to be a very valuable tool for identifying the primary and secondary stakeholders, understanding their interests and influence, and planning participation, communication and related activities.

This document covers an example of an initial stakeholder analysis undertaken at the start of the process of preparing an IWRM plan for the Shiyang River Basin in Gansu.

This document should be read in conjunction with Thematic Paper 2.2 'Stakeholder Participation in IWRM Planning' in the same series, which provides background into the purpose, methods and uses of stakeholder analysis.

This document contains the following sections:

- Introduction
- Brief description of Shiyang River Basin
- The stakeholder analysis, as carried out at the start of the WRDMAP project
- Conclusions arising from the analysis

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

A stakeholder analysis was carried out at the start of implementation of WRDMAP. This was particularly important since many of the activities proposed related to aspects of IWRM and water demand management which were unfamiliar locally, or presented in ways which appeared unfamiliar, and which required much wider participation than the direct water sector organisations such as Water Affairs Bureaus and water supply companies.

The stakeholder analysis process provided an opportunity for many parties to consider the project objectives and the way in which different parties may be affected both by the project and more generally by the adoption of Integrated Water Resources Management (IWRM) practices. This stakeholder analysis formed the basis for future stakeholder consultations and the design of the associated elements of the communication and participation plans for each provincial case study.

The assessments that form the basis for these matrices were undertaken in the provincial case study areas through discussions with the main stakeholder groups, in addition to focus groups, and interviews with many of the primary stakeholders. In the case of each stakeholder group, each matrix identifies their main interests in relation to the elements of IWRM and water demand management as required for individual case study. It outlines the possible negative and positive impacts of project implementation on each stakeholder group or organisation. It also assesses the degree of influence each group has over project implementation.

This document presents the stakeholder analyses related to the two IWRM plans – for the Daling River Basin in Liaoning and the Shiyang River Basin in Gansu.

WRDMAP is concerned both with the development and management of water resources and water demand. Whilst bringing potential benefits through such means as addressing equity issues, creating frameworks for reducing conflicts between water users, protecting shallow well owners and poor households, and enhancing community management, its implementation can also create problems for groups of water users –in areas such as increase in water prices, reductions in irrigation supplies and coverage, and more generally from changing allocations between users. Hence, the project will have both positive and negative effects on different user groups. These different effects must be reflected in the stakeholder analyses, so that the project can fully grasp the significance of each stakeholder group's interests, both for the purposes of implementation and stakeholder consultations. It is important particularly to understand the possible negative effects of implementation on stakeholders, so that appropriate mitigating strategies can be developed. This issue is addressed in our stakeholder analysis with its emphasis on both the positive and negative impacts of implementation.

2 Shiyang River Basin

The Shiyang River Basin (SRB) covers an area of 41,600 km^2. It comprises all or part of four administrative units at municipality level and nine units at county level. The total population was about 2.3m people in 2003, of whom almost 80% are dependent on agriculture although about 75% of the GDP is derived from non-agricultural sources – particularly large scale mining industry in Jinchang. The agricultural population is partly urban, and many farm households have members who work part or full time in urban areas (both within and outside the SRB).

The total volume of water resources is estimated at 1.5bn m^3 in the six tributary rivers of the Shiyang River and the two adjacent rivers; there are numerous small reservoirs on most tributaries, storing about 17% of average annual runoff. Groundwater abstraction greatly exceeds recharge, which is mainly derived from lateral flows from desert areas and seepage from surface canals. The rivers have very small or zero residual flows downstream of the reservoirs and thus environmental conditions are poor.

There are about 270,000 ha (4.0 m mu) of irrigation although there are various estimates for some irrigation districts. A large reduction in irrigated area (about 28%) is envisaged under the Shiyang River Basin Strategic Plan down to 195,000 ha (2.9m mu) in 25 irrigation districts, although the reduction is not uniform across the basin. A very large increase in industrial activity is envisaged, partly related to mining and partly to agro-industry and other types.

The Shiyang River used to terminate in the Huqu region around Qing Tu lake, which dried up in the early 1960s following construction of the Hongyashan Reservoir, and expansion of irrigation in the Minqin oasis. The Minqin oasis is surrounded by desert and has been experiencing significant degradation as a result of changes in upstream water use.

