

China – UK, WRDMAP Integrated Water Resources Management Document Series

Advisory Note 6.3/1: Social Monitoring

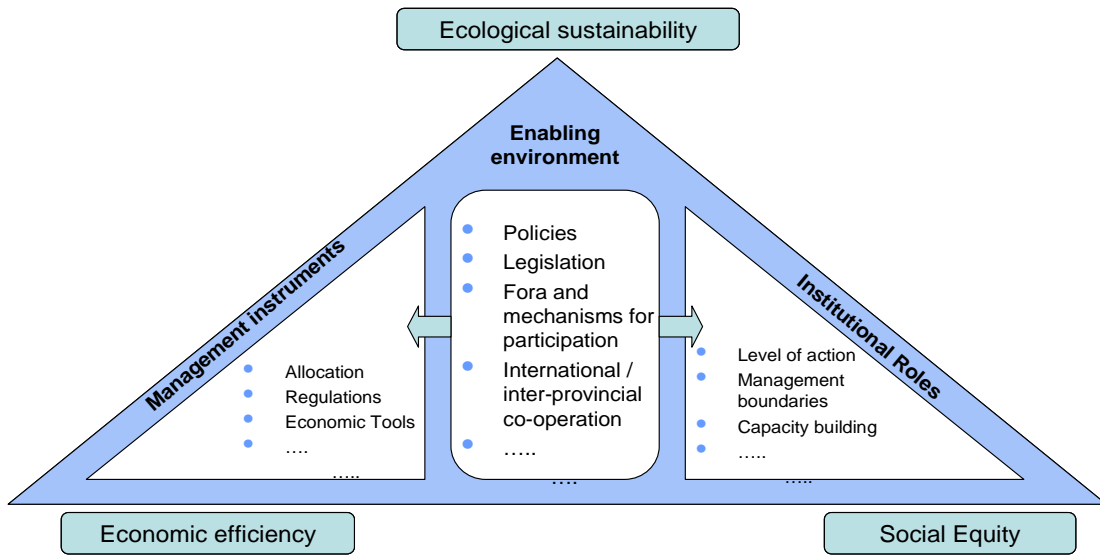
May 2010



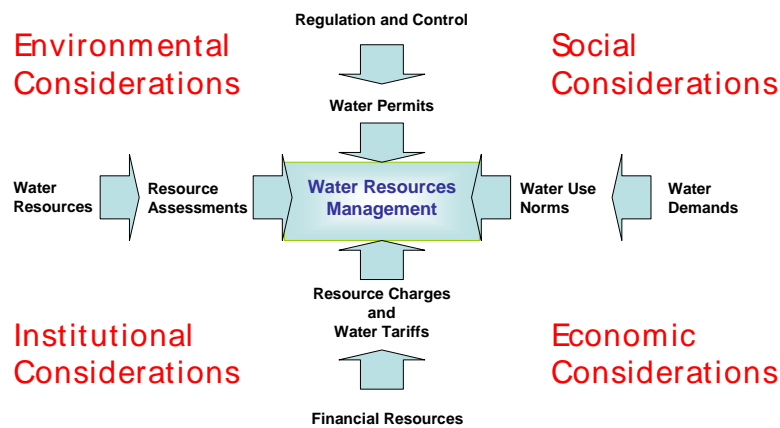
6.
Water
Saving
Society

Integrated Water Resources Management (IWRM)

(Based on Global Water Partnership)



Driving Elements of Integrated Water Resources Management



(Second figure after WRDMAP)

Summary: This guidance provided in this Advisory Note outlines the processes of social and economic monitoring, providing both an input into initial planning, monitoring and improved implementation.

This document covers the following topics:

- Introduction
- Monitoring process
- Monitoring impact
- Participatory monitoring
- Evaluation and feedback

The guidance draws on experiences gained on the WRDMAP project in Gansu and elsewhere in China. The importance for those collecting the data to understand the need for this data, and to use it in subsequent activities is highlighted. For this reason, the use of participatory monitoring is recommended.

