

China – UK, WRDMAP Integrated Water Resources Management Document Series

2.
IWRM

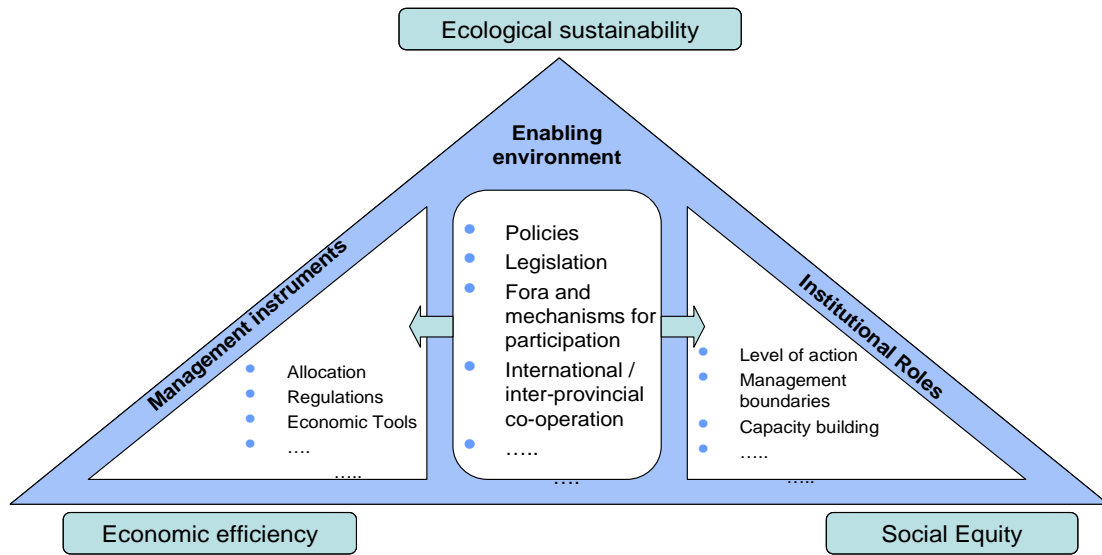
Thematic Paper 2.2: Stakeholder Participation in IWRM Planning

May 2010

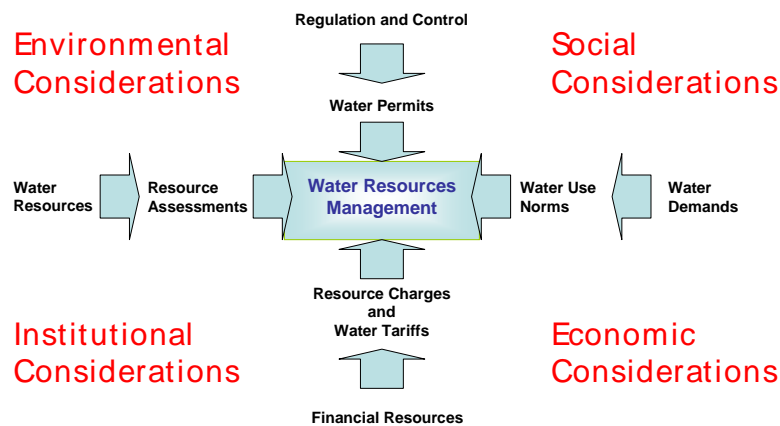


Integrated Water Resources Management (IWRM)

(Based on 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.

This document covers the following:

- Stakeholder participation; overview describing what a stakeholder is, the purpose of a stakeholder analysis, and nature and benefits of participation
- Stakeholder analysis: description of the recommended methods and some examples of stakeholder analyse
- Use of stakeholder analysis: how to use the analysis to design communication and participation programmes
- Co-ordination and participation: Description of arrangements for coordination and participation, with specific coverage of the constraints to participation and how to resolve these
- Campaigns for dissemination of information: a brief summary of potential methods, with an example from WRDMAP.
- Conclusion

This document should be read in conjunction with the Example 2.2 'Initial Stakeholder Analysis for Shiyang River Basin IWRM Plan' in this series.

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 Overview to Stakeholder Participation

1.1 Introduction

In many parts of the world, far greater importance is now being attached to the stakeholder involvement and participation in water resources management than was the case in the past. As resources become constrained and as water-related issues increasingly affect livelihoods, the environment and economic development, there are an increasing number of people and organisations affected by water related decision making.

Many organisations and individuals are involved in managing water or have interests in how it is managed. The governance and management of water is ultimately about who gets how much water, of what quality, where and when, and who makes the decisions about this. It is thus essential that there should be effective participation in the sector. The very large number of stakeholders – including many organisations with varying interests and influence as well as millions of individual consumers, - means that they need to be represented and involved effectively.

GWP clearly state the requirement to ensure a framework for broad stakeholder participation for the development of integrated water resources management (IWRM) plans,:

“Partnerships and strong multi-stakeholder groups and forums for participation in the development of IWRM Plans are essential partly due to the cross-cutting nature of IWRM. An IWRM plan should not be an

isolated exercise of a water department. It has to involve all the important governmental and non-governmental stakeholders in the water sector. Broad participation and communication with all stakeholders is essential in the process that builds understanding and mobilises the actors”

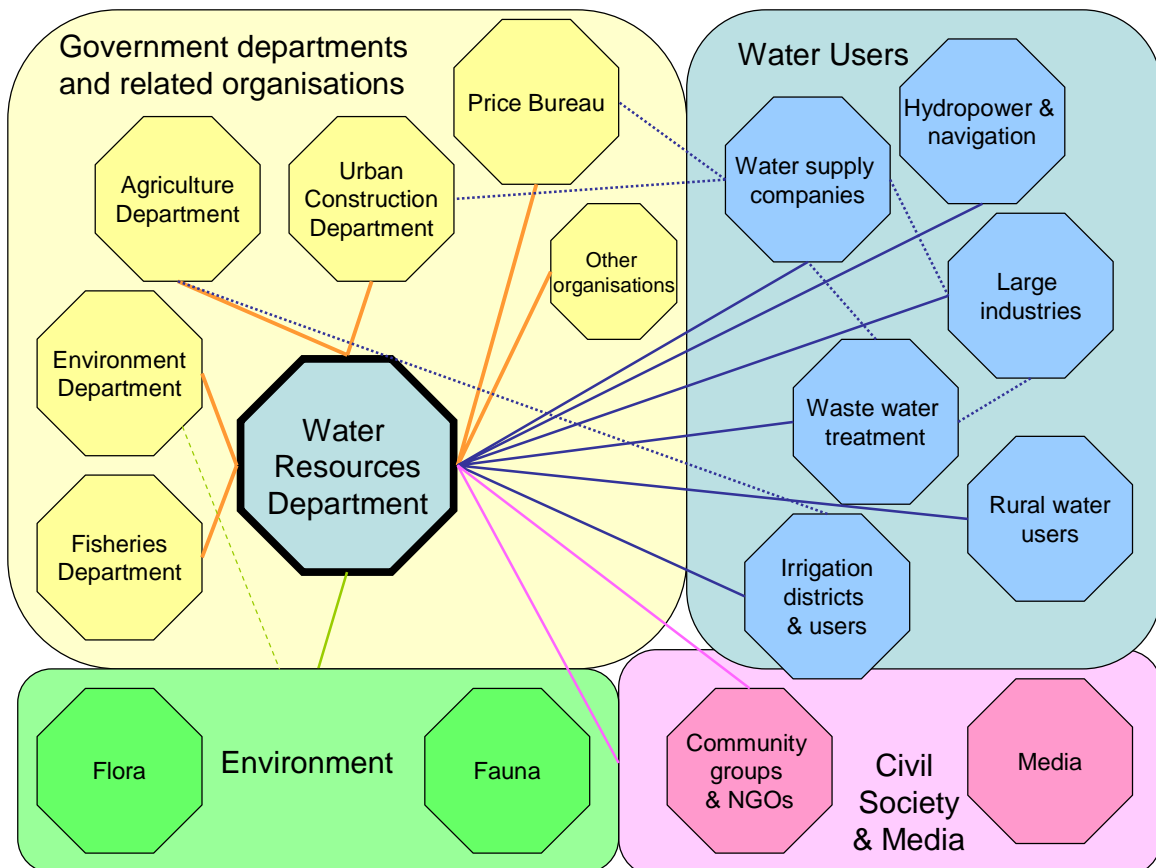
The emphasis given to stakeholder participation in all processes is one of the major distinguishing features of IWRM in comparison with traditional water resources management.

The term ‘stakeholder’ is, however, potentially misleading. Whilst it should be clear that it includes any organisation or individual, the word ‘stakeholder’ is often used in a very restricted sense to mean water users, and not the numerous organisations

and government departments who are, or should be involved in IWRM. For example, the Department of Water Affairs and Forestry (DWAf) of the Republic of South Africa Guidelines for stakeholder participation in IWRM in South Africa (2004) state simply that a “stakeholder is any individual or group who uses water”. Bandaragoda (2005), in a review of stakeholder participation in Asia, also focused on public participation by rural water users, rather than organisations such as Government environment department.

