INTEGRATED WATER RESOURCES MANAGEMENT PLANS

TRAINING MANUAL AND OPERATIONAL GUIDE

March 2005

Cap-Net

Global Water Partnership

UNDP

INTEGRATED WATER RESOURCES MANAGEMENT PLANS
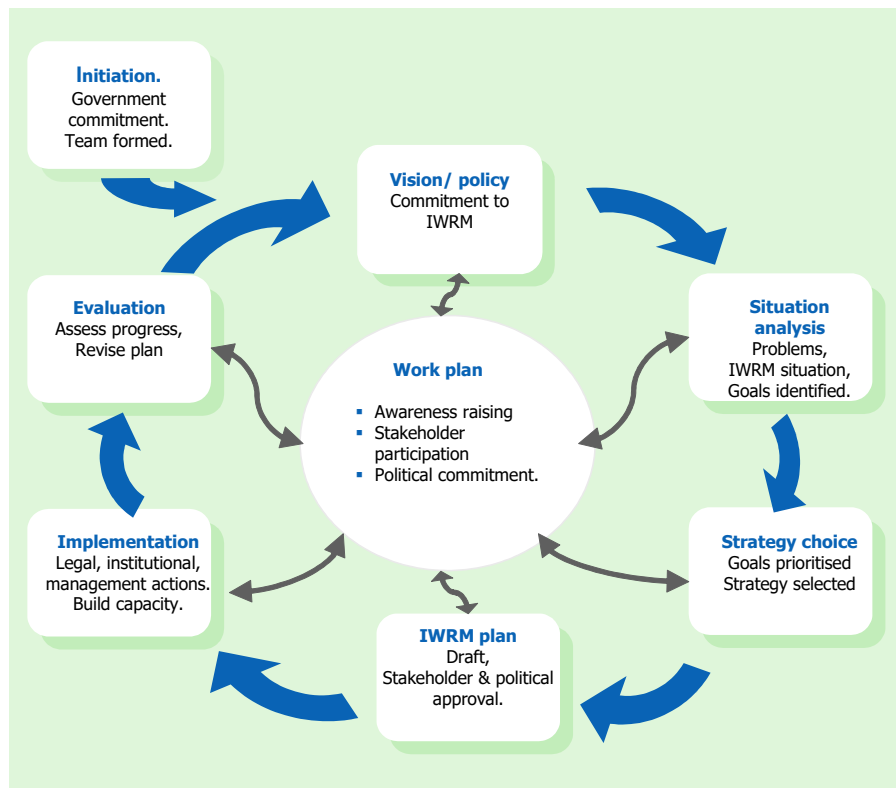

Training Manual and Operational Guide

March 2005

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Note

This is training material intended for a 3-4 day course on how to achieve a water resources management plan that brings in the principles of IWRM. It has limitations in time that affect the depth of the content and the focus is on process. The aim is that this limited introduction will provide also an insight into the other tools and techniques that will be required. Useful tools are identified to support the planning process in each step.

While the material is targeted for national IWRM plans it is readily adaptable for basin level planning and trainers are encouraged to be creative in adapting the material to suit local circumstances.

Acknowledgements

The reference material listed has been heavily used and in places quoted verbatim. Authors are from the Cap-Net network and GWP and include Paul Taylor, Lewis Jonker, Emmanuel Donkor, Diana Guio, Ibrahima Mbodji, Charles Mlingi from Cap-Net and Jan Hassing and Daniel Lopez from GWP. Additional materials have been incorporated from subsequent training sessions and the document will continue to be updated as necessary.

> This training manual can be downloaded from
> **http://www.cap-net.org/TMUploadedFiles/FileFor67/IWRM_Plan.doc** and
> **www.gwpforum.org**
> or requested on CD with all supporting references from **info@cap-net.org**

Foreword

Whether responding to international calls for action or just recognizing the urgent need to solve water problems at national and local scale, many of us are faced with the need to get involved in planning for action. The overall goal in addressing water resources management is sustainability but this should also be accompanied by social equity and economic efficiency. The accepted approach to improving water resources management is based on stakeholder involvement in the planning and decision making process. Therefore preparing water resources management plans can be more involved than conventional government planning.

A water resources strategy is usually a step on the way to the development of a plan as the basic goals and objectives need to be set and the key direction of the changes agreed before embarking on detailed planning.

This training module and operational guide is to assist people in those countries developing a water resources management strategy or a water resources management plan. The materials are linked particularly to the initiatives being taken by the Global Water Partnership (GWP) with several countries and can be used in conjunction with the publication Catalyzing Change (GWP, 2004) for additional input and discussion.

We strongly support the view that planning is not a linear exercise but it is cyclical and must be accompanied by regular evaluation, assessment of progress and re-planning. The material is presented with this view in mind; however it does not extend into implementation of the plan. Implementation is addressed in several other training materials of Cap-Net.

We hope the use of this training manual will help make the difference and catalyze positive change for sustainable development. These materials are a basis for capacity building but must be adapted to the local circumstances, language, culture and experience. This is why we strongly support the concept of capacity building delivery by local institutions. Although targeted at national planning for water resources management the material is readily adaptable for lower level basin or catchment planning within a national policy and legal framework which supports IWRM.

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PART 1

Training Manual

1. INTRODUCTION TO IWRM

1.1. WHAT IS INTEGRATED WATER RESOURCES MANAGEMENT?

At its simplest, integrated water resources management is a logical and appealing concept. Its basis is that the many different uses of water resources are interdependent. That is evident to us all. High irrigation demands and polluted drainage flows from agriculture mean less freshwater for drinking or industrial use; contaminated municipal and industrial wastewater pollutes rivers and threatens ecosystems; if water has to be left in a river to protect fisheries and ecosystems, less can be diverted to grow crops. There are plenty more examples of the basic theme that unregulated use of scarce water resources is wasteful and inherently unsustainable.

Integrated management means that all the different uses of water resources are considered together. Water allocations and management decisions consider the effects of each use on the others. They are able to take account of overall social and economic goals, including the achievement of sustainable development. This also means ensuring coherent policy making related to all sectors. As we shall see, the basic IWRM concept has been extended to incorporate participatory decision-making. Different user groups (farmers, communities, environmentalists…) can influence strategies for water resource development and management. That brings additional benefits, as informed users apply local self-regulation in relation to issues such as water conservation and catchment protection far more effectively than central regulation and surveillance can achieve.

Management is used in its broadest sense. It emphasises that we must not only focus on development of water resources but that we must consciously manage water development in a way that ensures long term sustainable use for future generations.