Although social and economic monitoring are widely practiced in China, there is a need to use them more widely in planning and implementing water demand management.

Separate Thematic Paper and Example documents, also focusing on this topic, are included in this document series. See the bibliography for exact references.

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

Social and economic monitoring are well-established procedures in China and a considerable amount of social and economic data and analysis is undertaken by several organisations. At the local level township and county governments compile a range of data. Other organisations also collect and analyse data as part of monitoring crop production or poverty alleviation programmes, for example.

There is less systematic social and economic monitoring within the water sector, where monitoring has traditionally been more focused on technical aspects of water resources and uses. This document aims to provide succinct guidance for Water Affairs Bureaus (WABs) and Water Monitoring Stations (WMSs) on why they should monitor social and economic conditions, how they should do this, and how they should use the results of this monitoring. Particular emphasis is given to participatory monitoring as this is relatively unfamiliar but is a very powerful tool.

In some cases the WAB will be able to draw on information collected by others – for example township governments compile some data on crop types, yields and areas. In other cases, the WAB may need to initiate its own social monitoring programmes, in support of water resource management activities. This will be important for water management activities which have specific social impacts, such as well closures, irrigation area reductions, changes in water quotas and so on. An example of how and why this should be done is presented in a separate document in this series (EG6.3: Socio-economic monitoring – an example of agricultural water management in Gansu).

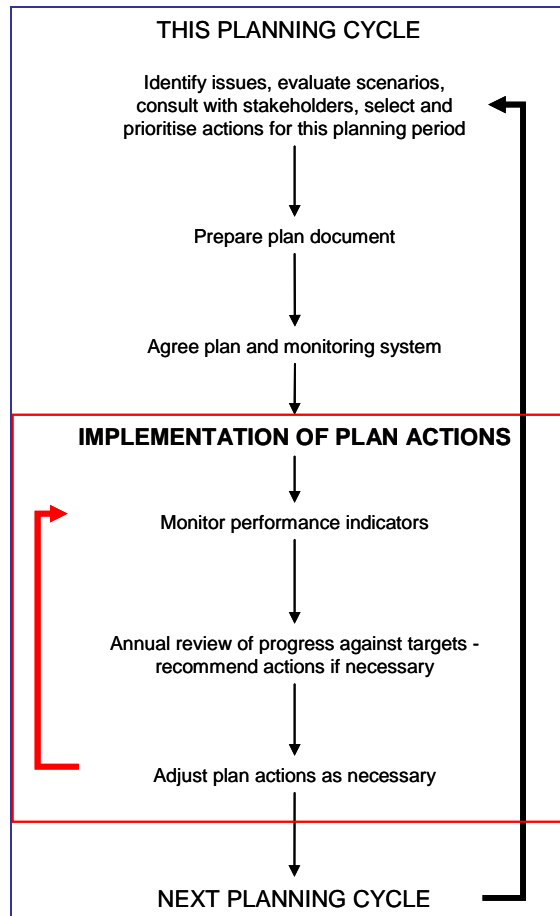
Developing a well thought out strategy for monitoring and evaluation is an important part of IWRM. Parameters to be monitored for this purpose need to be defined in advance, and an appropriate programme of data collection started to make sure accurate, reliable and timely data are provided to the review process. This is illustrated in Figure 1.

Social monitoring is one part of this overall monitoring process, but as social equity is one of the three pillars of IWRM (the other two being environmental sustainability and economic efficiency) it is a very important part. This will require the WAB to work in collaboration with other organisations.

Social monitoring requires different skills and process to other aspects of monitoring, and is less familiar to water sector professionals; this is a gap which this document attempts to redress.