The definition of ‘stakeholder’ used in this document is given in Section 1.2. This covers all categories of stakeholder involved in the process of IWRM (see Figure 1 for an example of these broad categories of stakeholder, together with some, but not all of the links between them).

Figure 1. Simplified structure of stakeholders for IWRM planning in China



This document addresses the following questions:

- What do we mean by stakeholders?
- How do we assess the importance to the planning process of the various stakeholders involved in its design and implementation?
- How, when, and why should stakeholders be involved in plan development and implementation?
- How can we encourage stakeholders to become involved in the planning and implementation phases?
- What factors might constrain the various stakeholders from becoming involved?
- What are the best ways for the 'water administration' to communicate with stakeholders?
- How can we use our assessments of stakeholders to identify possible risks to plan implementation?

1.2 What is a stakeholder

A stakeholder is any person, group or organisation that has an interest or involvement in a programme, plan or project and its implementation and management (either directly or indirectly).

This definition includes intended beneficiaries and intermediaries, those who will be affected (positively or negatively), those who have an interest, and those involved in decision making.

For example, if a project is concerned with the use of groundwater,

stakeholders are those who have an interest in the resources of a specified aquifer. This may be because they manage or use groundwater, or because they are engaged in activities that could cause groundwater pollution, or because they are concerned with groundwater-related environmental management.

Box 1 Classification of IWRM stakeholders

One useful broad classification of stakeholders is as follows:

- water users — consumptive and non-consumptive uses
- water polluters — agriculture, industry, domestic etc.
- water managers — organisational and operational level
- water policy and law makers — constitutional level
- society — general interests represented by government and
- specific interests represented by NGOs

It depends on the socio-economic and the political situation whether all the interests are represented. So it is important to assess which stakeholders' interests are considered and which are not considered, but are important for sustainability.

A water use (flow) diagram can be most helpful in identifying the stakeholders. Water use will be different for each basin. Therefore, stakeholders have to be identified on basin level.

Source: Van Hofwegen (2001)

Stakeholder groups can usefully be categorised into:

- Primary stakeholders: those groups affected directly by the activity; they can be affected both positively and negatively

- Secondary stakeholders: those groups who are not affected directly but whose influence can have a significant effect on the outcome of some part of the plan.
- Key stakeholders: those groups who are crucial for achieving the IWRM plan outcomes. Note that key stakeholders may be either primary or secondary stakeholders.

Unfortunately there is no universally accepted definition of primary and secondary stakeholders. For example, ESCWA (Economic and Social Commission for Western Asia) refer to water users and beneficiaries as primary stakeholders, whilst water organisations responsible for managing and delivering water are called secondary stakeholders.

In this document, however, both the users of water (and their representative organisations, such as WUAs) and those directly involved in managing water (eg WABs at the local level) are regarded to be primary stakeholders. Secondary stakeholders include all other organisations, interest groups etc who involved in the water sector.

A structure of stakeholders in the water sector in England and Wales (UK) is presented in Figure 1. This indicates the range of government, private sector, civil society organisations involved. Individual users are specifically represented on this through representation on bodies such as the UK Irrigation Association, the National Farmers' Union and the Consumer Council for Water. They are also represented indirectly via local Government, which in turn has internal processes for participation.

1.3 Stakeholder analysis

Stakeholder analysis can be used to understand the interest and influence of all parties engaged in an activity, or in making or implementing policy, and any intermediaries. It provides a framework for identifying all relevant stakeholders, including those who will support or oppose change. It can also help engage with stakeholders.

Stakeholders with high influence and interests aligned with the subject are the people or organisations who should be fully engaged. These will be key 'decision-makers' and 'opinion leaders'.

Stakeholders with high interest but low power are very important – they may include both some other Government departments and some categories of individual water users. They will need to be carefully addressed in the participation strategy, through measures such as improved procedures for collaboration with some other departments, and organisation of disadvantaged water users into an interest group or coalition (such as a Water Users' Association) which can then gain a 'voice' to lobby for change.

Those with high influence but low interest should be kept satisfied and ideally brought around to support the policy or activity.

A wide range of stakeholders is involved in the complex systems relating to the management and provision of water. Stakeholders influence activities within systems of water supply and resources in different ways.

Figure 2 Stakeholders in the water sector in England and Wales



For example, Ministries of Water Resources focus on higher level water resource policy and regulation, while domestic water supply departments focus on service provision; finance departments may favour particular types of investment for the water sector; water user associations relating to different types of water use may request better levels of service and they may relate more to different

government and non-government actors, and so on.

Understanding who these stakeholders are and their different roles, responsibilities and inter-relationships is a crucial starting point in understanding where improvements can be made in the water sector.

1.4 Nature and benefits of stakeholder participation in IWRM

Overview

This section indicates the nature of participation first by organisations and then by the users. The vast number of individual users means that appropriate systems for representation need to be devised. There are a smaller number of institutional stakeholders involved, but there are still many. Arrangements for coordination and participation by these organisations needs to be carefully designed.

There is a need for an enhanced process for participation within sub-sectors and for improved coordination between sub-sectors to reflect the diversity of interests and interest groups.

This depends on a lead organisation that instigates and encourages the process of stakeholder participation in water resources management. There needs to be both the internal commitment within this organisation to undertake the task and an overall enabling environment, and there needs to be a champion to drive the process.

Although there is an evident need for participation, there are costs associated with participation, and the different stakeholders may have differing views on whether they want to participate or how this should be organised. The drivers, incentives and constraints to participation should thus also be identified in the stakeholder analysis and subsequent consultations.

Some stakeholders might misunderstand the purpose of participation,

and may feel that some organisations are trying to offload some responsibilities. They may also seek compensation for the short-term cost or lost income resulting from participation. In some cases this is justified, but in others the short-term benefits of participation should be sufficient incentive. They may well also have differing view on the long-term benefits. These issues should always be considered and discussed openly with each stakeholder and between stakeholders. Wherever possible, a 'win-win' explanation should be found to encourage stakeholder participation. The overall advantages should be clear, but sometimes the details of who should participate and how they should participate in particular activities can be contentious.

Coordination between organisations

The need for involvement by a range of government administrative and sectoral organisations concerned with water is explicitly evident from use of the word 'integrated' in IWRM. It is necessary to integrate views and plans held by agriculture, forestry, environment, urban planning, poverty reduction agencies to name but a few. Cooperation between line agencies and their related departments at different administrative levels is needed for successful IWRM and this implies collaborative or at least 'consultative' planning involving the many sectoral bodies.

This particularly includes collaboration between water and environment departments for urban and industrial uses, and between water and agriculture departments for rural uses. Many of these organisations will have their own sectoral plans which involve water (or make assumptions about it),

and these all need to be recognised in the IWRM plans.

The importance of involving and collaborating with stakeholder organisations is well-recognised. The Asian Development Bank, for example, states the need for “*institutionalized stakeholder participation... [and well-defined] responsibilities of the national water apex body, river basin organizations, local governments, service providers and water user organizations, and the private sector, amongst others*” (<http://www.adb.org/water/wfp/IWRM-25-River-Basins.pdf>)

Difficulties in co-ordination are increased by the fact that the river basin rarely coincides with the administrative units used by local Government or many sector agencies – they may work to different boundaries, collecting and using data in different ways and for different purposes. Yet more complexity results from the vertical and horizontal institutional separation that often exists at each administrative level.

“Integration” may need to be achieved via high-level multi-sectoral forums or commissions and, on a day-to-basis, or by effective cooperative working arrangements between the various departments. Some organisations may have good working relations already, others may have little interaction, and in some cases there may be apparent incompatibilities in objectives, inter-departmental or inter-organisational rivalry that makes cooperation difficult. At an individual level, some may fear the loss of their jobs or be unwilling to adapt in the ways required.

It is easy to state the need for coordination, but it is rarely easy to

achieve and it will take a determined effort over a long period

Public participation and involvement of water users

Public participation in water management in developing countries often has a strong focus on the direct users of water – particularly irrigation users. (See Box 2 for an example in Nepal.) Globally, however, public participation is much wider than this and involves other interest groups – especially those concerned with environmental conditions and recreational uses of water. In the European Union, the water framework directive (WFD) explicitly encourages active participation by individuals as well as by organisations (Box 3).

Box 2 National Federation of WUAs – Nepal

Representative user organisations are set up at district and national level in Nepal. These comprise representatives elected from WUA leaders throughout the country, and they play an active role in consultations on national water policy and programmes

This is a much more active form of participation than was the case previously in the UK, where participation was primarily via democratic elections to local and central government. Non-governmental organisations (consumer councils, farmers’ unions, environmental groups) may represent special interest groups who can lobby government or attempt to influence the water sector directly, but there was traditionally little direct involvement by users or the general public in decision-making or influencing in the water sector.

Active participation in the water sector is now acknowledged to a pre-requisite for IWRM and is reflected specifically and in details in guidelines prepared by

most organisations responsible for promoting or implementing IWRM.