Integrated water resources management is therefore a systematic process for the sustainable development, allocation and monitoring of water resource use in the context of social, economic and environmental objectives. It contrasts with the sectoral approach that applies in many countries. When responsibility for drinking water rests with one agency, for irrigation water with another and for the environment with yet another, lack of cross-sectoral linkages leads to uncoordinated water resource development and management, resulting in conflict, waste and unsustainable systems.

> *Could you give more examples where integration can be beneficial?*

1.2. WHY IWRM?

Water is vital for human survival, health and dignity and a fundamental resource for human development. The world's freshwater resources are under increasing pressure yet many still lack access to adequate water supply for basic needs. Growth in population, increased economic activity and improved standards of living lead to increased competition for, and conflicts over, the limited freshwater resource. Here

are a few reasons why many people argue that the world faces an impending water crisis:

Box 1. Water crisis - Facts

- Only 0.4% of total of global water in the world is available for humans.

- Today more than 2 billion people are affected by water shortages in over 40 countries.

- 263 river basins are shared by two or more nations.

- 2 million tonnes per day of human waste are deposited in water courses.

- Half the population of the developing world are exposed to polluted sources of water that increase disease incidence.

- 90% of natural disasters in the 1990s were water related.

- The increase in numbers of people from 6 billion to 9 billion will be the main driver of water resources management for the next 50 years.

- Water resources are increasingly under pressure from population growth, economic activity and intensifying competition for the water among users;
- Water withdrawals have increased more than twice as fast as population growth and currently one third of the world's population live in countries that experience medium to high water stress;
- Pollution is further enhancing water scarcity by reducing water usability downstream;
- Shortcomings in the management of water, a focus on developing new sources rather than managing existing ones better, and top-down sector approaches to water management result in uncoordinated development and management of the resource.
- More and more development means greater impacts on the environment.
- Current concerns about climate variability and climate change demand improved management of water resources to cope with more intense floods and droughts.

1.3. KEY ISSUES IN WATER MANAGEMENT

1.3.1. Water governance crisis

Sectoral approaches to water resources management have dominated in the past and are still prevailing. This leads to fragmented and uncoordinated development and management of the resource. Moreover, water management is usually in the hands of top-down institutions, the legitimacy and effectiveness of which have increasingly been questioned. Thus, weak governance aggravates increased competition for the finite resource. IWRM brings coordination and collaboration among the individual sectors, plus a fostering of stakeholder participation, transparency and cost-effective local management.

1.3.2. Securing water for people

Although most countries give first priority to satisfying basic human needs for water, one fifth of the world's population is without access to safe drinking water and half of the population is without access to adequate sanitation. These service deficiencies primarily affect the poorest segments of the population in developing countries. In these countries, meeting water supply and sanitation needs for urban and rural areas represents one of the most serious challenges in the years ahead. Halving the proportion of the population lacking water and sanitation services by 2015 is one of

the Millennium Development Goals[1]. Doing so will require a substantial re-orientation of investment priorities, which will be very much more readily achieved in those countries that are also implementing IWRM.

1.3.3. Securing water for food production

Population projections indicate that over the next 25 years food will be required for another 2-3 billion people. Water is increasingly seen as a key constraint on food production, equivalent to if not more crucial than land scarcity. Irrigated agriculture is already responsible for more than 70% of all water withdrawals (more than 90% of all consumptive use of water). Even with an estimated need for an additional 15-20% of irrigation water over the next 25 years - which is probably on the low side – serious conflicts are likely to arise between water for irrigated agriculture and water for other human and ecosystem uses. IWRM offers the prospect of greater efficiencies, water conservation and demand management equitably shared among water users, and of increased recycling and reuse of wastewater to supplement new resource development.

1.3.4. Protecting vital ecosystems

Terrestrial ecosystems in the upstream areas of a basin are important for rainwater infiltration, groundwater recharge and river flow regimes. Aquatic ecosystems produce a range of economic benefits, including such products as timber, fuel wood and medicinal plants, and they also provide wildlife habitats and spawning grounds. The ecosystems depend on water flows, seasonality and water-table fluctuations and are threatened by poor water quality. Land and water resources management must ensure that vital ecosystems are maintained and that adverse effects on other natural resources are considered and where possible reduced when development and management decisions are made. IWRM can help to safeguard an "environmental reserve" of water commensurate with the value of ecosystems to human development.

1.3.5. Gender disparities

Formal water management is male dominated. Though their numbers are starting to grow, the representation of women in water sector institutions is still very low. That is important because the way that water resources are managed affects women and men differently. As custodians of family health and hygiene and providers of domestic water and food, women are the primary stakeholders in household water and sanitation. Yet, decisions on water supply and sanitation technologies, locations of water points and operation and maintenance systems are mostly made by men. The Gender and Water Alliance cites the example of a well meaning NGO that helped villagers to install pour-flush latrines to improve their sanitation and hygiene, without first asking the women about the extra two litres of water they would have to carry from distant sources for every flush. A crucial element of the IWRM philosophy is that water users, rich and poor, male and female, are able to influence decisions that affect their daily lives.

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[1] The Millennium Development Goals are an ambitious agenda for reducing poverty and improving lives that world leaders agreed on at the Millennium Summit in September 2000. For each goal one or more targets have been set, most for 2015, using 1990 as a benchmark. More information can be found on the UNDP website at http://www.undp.org/mdg/.

1.4. WATER MANAGEMENT PRINCIPLES

A meeting in Dublin in 1992[2] gave rise to four principles that have been the basis for much of the subsequent water sector reform.

Principle 1. Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.

The notion that freshwater is a finite resource arises as the hydrological cycle on average yields a fixed quantity of water per time period. This overall quantity cannot yet be altered significantly by human actions, though it can be, and frequently is, depleted by man-made pollution. The freshwater resource is a natural asset that needs to be maintained to ensure that the desired services it provides are sustained.This principle recognises that water is required for many different purposes, functions and services; management therefore, has to be holistic (integrated) and involve consideration of the demands placed on the resource and the threats to it.

The integrated approach to management of water resources necessitates co-ordination of the range of human activities which create the demands for water, determine land uses and generate waterborne waste products. The principle also recognises the catchment area or river basin as the logical unit for water resources management.

Principle 2. Water development and management should be based on a participatory approach, involving users, planners and policymakers at all levels.