Monitoring water sector activities that have a social impact, in areas such as well closures and reductions in irrigated area can be facilitated by co-operation with bureaus which are also monitoring changes in household's living conditions, such as the Poverty Alleviation Bureau and the Civil Affairs Bureau. Exchange of data and information from monitoring by such bureaus can reduce the amount of monitoring required and generate more comprehensive information on the social impact of plan and project implementation.

Figure 1: The role of monitoring and evaluation in the planning cycle



2 The Monitoring Process

2.1 What is monitoring?

Monitoring is the continuous assessment of the progress and performance of the implementation of a plan, programme or project. Together with evaluation, it is a crucial management tool for those responsible for implementation.

Box 1 Definitions of monitoring

“A continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing plan, programme or project with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds”.

Development Assistance Committee, Working Party on Aid and Evaluation, OECD, Paris, 2001.

“The regular collection and analysis of information to assist timely decision-making, ensure accountability and provide the basis for evaluation and learning. It is a continuing function that uses methodological collection of data to provide management and the main stakeholders of an ongoing project or programme with early indications of progress and achievement of objectives”.

The International Fund for Agricultural Development, Managing for Impact in Rural Development: A Guide for Project Management and Evaluation, Rome, 2002.

Monitoring provides essential information about impact, and enables us to demonstrate the results of implementation. The results of monitoring can also be important for sharing experiences between the different stakeholders affected by the plan, programme or project.

Monitoring enables us to measure change, and thereby to:

- Track changes and results over time.
- Know what works and what doesn't.
- Distinguish between effective and ineffective programmes.

Monitoring involves the regular tracking of plan, programme or project activities, outputs, outcomes and impacts. As distinct from evaluation, monitoring occurs frequently. It is mainly descriptive - recording inputs, outputs and activities. It is very specific, comparing a particular plan, programme, project and its results. It provides the knowledge required for effective management, reporting and accountability, and informing policy and strategy.

The main targets of monitoring are managers, implementers and primary stakeholders in a particular plan, programme or project. The concept of a stakeholder is introduced in Box 2, and described in much greater detail in TP2.2 on stakeholder participation in IWRM planning.

Box 2 Who is a stakeholder?

A stakeholder is any person, group or institution that has an interest in a programme, plan or project and its implementation.

This definition includes both intended beneficiaries and intermediaries, those who will be positively and negatively affected, and those involved in decision making.

What is effective monitoring?

According to Britha Mikelsen, in 'Methods for Development Work and Research: A New Guide for Practitioners', effective monitoring of social impact can:

- Provide information needed for day-to-day decisions on the changing context of plans, programmes or projects
- Provide information needed to guide the plan, programme or project strategy towards achieving its goals and objectives
- Provide early warning of problematic activities and processes that need corrective action
- Help empower primary stakeholders by creating opportunities for them to reflect critically on the project's direction and help decide on improvements
- Build understanding and capacity amongst those involved in plan, programme or project interventions
- Motivate and stimulate learning amongst those committed to making the intervention a success
- Assess progress and so enable accountability requirements to be met.

2.2 Developing a baseline

The first step in monitoring is to develop a baseline. A baseline study involves carrying out a review of the situation immediately before a plan, programme or project commences. Baselines provide useful benchmarks of the future situation and suggest suitable indicators for measuring the current situation.

Steps in carrying out a baseline study

1. Draw up Terms of Reference. These should include:
 - Background information
 - Objectives of the plan, programme or project
 - Scope and focus of the study
 - Who will conduct the study
 - Methodologies to be adopted - generally a combination of methods will be involved: interviews, public meetings, workshops, surveys, participatory assessments
 - Time plan
 - Reporting procedure
2. Choose the team to carry out the study
3. Decide when to conduct the study
4. Review the final report
5. Disseminate and utilise the baseline information

The information collected will depend on the nature of the plan, programme or project, but will normally include:

- Relevant water sector information – such as water use by group, quality of water service, availability, water prices, affordability of water, factors effecting water price, economic efficiency of water.
- Social and economic information –such as demographic information about a local community, its social and

economic organisation,
information about households.