Box 3. European Water Framework Directive: stakeholder consultation

One of the objectives of the European Water Framework Directive (WFD) is to make water policy more transparent through the active participation of all stakeholders. According to Article 14, Member States must "*encourage the active involvement of all interested parties in the implementation of [the] Directive, in particular in the production, review and updating of river basin management plans*".

The Directive calls on Member States to ensure that for each river basin district, they publish and make available for comments from the public, the timetable and work programme, the identification of the main water issues in the district, and the draft river basin management plan.

The Directive provides the framework for public consultation, but each Member State of the EU implements the Directive in its own way. Good public information is a pre-requisite to public consultation.

To ensure consistency between districts, most countries set up a national framework. In international river basins, countries often establish co-ordination mechanisms and, in some basins, the riparian countries adopt a common strategy for public participation. Their experience shows that consultation should be as local as possible and take a bottom-up approach at the basin and sub-basin scale.

The first public consultations generated a better understanding of public expectations. The experiences of Member States showed that water is of great public interest. It was also shown that raising the awareness of decision makers and senior administrators at local, regional and national levels is essential.

Communicating appropriately, using simple language tailored to the general public, proved crucial. Most important of all, decision making processes must be transparent. There must be ways to explain the decisions made and to account for the results.

<http://europa.eu/scadplus/leg/en/lvb/l28002b.htm>
http://ec.europa.eu/environment/water/water-framework/index_en.html

It is never possible for all users to participate individually, and in many cases they will not want to – but they do need to be represented on the planning process. This raises key questions about how the representatives should be selected and involved. There is always a risk that the interests of some vulnerable groups will be neglected, or that they will be unable to participate effectively because their voice is not heard.

In the case of an IWRM plan, there may need to be a hierarchy of representation. Individual users will be represented on local WUAs, and then one or more representative of all WUAs should be a member of the high level council, committee or working group. In China, other categories of individual users may need to be represented in other ways, for example via local branches of the All China Women's Federation. It is essential to be pro-active in identifying and involving such groups.

Benefits of participation in IWRM planning

A participatory approach to planning should yield considerable benefits in improving the quality and acceptability of a plan. People are far more willing to accept a difficult situation if they understand the reasons behind it, and were involved in the process of reaching a decision on how to cope with it.

There are many examples of the ways in which stakeholder participation has enhanced planning and project implementation in the water sector. For example, the management of the Murray-Darling Basin in Australia is based on an approach to environmental recovery that stresses the importance of stakeholder collaboration. Water management in

South Africa, involving nineteen regional catchment agencies, is increasingly involving stakeholders in water and ecological management. In China, watershed rehabilitation has for many years involved stakeholder consultation and collaboration between ministries, line agencies, government levels and village administration.

More specifically, participation should ensure that:

- The plan (and policies) are complete, responsive to needs and address all the important water related issues in the Basin. This means any other relevant policies or plans are presented and explained to other stakeholders, and they should be asked their views on the important water related issues in the river basin.
- The plan is practical and appropriate, drawing on the knowledge of a wide range of interested parties.
- Capacity and relationships are strengthened through participatory activities which will build the capacity of participants for other activities and result in stronger working relationships and partnerships, strengthen local support and contribute to a sense of ownership.
- Risk of failure is reduced, by identifying and addressing possible risks and conflicting interests.

Benefits of participation in implementation

Participation has substantial benefits at the implementation stage as well:

- Social consensus makes implementation of decisions taken by a regulatory agency easier.
- Management burden should be reduced, as some activities (such as monitoring and inspection) can be carried out effectively and economically through co-operative efforts.
- Decision-making is facilitated by integration and co-ordination.
- The availability of data and information, and the importance of data sharing is understood and facilitated
- Stakeholders understand and play their part responsively in ensuring that the river basin is managed sustainably and that the IWRM plan is implemented successfully if they are involved and kept informed.
- Conflicts and duplication in management and policies are minimised if the stakeholders are coordinated and understand the responsibilities, plans and priorities of each of the other stakeholders.

Summary of benefits

Given these benefits, it is hardly surprising that evaluations indicate that planning is more successful when stakeholders are involved, and that the plan subsequently corresponds more closely to their needs. The sooner involvement starts, and the more substantial their participation is in influencing and decision-making, the greater the benefit.

These benefits apply whether for individual small projects or large scale regional plans. However the complexity of ensuring effective

participation and avoiding 'capture' of the process increases with the scale of the activity. This applies equally to 'capture' by an influential sectoral organisation or by a single powerful individual.

Costs of participation

Participation does take time, may involve direct costs and may influence the time available for other income-generating activities. Both individuals and organisations incur such costs. This needs to be recognised and participation designed accordingly. Some costs may be more apparent than real, and may be offset by benefits but this may not be immediately apparent to participants. In some cases it may even be perceived that 'participation' is a way of transferring responsibilities without the resources to carry out the task in question. Such issues can be addressed by careful design of

participatory arrangements, but they do need to be recognised explicitly.

2 Stakeholder Analysis

2.1 Range of stakeholders in IWRM

IWRM depends on a clear understanding of stakeholders: who is involved in making decisions on water resources management and who will be affected by those decisions. Once this is understood, ways of getting the right mix of stakeholders involved at appropriate levels can be devised.

To identify who is involved and who is affected it is useful to draw up a matrix of stakeholders, and their roles and responsibilities. This can be a useful first step in understanding decision making at different levels in basin management. An example of such stakeholder matrix for a small river basin in Australia is given in Table 1.

Table 1 Stakeholder identification matrix for Namoi River Valley, Australia

Scale	Private	Public
Local (operational)	<p>Farmers and graziers</p> <ul style="list-style-type: none"> ▫ estimated at 165 families <p>Rural businesses</p> <ul style="list-style-type: none"> ▫ several farmers operate off-farm business ventures; ▫ suppliers and extension services (supply agrochemicals, farm machinery, irrigation equipment and fertilisers; includes consultants and advisers); ▫ transport (private stock and grain transport companies). <p>Land care groups</p> <ul style="list-style-type: none"> ▫ groups supported by government grants, but mainly locally owned and organised by farmers. 	<p>Agricultural extension agents</p> <ul style="list-style-type: none"> ▫ extension services of resource management agencies, primarily Departments of Agriculture, Conservation and Land Management (limited, and decreasing); ▫ consultants (provide independent agronomic and on-farm financial advice; based within the region); ▫ shire officials; ▫ three shires (Gunnedah, Quirindi, Murrurundi Shire) influence land ownership transfers, collect land taxes, and require local environmental management plans
Regional / State (implementation)	<p>Businesses</p> <ul style="list-style-type: none"> ▫ banks (includes agricultural development banks, loan services); ▫ wholesalers; ▫ services (supply agrochemicals and fertilisers); 	<p>State officials (agricultural extension and technical officers)</p> <ul style="list-style-type: none"> ▫ includes Conservation and Land Management, Department of Water Resources, Department of Agriculture, Environment Protection Authority, National Parks and Wildlife

Scale	Private	Public
	<ul style="list-style-type: none"> ▫ transport (private stock and grain transport companies). ▫ chemical companies; ▫ private consultants. ▫ Regional Development Board ▫ Private grower organisations (NSW Farmers, Grains Council of Australia). <p>Media</p> <ul style="list-style-type: none"> ▫ local and regional newspapers, television and radio stations (profile major resource management issues; influence changes in attitudes; market products and services). 	<p>Service, State Rail, State Forests, Rural Lands Protection Board;</p> <ul style="list-style-type: none"> ▫ includes some regional policy and planning by government. <p>Regional basin management organisations</p> <ul style="list-style-type: none"> ▫ North West Total Catchment Management Committee; ▫ Liverpool Plains Land Management Committee; <p>Academics</p> <ul style="list-style-type: none"> ▫ social, economic and biophysical research scientists from local and regional universities, and research field stations.
<p>National (strategic / policy)</p>	<p>National businesses</p> <ul style="list-style-type: none"> ▫ banks (national policy affects borrowing capability, interest rates); ▫ wholesalers (impact on product values and input costs); ▫ services (provide consultancy services); ▫ transport (provide national infrastructure). <p>Organisations</p> <ul style="list-style-type: none"> ▫ Private grower organisations (NSW Farmers, Grains Council of Australia); ▫ organic farming organisations. <p>Media</p> <ul style="list-style-type: none"> ▫ national newspapers, television and radio stations (profile major resource management issues; influence changes in attitudes; market products and services). 	<p>Philanthropic organisations</p> <ul style="list-style-type: none"> ▫ Australian Conservation Foundation; ▫ Inland Rivers Network. <p>Officials and programmes in federal organisations</p> <ul style="list-style-type: none"> ▫ Murray–Darling Basin Commission; ▫ Land and Water Resources Research and Development Corporation; ▫ Rural Industries Research and Development Corporation; ▫ National Landcare Program; ▫ National Dryland Salinity Management Program. <p>Media</p> <ul style="list-style-type: none"> ▫ as for private stakeholders (includes ABC TV and Radio).
<p>Global (strategic / policy)</p>	<p>International agribusinesses</p> <ul style="list-style-type: none"> ▫ none thought to be influential, although much agricultural produce is exported through national organisations to international markets; ▫ global markets influence local farming practices (e.g. planting decisions). 	<p>Academic and researchers</p> <ul style="list-style-type: none"> ▫ none thought to be influential, although international researchers will use Liverpool Plains as a comparative field site for research. <p>Treaties</p> <ul style="list-style-type: none"> ▫ federal government requires states and regions to comply with national policies derived from international agreements, such as the General Agreement on Tariffs and Trade and the Asia-Pacific Economic Co-operation, and global environmental initiatives including Ecologically Sustainable Development treaties. <p>Philanthropic organisations</p> <ul style="list-style-type: none"> ▫ none thought to be influential.