Water is a subject in which everyone is a stakeholder. Real participation only takes place when stakeholders are part of the decision-making process. The type of participation will depend upon the spatial scale relevant to particular water management and investment decisions. It will be affected too by the nature of the political environment in which such decisions take place. A participatory approach is the best means for achieving long-lasting consensus and common agreement. Participation is about taking responsibility, recognizing the effect of sectoral actions on other water users and aquatic ecosystems and accepting the need for change to improve the efficiency of water use and allow the sustainable development of the resource. Participation does not always achieve consensus, arbitration processes or other conflict resolution mechanisms also need to be put in place.

Governments have to help create the opportunity and capacity to participate, particularly among women and other marginalised social groups. It has to be recognised that simply creating participatory opportunities will do nothing for currently disadvantaged groups unless their capacity to participate is enhanced. Decentralising decision making to the lowest appropriate level is one strategy for increasing participation.

Principle 3. Women play a central part in the provision, management and safeguarding of water.

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[2] The International Conference on Water and Environment, Dublin, Ireland, January 1992.

The pivotal role of women as providers and users of water and guardians of the living environment has seldom been reflected in institutional arrangements for the development and management of water resources. It is widely acknowledged that women play a key role in the collection and safeguarding of water for domestic and – in many cases – agricultural use, but that they have a much less influential role than men in management, problem analysis and the decision-making processes related to water resources.

IWRM requires gender awareness**.** In developing the full and effective participation of women at all levels of decision-making, consideration has to be given to the way different societies assign particular social, economic and cultural roles to men and women. There is an important synergy between gender equity and sustainable water management. Involving men and women in influential roles at all levels of water management can speed up the achievement of sustainability; and managing water in an integrated and sustainable way contributes significantly to gender equity by improving the access of women and men to water and water-related services to meet their essential needs

Principle 4. Water has an economic value in all its competing uses and should be recognised as an economic good as well as a social good.

Within this principle, it is vital to recognise first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Managing water as an economic good is an important way of achieving social objectives such as efficient and equitable use, and of encouraging conservation and protection of water resources. Water has a value as an economic good as well as a social good. Many past failures in water resources management are attributable to the fact that the full value of water has not been recognised.

Value and charges are two different things and we have to distinguish clearly between them. The *value* of water in alternative uses is important for the rational allocation of water as a scarce resource, whether by regulatory or economic means. *Charging (or not charging)* for water is applying an economic instrument to support disadvantaged groups, affect behaviour towards conservation and efficient water usage, provide incentives for demand management, ensure cost recovery and signal consumers' willingness to pay for additional investments in water services.

Treating water as an economic good is an important means for decision making on the allocation of water between different water use sectors and between different uses within a sector. This is particularly important when extending supply is no longer a feasible option.

1.5. WATER USE, IMPACTS AND BENEFITS

1.5.1. Impacts

Most uses of water bring benefits to society but most also have negative impacts which may be made worse by poor management practices, lack of regulation or lack of motivation due to the water governance regimes in place.

Each country has its priority developmental and economic goals set according to environmental, social and political realities. Problems and constraints arise in each water use area, but the willingness and ability to address these issues in a coordinated way is affected by the governance structure of water. Recognising the inter-related nature of different sources of water and thus also the inter-related nature and impacts of the differing water uses is a major step to the introduction of IWRM.

TABLE 1. IMPACTS OF THE WATER USE SECTORS ON WATER RESOURCES

	Positive impacts	Negative impacts
Environment	• Purification • Storage • Hydrological cycle	
Agriculture	• Return flows • Increased infiltration • Decreased erosion • Groundwater recharge • Nutrient recycling	• Depletion • Pollution • Salinisation • Water logging • Erosion
Water supply & sanitation	• Nutrient recycling	• High level of water security required • Surface and groundwater pollution

1.5.2. Benefits from IWRM

Environment benefits

- Ecosystems can benefit from applying an integrated approach to water management by giving environmental needs a voice in the water allocation debate. At present these needs are often not represented at the negotiating table.

- IWRM can assist the sector by raising awareness among other users of the needs of ecosystems and the benefits these generate for them. Often these are undervalued and not incorporated into planning and decision-making.

- The ecosystem approach provides a new framework for IWRM that focuses more attention on a system approach to water management: -protecting upper catchments (e.g. reforestation, good land husbandry, soil erosion control), pollution control (e.g. point source reduction, non-point source incentives, groundwater protection) and environmental flows. It provides an alternative to a sub-sector competition perspective that can join stakeholders in developing a shared view and joint action.

Agriculture benefits

- As the single largest user of water and the major non-point source polluter of surface and groundwater resources, agriculture has a poor image. Taken alongside the low value added in agricultural production, this frequently means

that, especially under conditions of water scarcity, water is diverted from agriculture to other water uses. However, indiscriminate reduction in water allocation for agriculture may have far-reaching economic and social consequences. With IWRM, planners are encouraged to look beyond the sector economics and take account of the implications of water management decisions on employment, the environment and social equity.

▪ By bringing all sectors and all stakeholders into the decision-making process, IWRM is able to reflect the combined "value" of water to society as a whole in difficult decisions on water allocations. This may mean that the contribution of food production to health, poverty reduction and gender equity, for example, could over-ride strict economic comparisons of rates of return on each cubic metre of water. Equally, IWRM can bring into the equation the reuse potential of agricultural return flows for other sectors and the scope for agricultural reuse of municipal and industrial wastewaters.

▪ IWRM calls for integrated planning so that water, land and other resources are utilised in a sustainable manner. For the agricultural sector IWRM seeks to increase water productivity (i.e. more crop per drop) within the constraints imposed by the economic, social and ecological context of a particular region or country.

Water supply and sanitation benefits

▪ Above all, properly applied IWRM would lead to the water security of the world's poor and unserved being assured. The implementation of IWRM based policies should mean increased security of domestic water supplies, as well as reduced costs of treatment as pollution is tackled more effectively.

▪ Recognizing the rights of people, and particularly women and the poor, to a fair share of water resources for both domestic and household-based productive uses, leads inevitably to the need to ensure proper representation of these groups on the bodies that make water resource allocation decisions.

▪ The focus on integrated management and efficient use should be a stimulus to the sector to push for recycling, reuse and waste reduction. High pollution charges backed by rigid enforcement have led to impressive improvements in industrial water-use efficiencies in the industrialised countries, with benefits for domestic water supplies and the environment.

▪ Past sanitation systems often focused on removing the waste problem from the areas of human occupation, thus keeping the human territories clean and healthy, but merely replacing the waste problem, with often detrimental environmental effects elsewhere. Introduction of IWRM will improve the opportunity for introduction of sustainable sanitation solutions that aim to minimise waste-generating inputs, and reduction of waste outputs, and to solve sanitation problems as close as possible to where they occur.