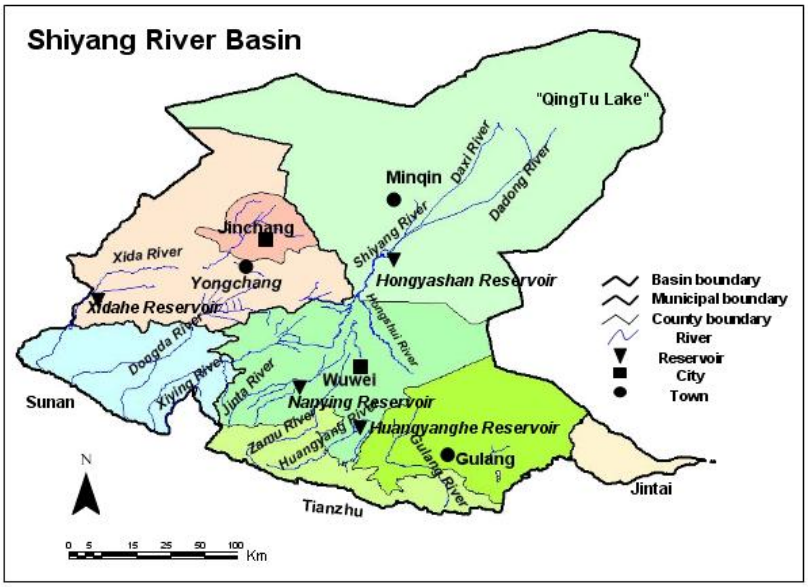
The Strategic Plan for the SRB was approved by State Council in 2007, and provides a framework for managing water use sustainably. This will be through a combination of measures, including reduction in irrigated areas, improvements to irrigation efficiency, construction of new transfer systems, and measures introduced to increase farm income from smaller cultivated areas.

Development of the strategic plan was driven by environmental objectives under the highest possible political leadership.

This example paper describes how stakeholder analyses were used in the subsequent IWRM plan.

Figure 1 Location of the Shiyang River basin

Figure 2 Shiyang River Basin



3 Initial Stakeholder Analysis for SRB IWRM plan

3.1 Primary stakeholders

Primary stake-holders	Interests of stakeholder in IWRM	Potential impact of on interest	Importance of IWRM for stakeholder	Influence of stake-holder on IWRM
Shiyang River Basin Management Bureau (SRBMB)	Provision of management skills, enhanced technical abilities. Acquisition of social analytical skills for river basin management planning. More comprehensive understanding of Shiyang River Basin. Political benefits from successful implementation of mandate. Improved co-ordination with line agencies. Clarity in relations between the SRMB and WRBs at various levels. Improved communications with WRBs. Improved communications with line agencies and water users. Defined and agreed division of management responsibilities with line agencies. Greater relevant expertise amongst SRBMB staff. Support for demand management policies from stakeholders.	H +	H+	H+
Jinchang WRB and Wuwei WRB and their county and district subsidiaries	Acquisition of IWRM tools and improved knowledge base. Opportunities to participate in decision-making, enabling the water users in their areas to have a means to express their requirements. More reliable water resource assessments.	H+ H+/- H+	M	M
Water Users in Rural Communities and in WUAs	More equitable and reliable access to water as a result of improved river basin management planning, management and development. Greater access to information on water demand allocation and prices. Involvement of user representatives in consultations on changes in water allocations, and on river basin planning Affordable/low water prices Reductions in water conflict. Compensatory/mitigation measures to cope with reduced water availability, particularly in the lower basin areas, where existing shortages and increasing groundwater abstractions	M+ H+ H+ G2/G3 G2/G3 G2/G3	M	L

Primary stake-holders	Interests of stakeholder in IWRM	Potential impact of on interest	Importance of IWRM for stakeholder	Influence of stake-holder on IWRM
	are most severe and where proposed improvements in social allocations to relatively poorer upstream users may not be possible within the river basin management proposals. New skills and techniques required to manage changing water allocations.	 G2/G3		
Industrial water users	Predictable and reliable access to water as a result of improved river basin planning, management and development. Improved access to information on water allocation and demand. Greater involvement in consultations on water allocations and prices. Affordable/low water prices Increased knowledge and resources for re-cycling and leakage detection and control.	M + H+ M+ G2 - G2	L	L
Domestic Water Users	Increase in reliability of supply for upstream and downstream users. Increased availability of information on water supply. Enabling environment for consultation on decision making concerning water use and allocation. Affordable/low water prices	M + H+ H+ G2	L	L
Water users on State Farms	More equitable and reliable access to water via involvement in decisions on basin planning and management [may require reductions in privileged access to water] Affordable/low price for water. Assistance with water-saving farming	M- G2 - G2	L	L

Note Reference to G2 or G3 relates to activities under other provincial case studies. These were separate but impinged directly or indirectly upon IWRM