Source: A Handbook for Integrated Water Resources Management in Basins www.inbo-news.org

The list of stakeholders identified in the initial matrix for IWRM studies in the Shiyang River Basin in Gansu Province under WRDMP was as follows:

Primary

- Shiyang River Basin Management Bureau (SRBMB);
- Jinchang WRB and Wuwei WAB and their county and district subsidiaries
- Water Users in Rural Communities and in WUAs
- Industrial water users
- Domestic Water Users
- Water users on State Farms

Secondary

- Gansu WRD
- Gansu Hydrology Bureau
- Wuwei and Jinchang Municipal Governments
- County and Township Governments
- Gansu Provincial Government and Peoples' Congress
- Environmental Protection Bureau
- Government line agencies in Jinchang and Wuwei Municipalities
- Government Non-Sector Agencies in Wuwei and Jinchang Municipalities
- Agriculture and animal husbandry bureau
- Agricultural technical extension service
- Land resources Bureau
- Construction Department
- Forestry Department
- Private Water Supply Companies

- Education Department
- Ministry of Water Resources (MWR)
- County Women's Federation
- Resettlement Office
- Municipal Civil Affairs Bureau - Wuwei
- Municipal Poverty Alleviation Office - Wuwei

Although lengthy, this is still not a comprehensive list. However, it includes most of the major stakeholders, and some who were subsequently considered to have marginal significance.

The stakeholder analysis and subsequent discussions led to the observation that some of these were unimportant, and that there were others not listed who were more important – but this list was a useful starting point. For example, the Shiyang River Basin Commission was not mentioned – possibly because it is a new high-level organisation which has not yet been very visible at local level. However, the role of this commission and the implementing committees at Municipality level were identified in the next stage of the consultation process.

2.2 Purpose of a stakeholder analysis

The purpose of a stakeholder analysis is to:

- Identify and define the characteristics of the various stakeholder groups, and ensure all are included.
- Assess in what way the stakeholder is affected by the various aspects of the water regime;

- Assess in what way the stakeholder affects the water regime;
- Assess the ways in which they might affect or be affected by a plan, programme or project
- Understand the relations between stakeholders - including an assessment of actual or potential conflicts of interest and expectations.
- Identify relations between stakeholders that can be developed to facilitate implementation.
- Assess the capacity of different stakeholders to participate in different phases of the plan, programme, activity or project.
- Assess possible risks to implementation resulting from the activities of particular stakeholder groups or from conflicts between stakeholders.

The stakeholder analysis should be carried out at the very start of the planning exercise, but it may need to be updated periodically as more information and interests become apparent.

2.3 Initial stakeholder analysis

An initial group of key stakeholders can be drawn from this matrix, and they can prepare the stakeholder analysis. For each stakeholder in the matrix, the group should assess their interest and influence and they should modify the initial stakeholder list if appropriate. The analysis can be done initially by a very small group or even an individual in the WAB but there is a risk of omitting important groups or opinions; in this case the stakeholder

analysis may need revision after the initial phase of stakeholder consultations.

In WRDMAP, for example, this information was tabulated, as part of an IWRM Plan for the Upper Daling River Basin, Liaoning Province. It is interesting to note that the primary stakeholder list brings together mainstream water agencies such as the WAB with community organisations representing water users. Both the water management technocrats and the community organisations have a 'primary interest' in the plan outcomes but they clearly will have very different views of the issues and priorities.

The full analysis is published separately (see Example 2.2 'Initial Stakeholder Analysis for Shiyang River Basin IWRM Plan'), but an extract of the findings for two key stakeholder groups (the Chaoyang WAB and village water users) is presented in Table 2.

These observations may not be objectively 'correct' but they are an invaluable starting point for designing consultations and participation. It is possible, indeed likely, that some stakeholders will not fully understand their own interests or influence over IWRM, let alone those of other stakeholders'. However the initial stakeholder analysis should be viewed as a starting point, and not a finished product.

A slightly different format was used in Gansu, as in Figure 3. This was prepared by a different group of stakeholders and this is reflected in the slightly different presentation, but it served the same valuable purpose for planning communications and participation.

Table 2: Extract from the Upper Daling River Basin stakeholder analysis

Potential institutional and/or social impact	Potential risks to/from IWRM implementation
<i>Chaoyang Water Affairs Bureau (Key Stakeholder)</i>	
Provision of management skills, enhanced technical abilities.	Insufficient co-operation and co-ordination with municipal and county bureaus limiting successful IWRM implementation
Acquisition of social analytical skills for river basin management planning.	Inadequate exchange of documentation and data with municipal Environmental Protection Bureau
More comprehensive understanding of the water resources of the Upper Daling River Basin (UDRB).	Ability of the Chaoyang WAB restricted by its relying on the Liaoning WRD to provide information and instructions on IWRM implementation, rather than acquiring the skills and capacity to understand IWRM and implement IWRM plans
Greater clarity in relations between the WAB and WRBs at various levels, in particular at the provincial level.	
Improved communications with other WABs.	
Improved co-operation and co-ordination with other bureaus	
Improved communication with water users	
Defined and agreed division of management responsibilities with bureau	
Defined and agreed division of increased level of management responsibilities with Shenyang WRD	
Enhanced expertise amongst WAB staff	
Support for demand management policies from stakeholder groups.	
<i>Village water users, with an emphasis on poor and vulnerable households</i>	
More equitable and reliable access to water as a result of improved river basin management planning, management and development.	Improvements in planning at river basin level failing to materialise in improvements at county level, thereby restricting more equitable and reliable water use
Greater access to information on water demand allocation	Information available, but not provided to users adequately by county water departments, or by village committees
Involvement of user representatives (village committees, leaders of village groups) in consultations on changes in water allocations, and on river basin planning in general.	Involvement by villagers not promoted by county water departments, and/or county governments, and/or village committees and village groups
Reductions in water conflict.	Increasingly limited access to groundwater and lack of viable alternatives resulting in increasing levels of water conflict
New skills and techniques required to manage changing water allocations.	

Source: WRDMAP

Table 3: Extract from the Shiyang River Basin stakeholder analysis

Interests of stakeholder in project	Potential impact of case study on interest	Importance of case study for stakeholder	Influence of stakeholder on case study
<i>Shiyang River Basin Management Bureau (SRBMB) - Primary</i>			
Provision of management skills, enhanced technical abilities.	H +	H+	H+
Acquisition of social analytical skills for 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/agreed division of management responsibilities with line agencies.			
Greater relevant expertise amongst SRBMB staff.			
Support for demand management policies from stakeholders.			
<i>Jinchang WRB and Wuwei WRB and their county and district subsidiaries - Primary</i>			
Acquisition of IWRM tools and improved knowledge base.	H+	M	M
Opportunities to participate in decision-making, enabling the water users in their areas to have a means to express their requirements.	H+/-		
More reliable water resource assessments.	H+		
<i>Wuwei and Jinchang Municipal Governments - secondary</i>			
Increased information provided on SRB.	M +	L	L
Possibilities for more sustained and equitable water-sharing amongst their constituents via government's involvement in decisions on river basin planning and management			
<i>Environmental Protection Agency – at provincial and municipal levels - secondary</i>			
Enhanced integrated natural resources management.	M +	M	L
Increased data-sharing.			
Improved co-operation and communication with WRB and WAB.			

H, M, L denote high, medium and low impact respectively; + / - denote positive or negative impacts

3 Use of Stakeholder Analysis

3.1 Initial consultations

The initial stakeholder analysis should lead on to an initial programme of consultations with selected organisations which can further refine the stakeholder analysis as well as provide valuable direct input into the IWRM plan.

This can be done by collecting information from relevant departments within water bureaus and from water supply companies, information on relevant current and recent conditions in relation to water use in various sectors can be obtained from line agencies – forestry, agriculture, development and reform commissions, land resources, environmental protection bureaus.

Information on current rural water use can be obtained from village or water user association officials. Since changes in water conditions often impact differently on women and men (in households, cultivation and production), it is important to obtain information from organisations such as the Women's Federation (ACWF).

In each case, stakeholder groups should first be visited and given a short briefing document on the programme and its anticipated implications. Such information is important not only for deciding which stakeholder groups are relevant, and how they can be categorised, but it also important as essential background for organising further consultations with stakeholders.

Further consultations can be organised, combining stakeholder groups, based on specific shared interests and concerns. The aims of these consultations are to reiterate and clarify the main aims, and to receive more detailed reactions from the stakeholder groups. Organising sessions for representatives of different groups at this stage enables these groups both to give their views and to outline what they think may be the reactions of other groups in ways that might not have been possible if they had been combined.