▪ At a practical local level, improved integration of water resource management could lead to greatly reduced costs of providing domestic water services, if for

instance more irrigation schemes were designed with a domestic water component explicitly involved from the start.

1.6. IMPLEMENTING IWRM

The case for IWRM is strong – many would say incontestable. The problem for most countries is the long history of sectoral development. As the Global Water Partnership puts it:
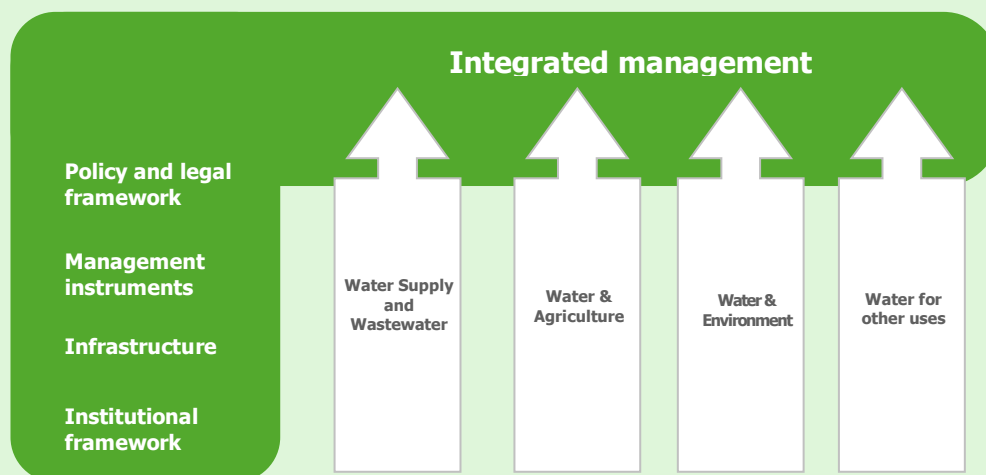
> *"IWRM is a challenge to conventional practices, attitudes and professional certainties. It confronts entrenched sectoral interests and requires that the water resource is managed holistically for the benefits of all. No one pretends that meeting the IWRM challenge will be easy but it is vital that a start is made now to avert the burgeoning crisis."*

IWRM is, above all, a philosophy. As such it offers a guiding conceptual framework with a goal of sustainable management and development of water resources. What it does demand is that people try to change their working practices to look at the bigger picture that surrounds their actions and to realise that these do not occur independently of the actions of others. It also seeks to introduce an element of decentralised democracy into how water is managed, with its emphasis on stakeholder participation and decision making at the lowest appropriate level.

All of this implies change, which brings threats as well as opportunities, There are threats to people's power and position; and threats to their sense of themselves as professionals. IWRM requires that platforms be developed to allow very different stakeholders, often with apparently irreconcilable differences to somehow work together.

Because of the existing institutional and legislative frameworks, implementing IWRM is likely to require reform at all stages in the water planning and management cycle. **An overall plan is required** to envisage how the transformation can be achieved and this is likely to begin with a new water policy to reflect the principles of sustainable

FIGURE 1. IWRM AND ITS LINKAGE TO THE SUBSECTORS

Integrated management

Policy and legal framework

Management instruments

Infrastructure

Institutional framework

Water Supply and Wastewater

Water & Agriculture

Water & Environment

Water for other uses

Source: GWP, TEC Paper 4 (2000)

management of water resources. To put the policy into practice is likely to require the reform of water law and water institutions. This can be a long process and needs to involve extensive consultations with affected agencies and the public.

Implementation of IWRM is best done in a step-by-step process, with some changes taking place immediately and others requiring several years of planning and capacity building.

1.6.1. Policy and legal framework

Attitudes are changing as officials are becoming more aware of the need to manage resources efficiently. They see too that the construction of new infrastructure has to take into account environmental and social impacts and the fundamental need for systems to be economically viable for maintenance purposes. However, they may still be inhibited by the political implications of such a change. The process of revising water policy is therefore a key step, requiring extensive consultation and demanding political commitment.

Water legislation converts policy into law and should:

- Clarify the entitlement and responsibilities of users and water providers;
- Clarify the roles of the state in relation to other stakeholders;
- Formalise the transfer of water allocations;
- Provide legal status for water management institutions of government and water user groups;
- Ensure sustainable use of the resource.

Bringing some of the principles of IWRM into a water sector policy and achieving political support may be challenging, as hard decisions have to be made. It is therefore not surprising that often major legal and institutional reforms are only stimulated when serious water management problems have been experienced.

1.6.2. Institutional framework

For many reasons, developing country governments consider water resources planning and management to be a central part of government responsibility. This view is consistent with the international consensus that promotes the concept of government as a facilitator and regulator, rather than an implementor of projects. The challenge is to reach mutual agreement about the level at which, in any specific instance, government responsibility should cease, or be partnered by autonomous water services management bodies and/or community-based organisations.

The concept of integrated water resources management has been accompanied by promotion of the river basin as the logical geographical unit for its practical realisation. The river basin offers many advantages for strategic planning, particularly at higher levels of government, though difficulties should not be underestimated. Groundwater aquifers frequently cross catchment boundaries, and more problematically, river basins rarely conform to existing administrative entities or structures.

In order to bring IWRM into effect, institutional arrangements are needed to enable:

- The functioning of a consortium of stakeholders involved in decision making, with representation of all sections of society, and a good gender balance;
- Water resources management based on hydrological boundaries;
- Organisational structures at basin and sub-basin levels to enable decision making at the lowest appropriate level;
- Government to co-ordinate the national management of water resources across water use sectors.

USEFUL RESOURCES AND TOOLS FROM THE WEB

❑ **CAP-NET WEBPAGE**
  o Cap net tutorial: http://www.cap-net.org/iwrm_tutorial/mainmenu.htm

❑ **GWP WEBPAGE**
  o GWP Publications:
    http://www.gwpforum.org/servlet/PSP?iNodeID=231&iFromNodeID=102
  o GWP Toolbox: www.gwpforum.org

QUESTIONS

Having gone through the basic principles of IWRM you will probably be able to assess the situation in your own country when it comes to implementation of IWRM. Some of the questions you may want to answer are:

❑ What is the evidence of commitment to integrated water resources management in your country?

❑ Considering the water management structures in your country, what institutional and legal reforms are needed to implement IWRM?

❑ Is there an urgency to manage water resources in an integrated manner and how is this best done? What will be the benefits for the different sectors?

❑ How are men and women affected differently by changes in water resources management in your country?