- Issues of local concern – issues that people feel strongly about. Such information can best be obtained by working with stakeholders with a good knowledge of local issues

These steps are ideal, and the situation on the ground often limits us from following them. Adequate and relevant baseline data are often lacking. Often we are faced with situations in which there is too much irrelevant data, poor recording of data, and no data available for our particular objectives.

Box 3 Example from WRDMAP Case Study in Beipiao, Liaoning

One of the case studies in WRDMAP, in Beipiao, Liaoning, aimed to improve the performance of the local water supply company, with a focus on improved cost-recovery and revenue generation capacity in relation to its client base. This entailed improving its relations with its client base, and required tracking the extent to which improvements were being made in these areas. A baseline was prepared with indicators covering both the macro level of the Beipiao economy, and the micro level, relating to the WSC and its customer base.

At the macro level, data included factors such as demographic changes, workforce structure, value of production, income levels, and poverty levels.

At the micro level, the focus was on water use and sources, water prices, quality, water user satisfaction, availability of water, water supply operating efficiency, and institutional efficiency

The sources were data that already existed (i.e. collected officially by bureaus and commissions), supplemented by interviews with important stakeholders (based on our stakeholder analysis for the project). This included both randomly selected members of groups of water users, with managers and staff of the water supply company, and with local government officials. This provided substantial supplementary information, particularly in those areas for which existing data was limited.



Beipiao WSC

2.3 What is an indicator?

The baseline survey should describe the situation at the start of the plan or project period, and should include the values of a set of indicators which will be monitored periodically to measure changes in social and economic conditions and hence progress in achieving the targets set out in the plan

An indicator is a means for measuring change – for monitoring and evaluating change that results from and relates to implementation. Without such indicators it is not possible monitor the achievements, progress or impact of plans, programmes or projects.

Indicators can be categorised into:

- Input Indicators: monitoring the use of resources put into the plan, programme or project at various stages of implementation.
- Progress Indicators: monitoring achievements during implementation, and tracking progress towards intended results.
- Output Indicators: Identifying short-term results.
- Outcome/Impact indicators: Relating to the longer-term results of the plan, programme or project.

A clear, well-defined indicator should include the following elements:

- Specified target group to which the indicator will be applied
- Specific unit(s) of measurement to be used for the indicator
- Specific time frame during which it will be monitored

- Reference to the baseline as a means of comparison
- Defined qualities – for example: what is meant by using terms such as “adequate, “effective” “successful” as a part of an indicator.

In summary, ideally, indicators designed should be “SMART”

- **S**pecific
- **M**easurable
- **A**ttainable (Realistic)
- **R**elevant
- **T**ime-Bound

For example, to monitor progress in setting up small enterprises by women in an urban area, an indicator stating “enterprises set up, particularly by women” is too vague. A more precise and effective indicator might be, “The number of new enterprises started each year by female-headed and male-headed households in urban area X as compared to the original number in the baseline year”. The more precise the indicator, the less likely will be the possibility of misunderstanding occurring among those collecting the monitoring data

It is crucial to remember that, no matter how many indicators a project develops, an indicator does no more than “indicate”. It cannot tell the whole story of the changes produced by the plan, programme or project. So, rather than collecting information about a large number of indicators, it is crucial to think through what are the most appropriate (few) indicators that provide enough information for a project to learn about its achievements, progress, outcomes or impact. In most cases, five or six indicators for each indicator category

(input, process, output, outcome /impact) should be used, otherwise the system will become unmanageable.

3 Monitoring Project Impact

Social monitoring is usually concerned with measuring impact. That is what most managers and governments want to know about: the positive and negative social changes produced by a plan, whether directly or indirectly, intended or unintended. This is a problem particularly for social monitoring, since monitoring impact is complicated, because it is difficult to control confounding or intervening factors. It is never possible to establish causal variations, since the environment cannot be controlled. It is only possible to provide probabilities about measurable changes that may have been produced via implementation.