3.2 Design of detailed consultation and participation programme

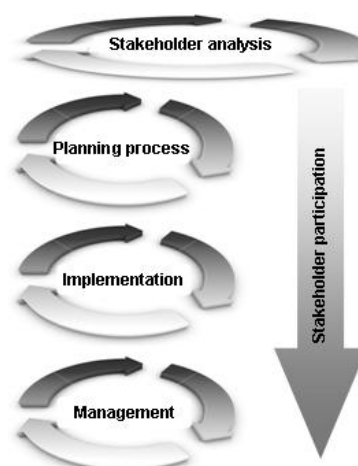
Once the stakeholder analysis has been tabulated and additional information compiled from initial consultations, there should be a sound basis for:

- planning ongoing consultations with stakeholder groups;

- organising the participation of groups at different stages of the plan cycle, taking account of both the importance of their participation and their interest and ability to participate;
- assessing the extent to which conflicts may arise between stakeholders
- developing strategies for addressing these conflicts
- disseminating appropriate information to different stakeholders;
- facilitating communication between different stakeholders;
- receiving feedback from stakeholders on the impact of implementation at its various stages
- organising and overseeing the monitoring of plan implementation.

This is a cyclical process, with participation increasing from the initial analysis through to implementation of early activities and finally long-term management.

Figure 3 Cyclical participatory process



It should be remembered that participation can be considered in three general categories:

- Communication; keeping stakeholders informed of the progress of implementation. The aim here may simply be to disseminate information and ensure that stakeholders are well-informed
- Consultation, in which stakeholder views are sought on appropriate topics at certain times
- Full Participation in aspects of decision-making. This participation must include appropriate stakeholders having clearly specified roles in the decision-making process at stages that are relevant to their particular interests

There may be different types of participation at different times. At one stage it may be beneficial for some groups to be provided with information, but not consulted. At another stage, these groups may be consulted on impact and progress. At yet another stage, these groups may be encouraged to participate in decisions.

Clear and reliable information and understanding is crucial at all stages – lack of information can result in misunderstanding, and possibly suspicion of motives or even conflict.

Box 4: Access to information in USA

If a public organisation in USA collects data it is regarded that this should be freely and publicly available to all, since they have in effect paid for it through the tax system. For example historical and real time data on 1.5 million hydrological sites throughout the country is accessible on <http://waterdata.usgs.gov/nwis>

3.3 Participation in IWRM planning

The requirements for participation in IWRM planning needs to take account of the overall planning process as illustrated in Figure 2 – this indicates the need for some form of consultation or participation with some or all of the stakeholders at several stages in the process. The stakeholder analysis should indicate which stakeholders should be involved at each stage. For example, stakeholders should be involved in:

- **The early stages** when the planning team are trying to understand fully all the water sector issues ahead of any consideration of the future. This will require broad consultation
- The stage of the planning process in which possible **alternative scenarios are developed and tested**. This requires a different sort of stakeholder participation – largely from the professional members.
- **Selection and prioritisation of actions** under the plan should bring together technical, social, economic, and environmental aspects. Since the tradeoffs required are “political” it is important to have stakeholder participation to obtain support and buy-in, particularly from institutional stakeholders. If a multi-criterion decision analysis is being undertaken (see separate document in this series) then stakeholder participation will be required when setting the criteria and scoring system for the model.

- The **draft Plan will require review**. This will require further wider stakeholder input to the process.

It is important to keep the process as effective and efficient as possible – this will inevitably require some compromises on representation and frequency of consultation.

Figure 4: The IWRM planning process

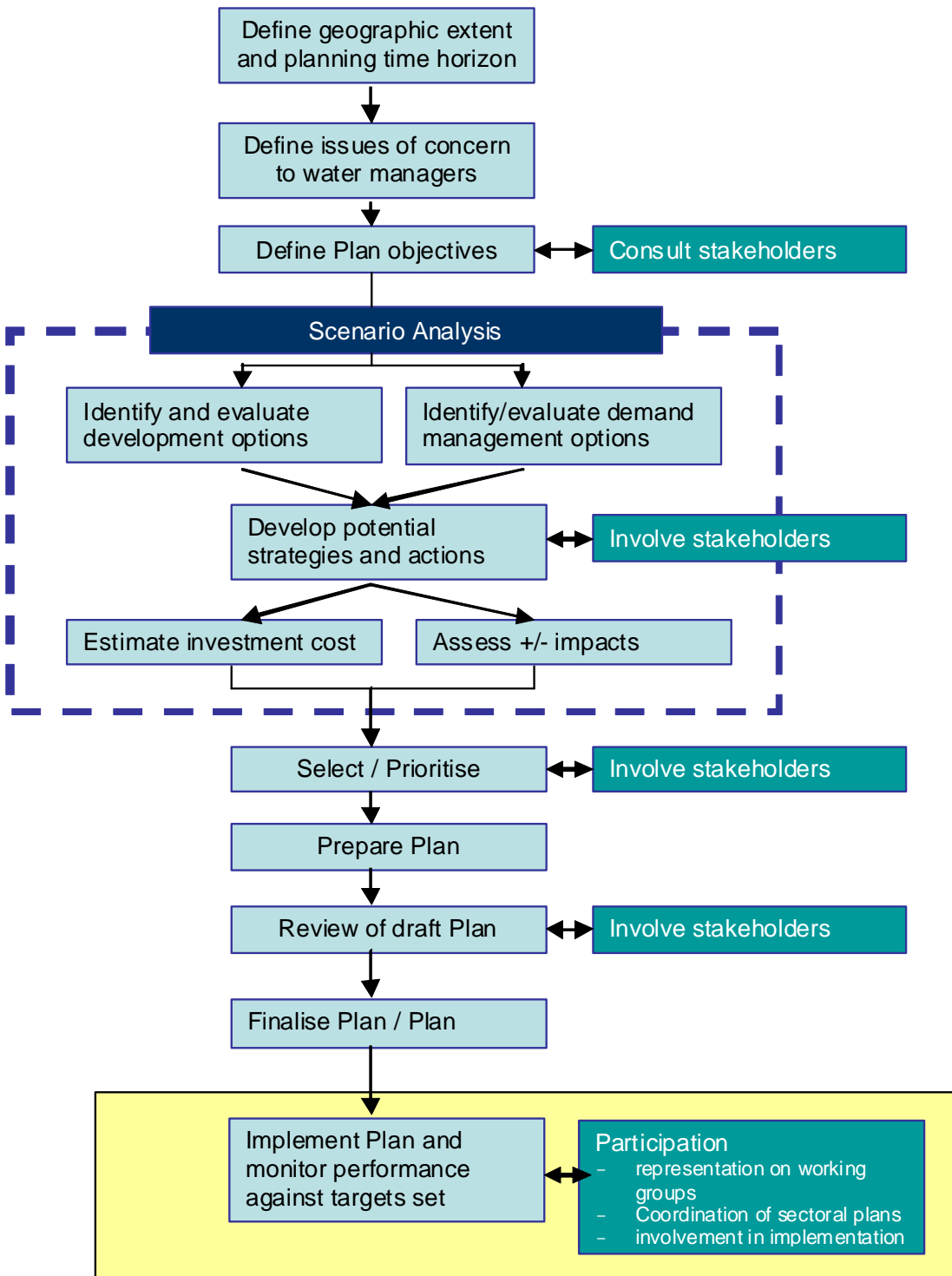


Table 4: Participation phases in IWRM plan development

Phase	Purpose of Participation
River Basin Profile or catchment characterisation (describing present conditions and current IWRM related plans and policies)	Gather data and information on river basin conditions Ensuring important issues in the river basin are addressed To identify water related government department policies and plans Stakeholders and wider community to understand issues and problems in the RB
Broad content of IWRM Plan	Broad content of IWRM Plan developed and agreed
Goals and objectives of IWRM Plan	Draft goals and objectives of IWRM Plan agreed
Scenarios for analysis	Important scenarios developed and described quantitatively
Scenario results and management options IWRM Plan	Results of scenarios understood and agreed IWRM Plan prepared Consultation and agreement of the IWRM Plan
Publicising and implementing the IWRM Plan	IWRM plan understood and implemented by all

Communication between the stakeholders, and the ways in which this can be facilitated is an important issue, particularly when there is a lack of understanding between groups, and a consequent potential for conflict between them during implementation.

The managers of a particular plan, programme or project must decide - on the basis of the stakeholder analysis - what they consider to be the most appropriate ways of communication between different stakeholders. This involves issues such as:

- Ensuring that stakeholders have an adequate understanding of the scope of the plan, programme or project and its potential impact on them.
- Promoting awareness of the main interests of other stakeholder groups.
- Improving sectoral co-operation between higher level

stakeholder groups – ministries, bureaus and departments. This depends crucially on clear definitions in the stakeholder analysis of the interests of these groups

- Developing procedures for conflict avoidance and resolution via means such as training, workshops.
- Being able to clearly explain the reason why participation is required and the benefits the stakeholder will gain from the process and how it will also bring benefits to socio-economic development, the local economy and environment.