2. PLANNING PROCESS FOR WATER RESOURCES MANAGEMENT: AN INTRODUCTION

2.1. WHY IWRM PLANNING?

As we have heard, the water problems are many and solutions are urgent. However, those solutions need to consider the underlying social, economic and political forces involved and require changes that are not easy to reach.

Planning to introduce an IWRM approach to sustainable management and development of water resources may take several forms. The most powerful reason is to address priority water problems affecting society and this may result in focused action gradually progressing towards IWRM. More commonly, the recognition that water problems are symptomatic of a deeper failure of water management systems leads to long term planning with an agenda for more sustainable use of water resources. The identification of water as a key factor in poverty reduction and sustainable development also drives national planning on water.

2.2. WHAT DO WE EXPECT TO ACHIEVE?

An output of the process will be an IWRM plan, endorsed and implemented by government. In the process the stakeholders and politicians will become more informed about water issues, the importance and the benefits from addressing sustainable management and development of the water resources. The plan may be more or less detailed depending upon the present situation in the country but will identify longer term steps that will be required to continue along a path to sustainability, social equity and efficiency of use.

2.3. TAKE A STRATEGIC APPROACH

Being strategic means to seek the solutions that attack the causes of the water problems rather than the symptoms. It takes a long term view.

Understanding the underlying forces that cause water-related problems helps to build-up a shared water vision and commitment to make that vision come true. In that sense a strategy sets the long term framework for incremental action that moves towards sustainable use of water resources using IWRM principles.

Another feature of water strategy is the consideration of conflict. Management of water resources is a process characterized by the clash of competing and conflicting interests and viewpoints. The integrated approach to water resources management promotes enhanced dialogue, negotiation and participation mechanisms. Applying these principles in the strategy and the subsequent planning process brings

transparency to decision making, acknowledgement of trade offs, and commitment to implementing the plans.
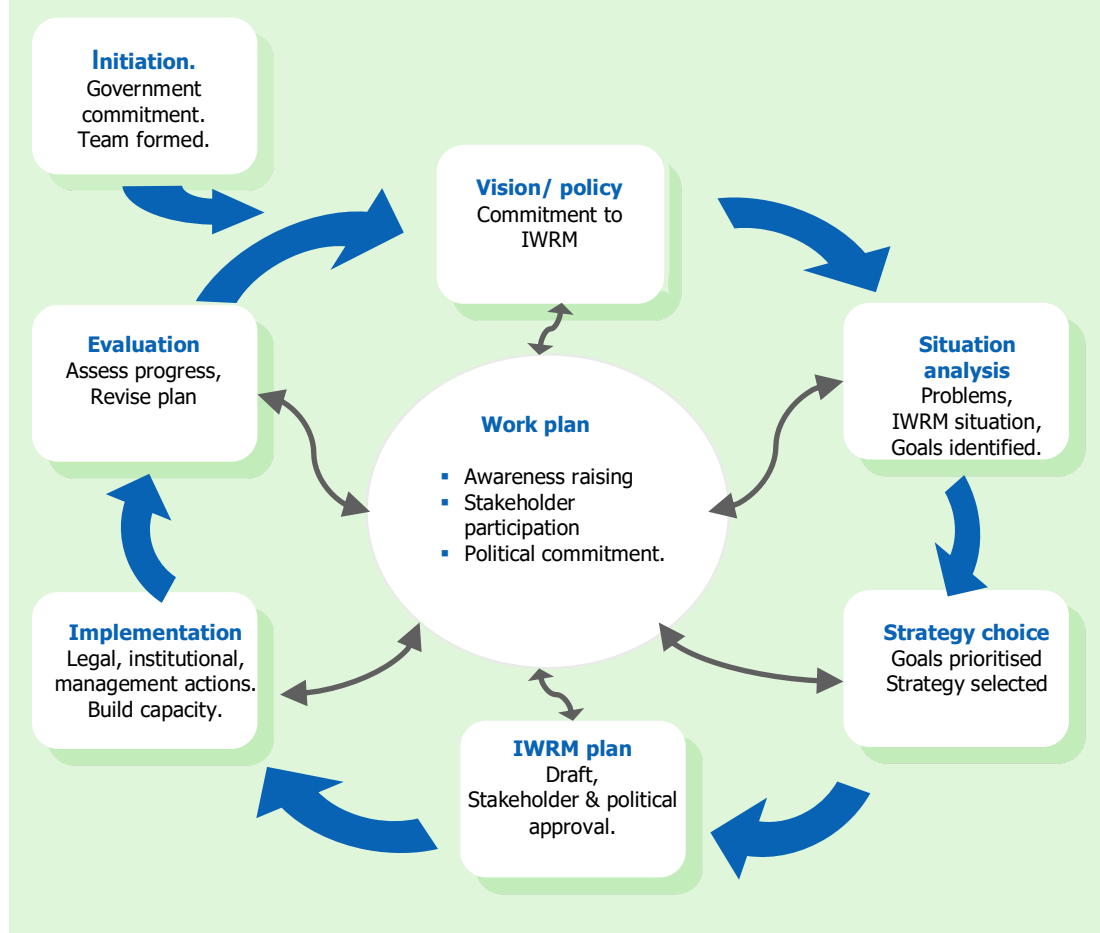
Why is planning important to you?

2.4. THE PLANNING CYCLE

Planning is a logical process which is at its most effective when viewed as a continuous cycle as it is shown in Figure 2 **.**

FIGURE 2. THE CYCLE FOR DEVELOPING AND ADJUSTING AN IWRM PLAN

The planning cycle is a logical sequence of phases that is driven and supported by continuous management support and consultation events shown here in the centre of the figure.

Why should we have a cycle and not a straight line?

2.4.1. Initiation (Module 3).

The triggers to start a planning process may be internal or external or a combination of both. However, once it is agreed that improved management and development of water resources is important the question immediately arises as to how do we get a plan in place to achieve this. That is the purpose of this course.

IWRM planning requires a team to organise and coordinate effort and facilitate a regular stakeholder consultation. An important starting point for government committment is an understanding of IWRM and water resource management principles for sustainable development.

2.4.2. Work planning and stakeholder participation (Module 4).

IWRM planning requires a strong commitment to a future with sustainable management of water resources. It implies political will and leadership from the top leaders and from stakeholders.

Commitment from stakeholders is necessary as they are the ones who strongly influence water management through joint efforts and/or changing their behaviour. Thus planning requires to recognize and mobilize relevant stakeholders, despite their multiple and often conflicting goals.