A monitoring programme for WUAs established with the specific purpose of water demand management (Box 4) illustrates some of the difficulties and problems encountered with monitoring.

Box 4. Monitoring WUAs in Gansu

In six villages where WUAs had recently been set up (in Wuwei and Jinchang Municipalities), a programme to monitor changing socio-economic conditions in agriculture in relation to access to changing water and water management arrangements was implemented. This section describes the indicators used to monitor this, how they related to the baseline, and how successful was the use of these indicators in measuring the impact of the project.

The baseline aimed to describe the main features of the village and its households: population, household numbers, and features of the labour force. Since male out-migration appeared to be important in

the villages, the baseline specified numbers of migrant workers, numbers of households where women managed irrigation, and number of female headed households. To this was added data on household income and expenditure, divided into its components (income from crops, livestock, forestry products, remittances, and expenditure each year in areas such as education, health, and – given the project's main concerns – water).

The baseline specified the numbers of poor households (those living below the provincial relative poverty line) plus those households in receipt of *di bao*. Agricultural production data specified uses of village area, types of irrigation, areas devoted to the cultivation of each crop, yields, prices, net profit per crop, livestock numbers, value of livestock production and market access. Water data specified use (domestic, different types of irrigation, use by rural enterprises) and sources of supply, combined with water price data (fees, operation and maintenance costs).

Given the importance of the development of water user associations (WUAs) and their role in water saving, the baseline specified WUA membership (eg: number of male/female members, election of committee and leaders, regularity of meetings), procedures (approval of constitution, number of dispute resolutions), financial management and water management (use of abstraction permits, norms established for water use, agreed system for managing water, etc).

The data was either collected by villagers working with the village leader and accountant, or derived from data already collected by the accountant. In some cases, there was also a reliance on data collected at the township level, notably by the statistics bureau.

Data sets were collected for 2005 (year of project commencement) and for 2000 (for recent historical comparison), following which data were collected for each year of the project – to 2009. The data was then tabulated, trends deduced, and the main conclusions presented in an annual report.

A fundamental problem was ensuring that those collecting the data fully understand the need to collect the data accurately and analyse it to promote water savings and better water management. Although the type of data generated was extremely useful, many saw it as yet another task to be implemented. This highlights the importance of communicating effectively the specific aims and objectives of the data collection, and the benefits of its subsequent use.

This aim for sustainability raises a further issue, namely the extent to which commitment to monitoring in a particular village or community can be sustained if this remains largely the preserve of local officials. This highlights the importance of participatory monitoring.

4 Participatory Monitoring

4.1 Introduction

Both in China and internationally, on the basis of project implementation, it has been argued that the commitment to monitoring – and indeed the task of monitoring itself - can be improved by a greater participation on the part of primary stakeholders such as water users who both benefit directly from the project and who also are being monitored.

Participatory monitoring widens involvement in monitoring away from those who are managing to a broader group of stakeholders. By building on local community knowledge, it increases the capacity of monitoring to record and analyse local conditions. A further purpose of giving project communities an active role in monitoring and evaluation is to enhance the project's communication and learning for improved performance and long-term sustainability.

Table 2 Principles of participatory monitoring

Participation

Primary stakeholders and particularly local communities are active participants, not just sources of information. They are involved in selecting indicators and can have access to the results of this monitoring

Discussion and negotiation

Relevant primary and secondary stakeholders should discuss, negotiate and agree what will be monitored, how and when data will be collected, and how findings can be shared

Learning and capacity building

Participation and discussion can lead to collective learning. The focus should be on building stakeholder capacity for analysis and problem-solving

Flexibility

Since one of the purposes of participatory monitoring is improved results, leading to ongoing change, adaptation and improved implementation, flexibility is important. Indicators cannot be imposed but must be the result of stakeholder discussion