The means for achieving these aims may involve planning meetings and workshop participation, and will depend on provision of reliable and easy-to-understand information via

such means as brochures, newsletters and use of mass media.

When communicating with stakeholder groups, this communication is usually with the representatives of the groups. It is important to know if a group's interests are actually and meaningfully presented by their representatives. For example: stakeholder analyses in water resources management refer in general to groups such as rural water users, industrial water users, poor and vulnerable households, and water user associations. These groups need to be represented so that individuals within them feel that their voice is heard.

For example, in villages with substantial male migration, it is essential to develop good communication channels with women cultivators in water user groups. How is this best to be achieved - via village officials, via the executive of the WUA, or via organisations such as the Women's Federation? Which groups within a WUA most effectively represent the interests of poor households – the WUA executive, the water user group, or other village organisations? In each case, the most effective representation of each stakeholder groups needs to be decided on the basis of the stakeholder analysis. International experience suggests that poor households are often inadequately represented by WUAs since they lack the time or inclination to participate, feel that their views will be ignored, or believe that the organisation has no power to take account of their interests. These are valid concerns which need to be addressed in institutional design. This design must be realistic, and it must be recognised that it is even more difficult to sustain such organisations than it is to set them up in the first place.

When planning a stakeholder consultation process to accompany an IWRM planning exercise it is very important to consider potential constraints to participation by particular groups as therein may lie risk of bias.

3.4 Participation in Implementation of IWRM

Overview

There are many ways to involve stakeholders in basin management, both formally and informally. Stakeholder involvement depends on the mandate of the basin organisation and how the role of stakeholders is defined. An example of how they might be involved and organised is given in the case of France in Box 5.

An example of participation in a trans-boundary river is given in Box 6, covering the development of participatory arrangements for the Orange River in southern Africa.

Such participation is necessary to ensure that activities are well targeted, well executed, and are achieving their intended benefits. If there is any underperformance then this information can be fed back to the water resources managers responsible for implementing the plans in order for them to improve.

Box 5 France: National, river basin and local water committees

In France, water resources management and planning is institutionalised at three levels: national, basin and sub-basin. At national level, a Member of Parliament nominated by the Prime Minister chairs a National Water Committee (NWC). The NWC consists of representatives of water users, associations, local authorities and government administrations, as well as experts and the presidents of the Basin Committees. The NWC is consulted on national water policy and gives advice on draft laws and decrees, reforms and draft government action plans. The 2006 Water Law widened the scope of the NWC and created additional committees for water prices, public water supply and sanitation services, fishing and the water information system.

In each of the six large river basins, a River Basin Committee (RBC), chaired by a local elected official, consists of representatives from local authorities (40%), water users and associations (40%) and the State (20%). The RBC prepares a Water Development and Management Master Plan (SDAGE) for approval by the State. The SDAGE sets the overall strategy and objectives for water management in the basin. It is a legal framework. Any decision likely to affect water resources must be compatible, or made compatible, with the SDAGE. SDAGEs were first developed following the 1992 Water Law. Each has now been revised as a River Basin Management Plan that complies with the European Water Framework Directive.

At the local level – tributary, sub-basin or aquifer – Local Water Commissions (LWCs) implement the SDAGE and prepare a Water Development and Management Plan (SAGE). LWCs consist of representatives of local authorities (50%), water users / associations (25%) and the State (25%). A Local Water Commission can implement plans through a Local Public Basin Establishment or other local group. Inter-municipal bodies may undertake studies or work at the sub-basin scale.

More information at: www.gesteau.eaufrance.fr and <http://www.lesagencesdeleau.fr>

Box 6. Orange–Senqu basin: roadmap for water-user dialogue on basin management

The Orange–Senqu basin in southern Africa is shared by Lesotho, South Africa, Botswana and Namibia. The Orange–Senqu River Commission (ORASECOM), established in 2000, recently developed a 'roadmap for stakeholder participation' which sets out how stakeholders in the Orange–Senqu River basin will participate in dialogues with ORASECOM on the co-management and sustainable development of the Basin and its resources to enhance livelihoods. The objectives are to:

- develop and strengthen institutional mechanisms for effective stakeholder participation in the management of the Orange–Senqu River basin;
- build and strengthen capacity in basin forums to effectively participate in decision making, planning and sustainable co-management of the Orange–Senqu River basin; and
- develop and maintain open and effective horizontal and vertical communication between and among the structures of ORASECOM and basin stakeholders by developing accessible, timely and good quality information and dissemination mechanisms to build trust, and improve participation and decision making in the basin.

Members of the Commission defined the core elements of the strategy during an initial three day workshop. The draft was further developed by representatives drawn from regional research organisations, NGOs and the private sector in each basin state and other countries.

Following another workshop, where the ORASECOM technical task team provided further input, the draft was revised and finalised and has been adopted by ORASECOM.

More information at: <http://orasecom.org>

The arrangement tentatively proposed for the Shiyang River Basin is to set up about 16 theme-based working groups with representatives of the relevant organisations and user groups. They will meet regularly, prepare working papers, and report problems and progress with the key topics listed in the table below. Detailed working arrangements for each working group will be devised by the SRBMB. These should include details of:

- The terms of reference for each group
- The frequency and location of meetings

- Reporting arrangements to line agencies, the SRBC, the SRBMB and municipality level organisations responsible for river basin management
- Integrating the findings of the groups into implementation of the Plan
- Dissemination of findings to other stakeholders and the general public

In additional implementation committees have been formed for each municipality.

Table 5: Examples of proposed working groups for IWRM in the Shiyang River Basin

Working Group	Key topics	Group members from the following organisations at various levels
Surface irrigation	Irrigation scheduling and management for water saving Canal lining Flow measurement Irrigation area reductions and consolidation	1. Shiyang River Basin Management Bureau (SRBMB) 2. Water Affairs Bureau (WAB) 3. Hydrology Bureau (HB) 4. People's Government at relevant levels 5. Agriculture Bureau 6. Water User Associations (WUAs)
Greenhouse development	Administrative arrangements Technical aspects Marketing Social issues	1. SRBMB 2. WAB 3. HB 4. People's Government, at relevant levels 5. Agriculture Bureau 6. Crop Associations 7. Civil Affairs Bureau 8. Women's Federation 9. WUAs
Urban water demand management	Public water savings awareness and methods Active demand management by WSCs and industries Impact of water savings activities	1. SRBMB 2. Water Supply Companies 3. Industry representatives 4. People's Government at relevant levels 5. User representatives

Numerous working groups have been proposed to support IWRM Plan implementation. These bring together the different stakeholders, and it is recommended that they report to the SRBC whose membership includes

senior representatives of the main stakeholder groups. The suggested composition and key topics for these working groups are presented below. Each working group is headed either by a representative of the 'lead

agency' defined in the table above or a representative of the SRBMB.

It should be noted that plan implementation committees have already been established in Wuwei Municipality and one is proposed for Jinchang Municipality (see Box 9 below).

4 Coordination and Participation

4.1 Coordination between organisations

IWRM requires an overarching arrangement for reconciling all relevant interests and making decisions on use of water in the river basin. This should represent all interests but be under governance of government to protect the interest of society at large;

This will require creation of a forum for involving stakeholders, which defines procedures, decision-making channels and accountability arrangements. It needs to ensure open access to reliable information on the availability, use and quality of surface and groundwater.

Managing an important publicly-held natural resource will always involve multiple actors, differing interests and perspectives, and relational dynamics (see Box 7 for an example in California, USA). This is true even in situations where a single agency is responsible for all aspects of basin water management, as there will be winners and losers among users of basin water resources and factions within the managing agency having differing perspectives and interests

Box 7 Coordination in IWRM in California

There are many discrete actors in water resource allocation and management in California, where co-ordination and decision-making have long been critically important functions.

In the past there have been many disputes often taken, at great expense to the courts. There is now growing reliance on processes of shared consensual decision-making – for example by CALFED which is a consortium of federal and state government agencies with management and regulatory responsibilities.

CALFED was formed in 1994 and addresses problems and solutions through discussion from the outset in an open forum with participation that spans the entire range of water-related interests. The commitment of all participating parties to make the CALFED approach work is striking.. This commitment arises in part from the fear that if the process fails, it would be replaced by far more adversarial processes.

Svendsen, (2001).

There are established arrangements for participation in drought management planning in China, as described in Box 8.

Box 8 Task force membership for drought management plans in China

In 1992, the State Council decided to set up the 'State Flood Control and Drought Relief Headquarters' to direct and manage flood control and drought relief work. Its member units include the Propaganda Department of CPC, State Development and Reform Commission, Ministry of Public Security, Ministry of Civil Affairs, Ministry of Land and Resources, Ministry of Construction, Ministry of Railways, Ministry of Communications, Ministry of Information Industry, Ministry of Water Resources, Ministry of Agriculture, Ministry of Commerce, Ministry of Health, Civil Aviation Administration of China (CAAC), State Administration of Radio, Film and Television, Meteorological Bureau, Headquarters of Chinese People's Armed Police Force etc.

This arrangement is repeated at each tier of local government led by the senior local government official, eg Mayor at municipality level.