Politicians are a special group of stakeholders as they are both responsible for approving a plan and are also held accountable for its success or failure. Thus:

- Management of the process;
- Maintaining political commitment;
- Ensuring effective stakeholder participation; and
- Creating awareness of IWRM principles

are all central to the whole planning process.

2.4.3. Building of a strategic vision (Module 5).

A national water vision captures the shared dreams, aspirations and hopes about the state, use and management of water resources in a country. In that sense, a vision provides guiding principles and direction to the future actions about water resources and in particular guides the planning process. The vision may or may not be translated in to a water policy but would be expected to address sustainable use of water resources.

What do we mean by sustainable management and use of water?

2.4.4. Situation analysis (Module 6).

In order to define the action needed to reach such vision, it is important to know the existing situation. Consultation with stakeholders and various government entities is vital to this process to understand competing needs and goals in relation to the water resource availability. The water related problems that arise during this analysis, when

viewed against the water vision or IWRM principles immediately begin to give an indication for the types of solutions that may be necessary or possible.

This phase identifies the strengths and weaknesses in the water resource management, as well as to point out the aspects that should be addressed in order to improve the situation and to be in the track of reaching the vision. As a final output, goals may be drafted according to problems and issues identified, as well as the priorities of the nation.

2.4.5. Water management strategies (Module 7).

Possible solutions come up at the same time or immediately after defining the problems. Such solutions need to be analysed, considering the requirements, the advantages and disadvantages involved and their feasibility.

Establishing the goals for the IWRM plan is important at this stage now that the extent of the problem, and the hurdles to be faced, are known. For each goal the most appropriate strategy is selected and assessed for feasibility as well as its conformity to the overall goal of sustainable management. The scope for technical and managerial action is very large given the complexity of the water sector and already at this stage priority areas for action should be identified.

2.4.6. IWRM Plan prepared and approved (Module 8).

On the basis of the vision, the situation analysis, and the water resources strategy an IWRM plan may be prepared. Several drafts may be required, not only to achieve feasible and realistic activities and budget, but to get politicians and stakeholders to agree to the various trade offs and decisions made. **Approval by government** is essential for resource mobilisation and implementation.

2.4.7. Implementation and evaluation

These are not dealt with in these training materials. To obtain the IWRM plan is a milestone but not the end itself. Too often plans are not implemented and the main reasons are important to know and avoid:

- Lack of political commitment to the process. Usually due to the drive coming from external sources or a lack of engagement of key decision makers in initiating the process.
- Unrealistic planning with resource requirements beyond the reach of Government.
- Unacceptable plans. Plans rejected by one or more influential groups due to inadequate consultation or unrealistic expectations of compromise. With water, where economic benefits or power relations may be affected, adequate consultation is vital.

To achieve sustainable management and development of water resources is a long term commitment and therefore the plan should be seen as a revolving plan with features of evaluation and reformulation at periodic intervals.

USEFUL RESOURCES AND TOOLS FROM THE WEB

❑   **National Strategies for Sustainable Development**: A resource book
  o   http://www.nssd.net/res_book.html#contents

❑   **UNESCAP - Strategic Planning and Management of Water Resources**
  o   http://www.unescap.org/esd/water/spm/

EXERCISE

In small groups compile the activities for each step of the planning cycle that you think would be necessary in your country and region.
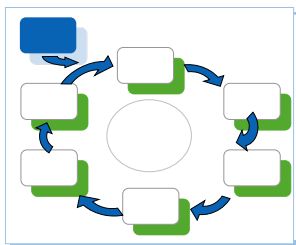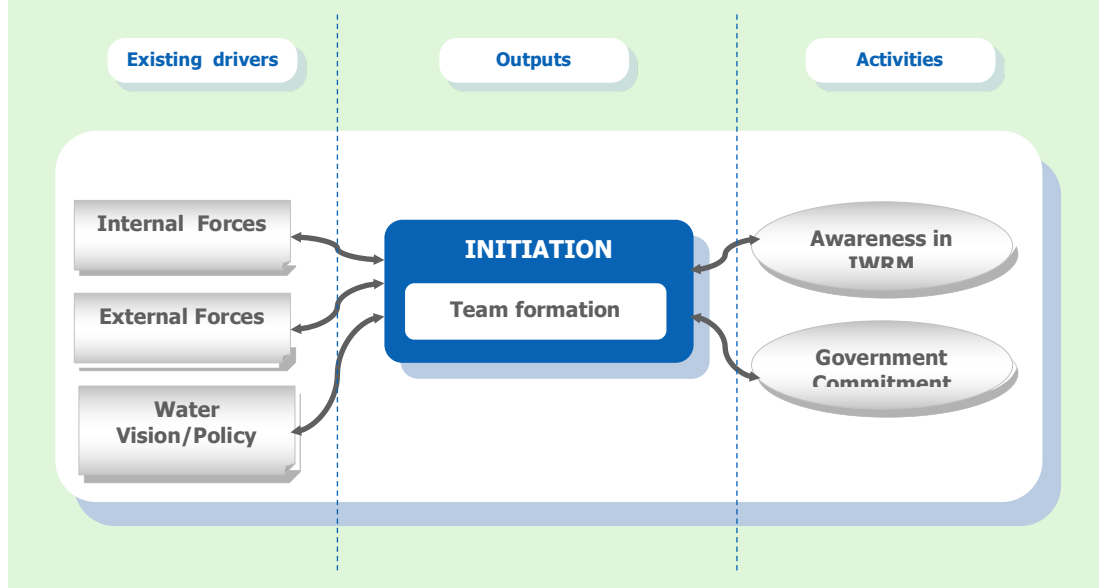
3. INITIATING THE PLANNING PROCESS

3.1. WHAT ARE THE EXPECTED OUTPUTS

This session concerns the initiation and mobilisation of the planning process and therefore the expected output from this stage would be:

- Government interest in improved management of water resources is translated into commitment and the setting up of a management structure to develop the plan.

FIGURE 3. INITIATION PHASE – DRIVERS, OUTPUTS AND ACTIVITIES

3.2. INITIATION

The initiation of an IWRM planning process may arise from several sources. Internationally governments have agreed at the global summit on sustainable development to put in place plans for sustainable management and development of water resources by 2005. This is being followed up with support from the international community and donors. As a result the drive for IWRM plans may appear to come from outside the country by donors and international agencies offering assistance to achieve the goal.