Ownership and appropriate action

Communities have access to the data obtained by the participatory monitoring

Table 3 Main differences between conventional and participatory monitoring

	Conventional	Participatory
Who	External experts	Project staff, community members, facilitators
What	Predetermined indicators of success, principally production outputs and costs	People are involved in identifying indicators of success, including outputs and costs
How	Separation of those monitoring from other participants	More emphasis on self-evaluation; methods more adapted to local needs. Sharing of results through local involvement in monitoring
Why	Accountability	Accountability and greater empowerment of local community to take corrective action

In participatory monitoring, the inclusion of many stakeholders with different interests is the axis around which the monitoring process revolves, as people together analyse the process of plan, programme or project implementation and devise agreed and appropriate indicators. The different stakeholders discuss and agree what will be monitored, and how and when data will be collected. This process strengthens people's understanding of the project and – usually - strengthens their commitment to it. In participatory monitoring, groups of stakeholders:

- Discuss and agree on what areas are to be monitored
- Select indicators for monitoring
- Collect data
- Have access to the results of the data collection

Participatory monitoring has been developed in projects in China, notably in Jiangxi Province.

Box 5 Participatory monitoring in Jiangxi Province

In order to monitor and evaluate Village Development Planning in the Chinese 2001-2010 Poverty Alleviation Programme more effectively, a Sino-German Project developed a dataset and indicator system for the Jiangxi Poverty Alleviation and Development (PADO) Office. The indicator system was developed with participation by representatives from some of the villages being monitored. The villagers also worked with local officials in collecting data. The process was supported strongly by the Leading Group on Poverty Alleviation and Development (LGOP), and also used international experts. The monitoring system developed comprised input, output, outcome and impact indicators. These indicators measured social, economic, ecological and political aspects. The monitoring took place in a sample of 1800 villages.

4.2 Practical steps

A further example, below, outlining the steps to be taken in participatory monitoring, is taken from a report written about the participatory monitoring process in the Poor Rural Communities Development Project implemented jointly by the Chinese Government and the World Bank recently in Yunnan, Sichuan and Guangxi provinces.

Step One: Establish a work structure for participatory monitoring (PM)

As a first step, the local community, working with other primary stakeholders, needs to determine responsibilities. Management of the project must work with a group chosen from primary stakeholders and the local community. Responsibilities of this group will include: monitoring the progress of the project, under supervision by management and relevant experts; calling community meetings to discuss problems during project implementation.

Step Two: Identify the areas to be monitored

The community should develop a clear understanding on which areas need to be monitored during project implementation and what kind of changes they expect to occur during the project.

Step Three: Experts to facilitate the understanding and development of indicators by the community

The concept of “indicators” is abstract and often not readily understood. Experts need to facilitate this understanding, and they also need skills in condensing the perceptions, values and views provided by

stakeholders into indicators that the experts have begun to develop, and into new indicators based on stakeholder’s views.

Step Four: Preparation for use of indicators

Stakeholders specify indicators, responsibilities and deadlines. During PM planning workshops, experts and stakeholder representatives agree on a list of indicators that can be monitored on a regular basis.

Step Five: Carry out the participatory monitoring

Data collected from various sources – households, bureaus, village officials- by trained members of the community working with experts.

Step Six: Review participatory monitoring information

Based on the information from the monitoring, community members, stakeholder representatives and experts review the implementation process and adjust it, if necessary, to improve monitoring.