A number of observations regarding the constraints to participation in these arrangements can be made:

- Difficulty in undertaking stakeholder consultation and participation across sectors
- Obtaining release of individuals from different sectors to participate actively in a 'working group' is an issue.
- The problem of representatives of a working group having the authority to make decisions.
- Although large numbers of stakeholders are nominally included in 'Task Forces', 'Steering Groups' or 'Leading

Groups', there may be less involvement in practice.

These are common problems and need to be addressed carefully, possibly by ensuring a strong champion to lead the process, with a core team which has mandatory duties and small working groups by sector. The core team need to coordinate the working groups and ensure regular reporting.

In the case of the Shiyang River Basin, an implementation committee has been set up (see Box 9)

Box 9: Implementation committee for SRB strategic plan in Wuwei Municipality

An implementation committee has been established under the leadership of the Mayor, including the Directors of the following offices as members:

- Agriculture & Animal Husbandry Bureau
- Water Affairs Bureau
- Development and Reform Committee
- Agriculture Committee
- Forestry Bureau
- Land Resources Bureau
- Environmental Protection Bureau
- Treasury Bureau
- Auditing Bureau
- Supervision Bureau
- Research Office
- Legislative Affairs Bureau
- Branch company of Agriculture Cultivation in Wuwei
- District and County government

The WAB is designated as the lead organisation with responsibilities for coordination with other offices, as described in Box 8. However, further arrangements for stakeholder participation could be considered to strengthen this aspect of the strategic plan.

Box 10: Stakeholder responsibilities under SRB strategic plan

- WAB: coordination with other departments, plus specific WAB responsibilities
- D&RC: checking the obligatory targets
- Agriculture Committee: initial ideas for farmland reduction and migration
- Agriculture and Animal Husbandry Bureau: initial ideas for greenhouses and crop pattern changes
- Forestry Bureau: initial ideas for ecological protection
- Land Resources Bureau: for land use management
- EPB: EIA of projects in Strategic plan, and control of pollution discharge
- Treasury Bureau: to provide fund allocation plan
- Auditing Bureau: fund auditing
- Supervision Bureau: to supervise and check projects.
- Research office: to be responsible for research and study,.
- Legislative Affairs Bureau: to be responsible for development of documents.
- Governments at county/district level: to implement policies and measures
- Branch company of Agriculture Cultivation company: to be responsible in farms under its jurisdiction.

4.2 User / public participation

Methods to involve stakeholders depend on many factors: how often stakeholders need to be involved, the kind of society, the nature of information the basin organisation needs from them, the type of representation that is appropriate, the political value of engaging pressure groups and access to the basin organisation and decision makers. Taking part in village meetings, 'town hall' meetings, surveys of basin stakeholders' opinions and basin advisory groups, are just some of the ways stakeholders can be encouraged to get involved.

But, stakeholder participation can be time-consuming and costly, and may not have clear outcomes. There has to be a balance between informing all and involving a few. To avert or minimise these problems, procedures for involving stakeholders need to be designed thoughtfully and implemented carefully. In particular it is important to:

- Ensure all relevant groups of water users are represented.
- Avoid 'capture' of the process by minority or particularly articulate groups.
- Subsidise if necessary to ensure a 'balance' of public and private participation.
- Establish 'rules' to resolve disputes.

In addition to setting up ways to involve stakeholders there is also a need to be specific about the scope of any consultation, what decision processes each group of stakeholders are going to be involved in and how these decisions are to be made.



Public consultation in the UK (Virginia Water)

The strategy adopted in Hungary for IWRM on the River Danube is given in Box 11, indicating how all groups can be represented efficiently, incorporating both individuals and organisations.

Box 11. Hungary: public participation

The first Public Participation (PP) strategy for river basin management in Hungary was developed in 2006 based on the Danube River Basin PP Strategy. The strategy stresses that river basin management plans must harmonise with all other development programmes that affect water resources management.

The strategy was piloted in the Upper Tisza during the first half of 2007 on the four major interest groups: central and local government organisations; NGOs; water users; and professionals and academia. To ensure meaningful public involvement, the PP strategy recommended establishing the following bodies:

- twelve Sub-Committees of existing Regional Water Management Councils,
- four Sub-Catchment Water Management Councils,
- National Water Management Council.

These bodies are charged with canvassing public opinion and input to the River Basin Management Plan. Each body supervises the PP process at their own level and, following review and amendment, endorses or returns the plans for further improvement. The National Water Management Council is responsible for advising the minister on adoption of the plan.

The core composition of the councils is: 40% representatives of governmental organisations, 20% representatives of NGOs, 20% representatives of water users and 20% representatives of professionals and academia.

Other members of the national and sub-catchment committees may be included to ensure bottom-up representation. Legislation is being modified to establish the councils

The difficulties with public participation are very evident from the experience gained in France (Box 12) where there was barely 1% response to consultation despite intense effort. This might appear to limit the value of such consultation, but it was still

valuable in ascertaining opinions and did highlight the key issues. Although small in percentage terms, the overall number of people consulted was still very large.

Box 12. France: public consultation

The European Water Framework Directive requires members of the European Union to consult stakeholders. In France, the minister in charge of the environment and the River Basin Committees arranged a national public consultation, 'Water is life – give us your opinion', to seek public opinions on the future of water resources in basins.

The public consultation in 2008 sought opinions on the environmental objectives of Water Development and Management Master Plans proposed by the basin committees, as well as on the actions that are planned to achieve those objectives.

A questionnaire was distributed to all households in each basin. Questions related to the environmental objectives and the major measures to achieve them. People could also make general comments about the Master Plans. Citizens could also participate in the consultation through the Internet. The media (radio and regional media) encouraged people to take part in the consultation. Partner associations also organised events to encourage participation.

The average rate of participation was 1.3% (400,000 respondents), although participation varied from one basin to another (ranging from 0.7% to 4.3%). The responses addressed the main concerns of the basin committees. Overall, the public questioned the proposed objectives and expressed reluctance to pay more. The major concerns were the risks related to toxicity and health (urban, industrial and agricultural pollution) and the costs of water. Citizens reasserted their commitment to the polluter-pays principle, transparent decisions, to measures that protect water resources and to outcomes that safeguard the future of water resources.

<http://www.eaufrance.fr>

Independent groups, such as a stakeholder advisory group that advises on key water issues, can

make IWRM more effective. Stakeholder advisory groups are government - private sector - community groups with representatives of farmers, government agencies, local government, local water supply authorities and other utilities, economic sectors such as agriculture and energy, and other groups with an interest in water management.

Box 13: Irrigation customer service committees, Victoria, Australia

The *Water Act* 1989 aims to “maximise community involvement in the making and implementation of arrangements relating to the use, conservation or management of water resources”. Water corporations are expected to facilitate and encourage community involvement and to establish committees which should function in accordance with best practice for customer committees. There are six principles for the formation and operation of committees. They are: appropriate participation; transparency; effectiveness and efficiency; documentation; accountability; performance monitoring and evaluation.

Customer committees have two functions:

- to be representative of customer views and assist the water corporation understand irrigator needs.
- to advise on service provision; the balance between service level and price; customer communication; and related issues

Performance to date suggests that they should be evaluated against six criteria

- Effective internal operation
- Appropriate participation in decision making processes
- Effective feedback loops between stakeholders
- Committee member diversity.
- Role as a central, negotiated decision making body with Government
- Adherence to high quality protocols for effective committees

The role of the advisory group is to advise the basin organisation on major problems and possible solutions. The group can voice local concerns, provide local knowledge, help quantify and prioritise issues, as well as identify options to address these issues and provide a reality check on how options are likely to work in practice. Another important role is to advise on developing and implementing a monitoring system.

Workshops and field trips can help both stakeholders and basin organisations appreciate the array, size and extent of land and water resources issues in basin management, as well as how local actions impact other parts of the basin. The advisory group may be supported by a technical committee that advises on the engineering, ecological, economic and social aspects of management.

There are also many opportunities for the private sector to be involved in basin management, especially at the local level. Some ways of doing this are through joint ventures and projects, and cost-sharing arrangements. Private sector water utility providers are the obvious partner for these types of arrangements. However, such arrangements in emerging economies and low-income countries need to be sure of representation by the informal water sector and private sector groups, as well as local organisations and agencies.

4.3 Constraints on organisational cooperation

Constraints on participation and cooperation between organisational stakeholders are often most evident in relation to protecting surface water

quality. In China as in many countries this involves two or more distinct organisations.

This problem is apparent, for example, from the experience of Gediz river basin in Turkey (Box 14) where an organisation was set up and endorsed at the highest level but still remained essentially inactive. Alternative models can be considered for resolving this problem.

- a comprehensive basin authority, which concentrates authority, responsibility, and capacity to implement directly many basin management tasks.
- a loose co-ordinating committee which simply provides a forum for discussion and voluntary co-ordination.
- variations between these two extremes to avoid compartmentalising water quantity and quality, into a functional integrated system

To date, informal methods have proved most effective. This has been helped by devolution of many traditional simpler management responsibilities to user organisations (WUAs) enabling the Government organisations with more resources to concentrate on difficult issues of cooperation.