At country level, many governments are aware of the problems that their own water sector is facing from issues such as pollution, scarcity, emergencies, competition for use and have identified action as a priority. Many have also taken the first step of

developing a water policy or water vision or have contributed to the development of such visions in their region. The focus on specific water problems or problem areas are also adequate stimulus for government to act and even if this results in a more focused plan of action to solve a specific issue it may lead on to a gradual development of a fully integrated approach to water resources management.

The process for the development of the IWRM plan requires a different process than usually the case for government planning. Key differences include:

- Multi sectoral approach: To manage water in an integrated way means developing linkages and structures for management across sectors. For such strategies to be successful the main water use sectors should be involved in planning and strategy development from the outset.
- A dynamic process: The development of a sustainable management system for water resources and the integrated approach will be a long process. This will require regular review, adaptation and possibly reformulation of plans to remain effective.
- Stakeholder participation: Because most problems with water resource management are felt at the lowest levels and changes in water management are required down to the individual action, the strategy development process requires extensive consultation with stakeholders.

Whatever the reason for government considering to embark on an IWRM planning exercise there are several key activities:

- Obtaining government commitment
- Raising awareness on principles for achieving sustainable management of water resources (IWRM);
- Establishing a management team

3.2.1. Obtaining government commitment.

For a plan to be accepted and implemented it has to belong to government and be housed within the government structure from the outset. The development of commitment may be required beyond a single ministry if the expected changes are going to be far reaching. Revising water resources management systems impinges on all water users and threatens power of some influential ministries. Building the commitment of those ministries should be done at the outset or at least be a major start up activity of the work plan.

Who are the most important and influential ministries concerning water in your country ?

Which Ministry or department should lead a planning process?

The structure of a management team for the planning and the raising of awareness about water resources management are both linked to achievement and maintenance of government commitment. The topic of political support will be returned to later and will feature throughout the modules.

Indicators of government commitment include, financial allocation to the planning process, leadership of the planning team, number of ministries and agencies involved in the decision to develop a plan.

3.2.2. Raising awareness on water resources management.

The IWRM planning process has to be directly responsive to and justified by national water resource issues and problems. IWRM has to be presented as a realistic means to achieve change and address some of the problems the country is facing. The raising of awareness will continue throughout the planning process but at this point is targeted at key government officials who must be aware of the potential for impact and success before they will commit to the planning exercise based on IWRM principles.

What strategy would you use to reach key political and senior government figures to explain IWRM?

The management team, once established, should also have full opportunity to be briefed about IWRM and be able themselves to convincingly explain the strategies and options that are available to improve management of water resources.

For senior government people a short one or two hour briefing may be all that is possible. A high profile event or attention from the international community may stimulate government interest also.

3.2.3. Establishing a management team

The involvement of all parties has to take place within a clear management framework with agreed roles and responsibilities.

Key organisations for managing the IWRM planning process include for instance:

- The National Government
- A Process Steering Committee
- A Management Team

TABLE 2. SUGGESTED BRAKDOWN OF ROLES AND RESPONSABILITIES

	ROLE
NATIONAL GOVERNMENT	- Lead role, 'owner' of the process - Mobilize funding - Set macro-economic policy environment
STEERING COMMITTEE	- Guide the process (group with wide representation) - Mobilize support across sectors and interest groups - Guarantee quality output - Monitor implementation progress
MANAGEMENT TEAM Group of qualified professionals	- Manage day-to-day processes for strategy development, implementation and capacity building
FACILITATING INSTITUTION where appropriate for example, national NGOs, GWP country or regional partnerships, or local UN country local teams	- Provide neutral platform for dialogue - Support strategy development process by providing advice and sharing knowledge - Foster capacity building and training

- Where appropriate GWP may act as facilitator

The role of the different organisations managing the process has to be clarified and agreed upon at a very early stage (Table 2).

As a consequence of the diversity of situations encountered in the different countries and the varying maturity of the planning processes, there is no blueprint for an effective program management structure.

Steering Committee

If a Steering Committee is established to direct the strategic planning initiative it should drive the plan through all stages of preparation, to ensure that the initiative is both managed effectively and is providing maximum benefit. It needs to include the authorities and institutions involved in decision making for in the water sector, together with a selection of other key stakeholders. The eventual make-up must be carefully balanced and requires a commitment at the outset from all participating organisations (government, the private sector and civil society etc) acceptable to stakeholders.

Establishing a Process Management Team

The key to effective performance is the establishment of a *secretariat/ coordinating body/ management team* acceptable to stakeholders, with sufficient authority and resources to coordinate the activities. Team members normally include senior planners from relevant sector agencies for purposes of bringing different perspectives to bear on the planning process but may be comprised of consultants or seconded staff.

The role of the Team is to translate the requirements of the Steering Committee into practical measures for action, while at the same time informing the Steering Committee on progress and emerging key issues. The Team will be responsible for managing the participatory planning Process and for guiding the activities required for preparation of the IWRM plan. Specific tasks of the team will include the following:

> **BOX 3. KEY TASK OF A STEERING COMMITTEE**
>
> - Provide the management team with general guidance and support
> - Review the proposals and reports prepared by the management team
> - Regularly review progress in implementation
> - Assist the management team in securing primary data and information
> - Be responsible for coordinating and monitoring the implementation of relevant activities within their respective agency, organisation or community
> - Decide on the composition of the management team and appoint its members

> **BOX 4. POTENTIAL MEMBERS OF A STEERING COMMITTEE**
>
> - A senior political figure as chair
> - At least one member of the Team
> - Officials representing relevant Ministries and departments
> - Representative of the regulatory agencies
> - Selected stakeholder representatives
> - Selected specialist experts
> - Representative of external support agency

> **BOX 5. SKILLS IN MANAGEMENT TEAM**
>
> **MINIMUM TEAM SKILLS**
>
> - Team leadership and project management
> - Communication skills negotiation skills.
> - Administrative support
>
> **DESIDERABLE SKILLS**
>
> - Organisation and planning in water resources
> - Political, institutional, legal skills
> - Technical skills: hydrology, demand assessment etc
> - Socio-economic analysis
> - Economics and finance

- Organize and coordinate the overall strategy process
- Planning specific activities and meetings
- Procuring expertise and resources
- Support working groups and other committees
- Act as a focal point for communication.

The composition of the Team may vary and will depend on the extent to which work is outsourced and the scale and scope of the expected output. Likewise the location of the team may vary. However experience shows that it will work best if placed within a government department or, if the expected outcome is far reaching, then it may be better placed centrally within an office which has cross cutting functions such as Finance or Planning. Placement within an independent body acceptable to, and respected by, government is also a possibility.