Box 6 Changed attitudes as an outcome of participatory monitoring

Through their involvement in participatory monitoring, local officials developed a new understanding of the local community. Three examples of this change are:

From lack of trust in the analytical abilities of the community to acknowledgement and respect. *“When they started participating in PM, some officials thought that villagers who were poorly educated could not think about their lives. Conducting PM would only waste time and resources in communities.”* However, as the work progressed, the attitudes of township and county project staff changed. *“During the course of analysis, we came to fully respect and trust local people’s knowledge and abilities....The results proved that the community have all the abilities to analyse their own problems”.*

From being unwilling to communicate with the community to learning from them, and listening attentively to their wishes. *“At the very beginning, some people believed it was sufficient to consult a few village cadres, and that there was no need to do a very detailed job. However after being in the village and establishing good communication with the villagers, county and township project staff discovered they had gained a lot of knowledge from the community, and collected a lot of information. We learned how to learn from the community and listen to their voices”*

From being afraid of empowerment to letting local people make decisions by themselves. *“Before implementation of PM, some people were worried that the community would not use their new rights to monitor. However after a while, we noticed that the community had all the abilities to handle all kinds of conflicts of interests, and make practical and feasible plans”*

Write-up of his experiences of participatory monitoring during the implementation of the **Pro-Poor Rural Communities Development Project**, by Zhou Zhifei, local official, Banqiao Township, Rongan County, Guangxi Province, 2004.

5 Evaluation and Feedback

Data should not be collected for its own sake: as noted earlier, the monitoring programme should be designed with a specific purpose in mind and there should be consensus that it will be used for this.

At an early stage in a programme the data is used for designing the programme and preparing a baseline against which future performance will be evaluated.

Subsequent monitoring results should be fed back into plan implementation – both to monitor and report on performance, and to improve future implementation and future planning cycles. Feedback should assess the social impact, to see what changes –if any- need to be made to improve effectiveness. Monitoring can provide “early warning” of problems likely to emerge during implementation. Feedback can also be used to provide ongoing information to stakeholders, so that they understand better the plan or project. Feedback is also essential for mitigation. For example, in the Gansu case study, monitoring the impact of water saving through the introduction of greenhouses enabled a detailed assessment of the introduction of greenhouse cultivation on different groups of farmers. Understanding this impact resulted in the development of policies to assist farmers, both in the water sector, and externally, via the development of economic and social support mechanisms. Lessons learnt from Gansu from monitoring in this area can be used to facilitate the successful introduction of greenhouse cultivation elsewhere in China.

Document Reference Sheet

Glossary:

Monitoring	Monitoring is the continuous assessment of the progress and performance of the implementation of a plan, programme or project.
Stakeholder	A stakeholder is any person, group or institution that has an interest in a programme, plan or project and its implementation. This definition includes both intended beneficiaries and intermediaries, those who will be positively and negatively affected, and those involved in decision making.
Indicator	An indicator is a means for measuring change against a baseline – for monitoring and evaluating change that results from and relates to implementation

Bibliography:

Poor Rural Communities Development Project

Pro-Poor Rural Communities Development Project

Mikelsen B, 'Methods for Development Work and Research: A New Guide for Practitioners', Sage, London, 2005

The International Fund for Agricultural Development, Managing for Impact in Rural Development: A Guide for Project Management and Evaluation. Rome, Italy: 2002.

Document Reference Sheet

Related materials from the MWR IWRM Document Series:

Thematic Paper 2.2	Stakeholder Participation in IWRM Planning
Example 2.2	Initial Stakeholder Analysis for Shiyang River Basin IWRM Plan
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
Advisory Note 6.3/2	Socio-economic Monitoring in Agricultural Water Management (Document in Chinese only)
Example 6.3	Socio-economic Monitoring for Agricultural Water Demand Management in Gansu

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

Integrated Water Resource Management Documents

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

Documents will comprise of:

Thematic Papers

Advisory Notes

Manuals

Examples

Training Materials

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

WRDMAP Project Website: www.wrdmap.com

Advisory Services by : Mott MacDonald (UK) leading a consultancy team comprising DHI (Water and Environment), HTSPE (UK), IWHR, IECCO (Comprehensive Bureau), CIAD (China Agricultural University), Tsinghua University, CAAS-IEDA, CAS-CWRR, Gansu WRHB and Liaoning WRHB.

6.
Water
Saving
Society