4.4 Constraints on public participation

Despite aiming to involve stakeholders in different ways, and developing strategies for this at different stages of the plan or project cycle, the problem for some stakeholders may be that there are limitations on, and barriers to their participation.

Box 14 Cooperation over water quality management in the Gediz basin, Turkey

Despite considerable effort, water quality management remains weak in Gediz. The problem stems from several factors, including weak co-ordination and co-operation among the three separate agencies responsible for surface water quality monitoring, wastewater discharge monitoring, and enforcement of standards. This is driven by bureaucratic tussling over turf, the failure of any of the three parties to come forward with effective, inclusive, and forward-looking leadership, and limited availability of and restricted access to data. Although a co-ordinating 'Environmental Protection Service Association of Gediz Basin Provinces' was set up in 1998 and officially authorised by the national cabinet, it has lain largely dormant due to lack of resources despite its considerable potential authority.

However, the premier water resource agency in Turkey, DSI, is responsible for both ground and surface water, making coordination much easier than in the case in many other countries. Moreover, DSI has handed over many routine management responsibilities to WUAs leaving it with more resources to take on the role of and water quality management. DSI still recognise that a number of different actors must be involved in solving water quality problems. It is important to transform this recognition into effective ways of working together, rather than squandering energy and resources in intra-governmental squabbles over bureaucratic turf.

Svendsen, Hammond Murray-Rust, Harmancioglu and Alpaslan (2001) *Governing Closing Basins: The Case of the Gediz River in Turkey*

Examples of such barriers might include:

- Lack of institutional means for participation
- Inadequate information
- Time and costs of participation
- Legitimacy of particular groups might be contested by others
- Local hierarchies or relations may limit participation by some groups.

Stakeholders may lack the institutional means for their views to be taken into account. Although water user associations are often set up, they are often ineffective for this purpose, and their representation needs to be enhanced, with appropriate training provided for encouraging participation.

Stakeholders may lack adequate information to be involved effectively in decision-making – hence the importance of appropriate training programmes to facilitate their participation, providing appropriate knowledge and skills. Initial stakeholder consultations can be used as a basis for devising these programmes. Strategies also have to be developed to establish appropriate channels of communication for each of the stakeholder groups, and particularly primary stakeholders.

Stakeholders may view the time and monetary costs of participation as being too high, compared with the benefits expected from outputs – hence the need to respond to this by reducing the costs of their participation, and scheduling appropriate times for their involvement. This is important, for example, for primary stakeholder groups such as rural water users, for whom participation can often result in time lost to cultivation and the incurring of transport costs.

Some stakeholders may be more powerful than others – hence activities need to target specific relatively disadvantaged and powerless groups. Targeting of such poor households has proven particularly successful in China's poverty reduction programmes since the early 1990s, and these can be taken as best practice models for targeting in projects in other sectors

The legitimacy of a particular stakeholder group to participate in decision-making may be challenged by other groups – particularly in the water resources area, given the possibilities for limited access and conflict between groups over both access and use. Decisions on which groups should participate in decision-making and at what particular points, are of considerable importance, and need to be based on a detailed understanding of the relations between stakeholders. Gaining this understanding is a crucial task of early assessments and initial stakeholder consultations.

Local hierarchies may limit the extent of participation by stakeholders. It is important to decide at an early stage if this is going to be detrimental for implementation, and what strategies need to be adopted to address this issue. For instance, in implementation at the village level, it is sometimes the case that the interface of county and township governments with villages is characterised by stereotyped views and organisational practices that are not always conducive to participation.

This reflects not only a lack of capacity of township officials but also compartmentalised administrative arrangements creating disincentives for change. For example where the introduction of water user associations requires greater consultation with production group members, and where water user group leaders need to participate to a greater extent in decision-making than has previously been the case, township and village officials may be wary of such developments, seeing them as a potential means for undermining their entrenched positions.

In such cases, it is necessary to develop strategies for working with these officials, providing incentives for them to support the necessary changes in local consultation and participation.

5 Campaigns for Dissemination of Information

A stakeholder analysis can also assist in the important task of disseminating information about activities, and outcomes. Information can be prepared to suit their different understanding of the main interests of each stakeholder group, their concerns about aspects of implementation, and their relations with other stakeholders,

This is important particularly in areas such as the dissemination of information to user groups on water saving. It is important to assess the best channels for disseminating information to them by answering questions such as:

- Which media channels might be most appropriate?
- Should information be disseminated through non-governmental organisations?
- Should information be disseminated through particular line bureaus or commissions?

Information obtained from initial social assessments and consultations is extremely useful for addressing these questions. Examples of how this might be achieved are presented in Box 15, which indicates how the women's federation and the water savings office have been effective in facilitating participation and communication in the Shiyang River basin.

Box 15 Example of successful targeting of information to stakeholders

One of the key tasks in implementing IWRM in the Shiyang River Basin is to disseminate information on ensuing changes in policy as they impact on particular stakeholders, and, more generally, on the importance of water saving. Consequently the Shiyang River Basin Management Bureau targeted stakeholders through use of television and newspaper articles, and via information posted on their website. However, staff were concerned that additional channels were required, more specifically targeting primary stakeholders such as rural and domestic water users. Consequently, they focused on two channels:

Firstly: On **Non-governmental organisations**. Working with the Shiyang Basin River Management Bureau and the Water Affairs Bureau, the **Women's Federation** produced documents on relevant policies for use at the branch level: on the reasons for greenhouse construction in the context of the current Shiyang River Basin situation, on how to train women to equip them for greenhouse cultivation, and on the strategic basis for well closures. The Federation is also active in producing articles on water saving measures, notably in the Wuwei Daily. It is co-operating with the WAB on a series of water related projects for women, notably on the construction of water tanks in villages, and has also worked with the WAB on television programmes promoting water saving. Additionally, the main proposals of the Shiyang River Basin Management Plan, with its focus on IWRM, have been discussed within the Federation, at each administrative level.

Secondly, the promotion of water saving was tasked to a **Water Saving Office**, located in Wuwei. The Office has had a crucial disseminating role: providing advice to farming households on water-saving technology; overseeing the upgrading of water-saving facilities in factories; publishing pamphlets for households on water-saving appliances; producing educational packages on water saving for use in schools. It also advises on water saving designs for the construction of industrial buildings. Recently, the Office's educational work has expanded into schools in village communities, and it has advised several bureaus on plans to save water in their offices.

The key lessons are:

- Relevant information is provided for each different stakeholder
- Non-Government Organisations and Community Organisations are used as information channels
- A particular organisation is tasked with dissemination of a key project topic such as water-saving

Source WRDMAP project studies

6 Conclusions

Management of water resources and water services functions more effectively within a system that enables stakeholder participation.

Experiences in China and internationally shows that participation:

- enables planning to be more effective and sustained;
- improves co-ordination;
- assists essential management activities;
- promotes consensus;
- strengthens local support;
- reduces the risk of failure;
- enables potential conflicts to be assessed and addressed
- facilitates communication and dissemination;

A stakeholder analysis progresses through several stages:

- providing stakeholders with briefing documents;
- devising a stakeholder matrix, indicating:
 - the potential institutional and/or social impact for each stakeholder;
 - the potential risks for each stakeholder from implementation;
- organising consultations with each stakeholder group;

The lead organisation that instigates the process of stakeholder participation in water resources management needs both internal commitment and an overall enabling environment. A champion is required to drive the process.

Different types of stakeholder involvement are required at different stages of plan implementation – from full active participation to consultation and the provision of information. The planning team must decide which types are appropriate for each stakeholder group – based on the information contained in the stakeholder analysis.

Participation in implementation may be constrained by stakeholders:

- not having adequate channels through which their views can be represented;
- lacking sufficient information to reach conclusions;
- having insufficient time to participate

- having less power to influence events relative to other, more powerful stakeholders;
- not having sufficient legitimacy to avoid their participation being questioned by other stakeholders.

Appropriate strategies need to be devised by the planning/project team to address these constraints.

On the basis of the stakeholder consultations and analysis, decisions must be made as to which are the most appropriate channels for dissemination of planning and project outcomes. This is important particularly in areas such as water awareness and saving, where implementation depends crucially on the attitudes and activities of water users and many other organisations. Targeted groups require relevant information tailored to their particular interests and needs.

Securing stakeholder participation is not easy. It requires diplomacy and commitment. However, if the trust and enthusiasm of stakeholders can be gained, overall water resources management will be more effective, risks reduced and problems and conflicts minimised.

Document Reference Sheet

Glossary:

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
WUA	Water User Association
SRB	Shiyang River Basin, Gansu Province

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Related materials from the MWR IWRM Document Series:

Advisory Note 2.1	Developing an IWRM Plan
Example 2.2	Initial Stakeholder Analysis for Shiyang River Basin IWRM Plan
Thematic Paper 6.3/1	IWRM, Irrigation and its Social Context
Thematic Paper 6.3/2	Assessing the Impact of IWRM on Women's Status and Conditions
Thematic Paper 7.1	Multi-criterion Decision Analysis – an Introduction

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

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