3.2 Secondary stakeholders

Secondary stake-holders	Interests of stakeholder in IWRM	Potential impact of on interest	Importance of IWRM for stakeholder	Influence of stake-holder on IWRM
Gansu WRD	Increased understanding of SRB. Enhanced understanding of demand management policies, leading to greater interest. Improved information base for decision-making.	H + H+ H+	H	H
Gansu Hydrology Bureau	Increased knowledge of IWRM. Increase in use of data bases, and in levels of expertise in using these. Improved information for decision-making	H + H+ H+	H	H
Wuwei and Jinchang Municipal Governments	Increased information provided on SRB. Possibilities for more sustained and equitable water-sharing amongst their constituents via government's involvement in decisions on river basin planning and management	M +	L	L
Gansu Provincial Government and Peoples' Congress	Potential for greater involvement in decision making on water use and allocation. Provided with more adequate information on SRB. Possibility of increased participation by political representatives in decision-making on water use and allocation. Low water prices	M +	L	L
Environmental Protection Agency – at provincial, municipal levels	Enhanced integrated natural resources management. Increased data-sharing. Improved co-operation and communication with WRB and WAB.	M +	M	L
Government line agencies in Jinchang and Wuwei Municipalities	Possibilities for increased involvement in decisions on water use and allocation. Benefiting from data-sharing Improved communications between agencies.	M +	L	L
Government Non-Sector Agencies in Wuwei and Jinchang Municipalities	Enhanced possibilities for raising the needs and requirements of particular water user groups. Increased opportunities to protect the rights of these groups through greater involvement in decision-making. Low water prices	L +	L	L

Secondary stake-holders	Interests of stakeholder in IWRM	Potential impact of on interest	Importance of IWRM for stakeholder	Influence of stake-holder on IWRM
Construction Department	Need for more water related infrastructure. Operation and maintenance of water infrastructure not operated by others.	M +	L	L
Forestry Department	Need for more afforestation in terms of improved upper catchment management Need for more afforestation in terms of sand / desert encroachment control	M +	L	L
Private Water Supply Companies	Greater information available for management and planning	L +	L	L
Education Department	Increased information provided to schools on water resources management	M +/-	M	L
Ministry of Water Resources (MWR)	Improved knowledge on the adoption of IWRM practices at provincial and local level. Improved knowledge on how to manage the development of provincial level River Basin Organisations.	H+	H+	H+
Donors	Replicable model for introduction of IWRM in water-stressed basins, ensuring the access to water by poor people	M+	M	M

4 Conclusions

A stakeholder analysis progresses through several stages:

- Providing stakeholders with briefing documents;
- Devising a stakeholder matrix and analysis, indicating:
  - the potential institutional and/or social impact of the plan or project for each stakeholder;
  - the potential risks for each stakeholder from implementation;
- Organising consultations with representatives of each stakeholder group;

In this case, which was part of a project to introduce IWRM concepts in the Shiyang River a river basin profile was first prepared on the basis of initial discussions. This was circulated more widely and used as a basis for preparing the stakeholder analysis, which was done in a series of meetings with key stakeholders.

This analysis was prepared led to some important observations for implementation of the project:

- The WRB/WAB and WMS are seen to be very influential for the success of the project, but equally the project is only one of their many activities. This is reflected in the high influence/low importance scores. The low importance scores ascribed by some to these stakeholders during the workshops may, however, be more a reflection of their current understanding of the nature of the project than a true indication of its importance. This needs to be resolved at an early stage in the project through workshops, training programmes and more specifically through direct discussions with the affected stakeholders. This might then lead to a higher importance score.
- The reverse is true for poor farming households, for whom the project is important but they have little or no influence over it.
- Primary stakeholders in groundwater irrigation areas, particularly G2B, have a high influence and face a possible or perceived negative impact as a result of project activities. This is reflected in a low interest in the project which needs to be resolved.
- The project is of low importance to the agriculture bureau and they have little influence, yet they will be required to provide assistance which will increase their workload, but by contrast the Husbandry Bureau was felt to gain from the project despite a marginal importance
- There was a tendency to state positive impacts and neglect negative ones, and it is clear that the analyses developed in these workshop are preliminary as they are still based on a limited understanding of both stakeholder analysis and of the project by some participants

Clearly many of the above issues needed addressing during the course of the project and were incorporated in the project Communication Plans and related activities.

Many of the observations above and in the initial stakeholder analysis in Section 3 reflect the understanding at the start of the project. Some of these views were modified during the IWRM planning phase, and can be expected to be further modification during implementation. The stakeholder analysis should be updated periodically to take account of changes in interests and knowledge as well as in institutional arrangements as implementation progresses.

Document Reference Sheet

Glossary:

IWRM	Integrated Water Resources Management
Stakeholder	Any person, group or organisation that has an interest (either directly or indirectly) in a programme, plan or project and its implementation and management
WRB	Water Resources Bureau
WUA	Water User Association
SRB	Shiyang River Basin

Bibliography:

Paul Van Hofwegen (2001) Framework for Assessment of Institutional Frameworks for Integrated Water Resources Management. Abernethy (2001)

Related materials from the MWR IWRM Document Series:

Thematic Paper 2.2	Stakeholder Participation in IWRM Planning
Thematic Paper 6.3/1	IWRM, Irrigation and its Social Context

Where to find more information on IWRM – recommended websites:

Ministry of Water Resources: www.mwr.gov.cn

Global Water Partnership: www.gwpforum.org

WRDMAP Project Website: www.wrdmap.com

China – UK, WRDMAP

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

WRDMAP Project Website: www.wrdmap.com

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