THE MULTI-STAKEHOLDER PLATFORM: THE ADDED VALUE OF GWP

The Global Water Partnership (GWP) utilizes multistakeholder platforms that have been established both at regional and country levels - in the form of Regional and Country Water Partnerships (CWP) - as a means of assisting with the development of national IWRM and water efficiency plans.

These CWP are neutral platforms that enable all stakeholders to get together and discuss how to make concrete contributions towards the development of strategies, plans and implementation of actions leading towards more sustainable water management and use. They provide a forum for innovation and improved understanding of how changes may be implemented - thus making them more effective - and push for the necessary reforms in legislation and institutional arrangements.

In facilitating the preparation of national IWRM plans - which have the full support of all key stakeholders and are approved by the respective governments - the GWP Country Water Partnerships aim to ensure broad ownership of the plans, thereby facilitating the mobilization of resources to support implementation.

Thus Water Partnerships:

- Provide neutral platform for dialogue and information exchange
- Support IWRM strategy and planning development processes by providing advice and sharing knowledge and lessons learned across regions and countries
- Foster capacity building and training by providing key liaison and coordination with capacity building networks.

USEFUL RESOURCES AND TOOLS FROM THE WEB

❑ Getting in Step: Engaging and Involving Stakeholders in Your Watershed
http://www.epa.gov/owow/watershed/outreach/documents/stakeholderguide.pdf

❑ The How-to of Communications Planning. Social Change media.
   o http://media.socialchange.net.au/planning_comms/10steps.html

❑ Advocacy Sourcebook. A Guide to advocacy for WSSCC co-ordinators working on the WASH campaign
   o http://www.wsscc.org/download/Advocacy_Sourcebook.pdf

❑ Manual Advocacy for Gender & Water Ambassadors. Gender and Water Alliance.
   o http://www.genderandwateralliance.org/reports/GWA%20Advocacy%20manual.pdf

❑ The partnership handbook. Government of Canada
   o http://www.hrsdc.gc.ca/en/epb/sid/cia/partnership/partnerhb_e.pdf

❑ Working on Teams. Articles and Tools. MIT.
   o http://web.mit.edu/hr/oed/learn/teams/articles.html

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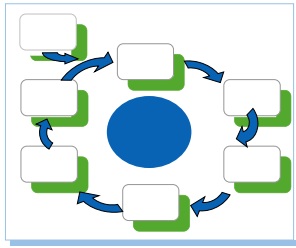
4. DEVELOPING THE WORK PLAN

4.1. WHAT ARE THE EXPECTED OUTPUTS?

This stage of the planning cycle addresses preparing for the work of producing the IWRM plan and therefore the expected outputs from this stage would be:

- A programme of action with detailed work plan and means of funding is in place.
- Political will and support for the planning process is built.
- A framework for broad stakeholder participation is in place.
- Capacity building activities to support the planning process are identified.

The following sections address these output areas.

FIGURE 4. MOBILIZATION PHASE — DRIVERS, OUTPUTS AND ACTIVITIES
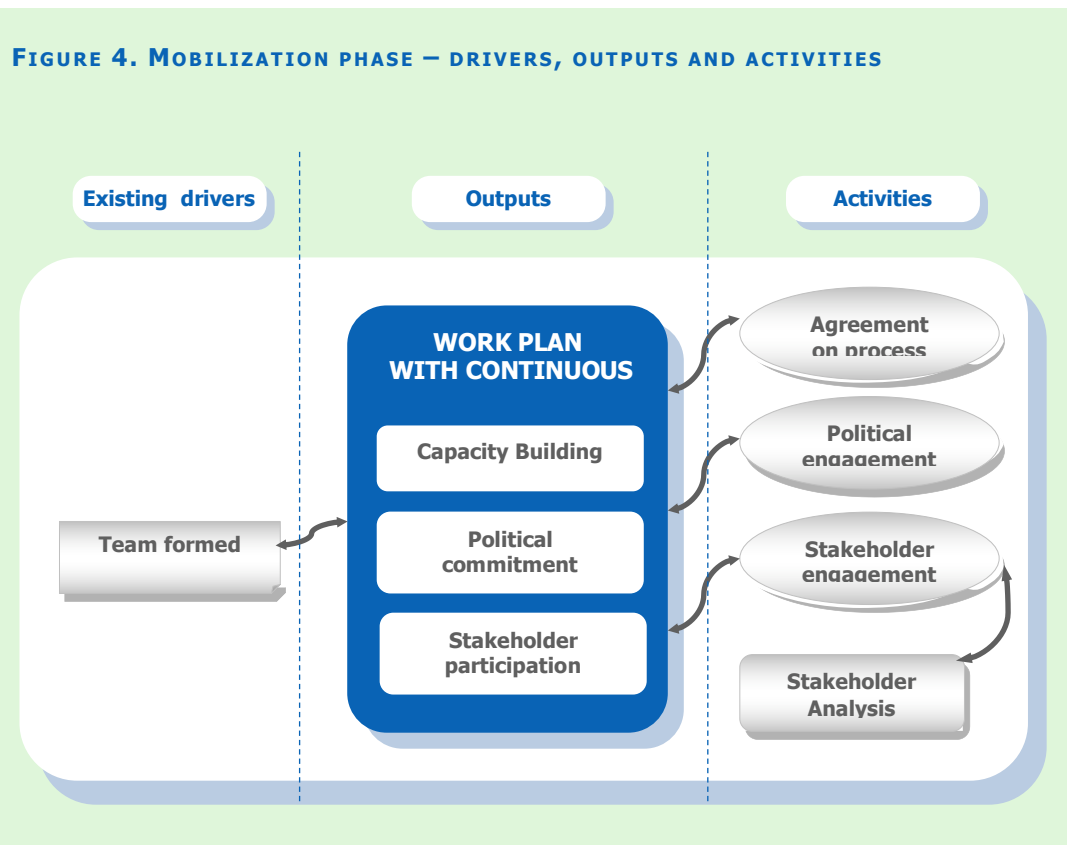
4.2. MOBILISATION

Mobilising the team, development of the work plan, drawing in relevant stakeholders, and ensuring political commitment are all components of the start up of the planning

process. The actions of the team and other process management structures take place throughout the planning cycle and are the means to keep the cycle turning.

The mobilization of efforts should also seek to build trust in the process. Trust is one non-tangible social capital that gives cohesion by reducing uncertainty. Trust reduces conflict eases the consultation process and improves acceptance of the result. Loss of trust has the opposite effects.

4.2.1. Development of the work plan.

Defining the Terms of Reference

The mobilisation phase is one of the key stages in the entire planning process, during which Terms of Reference (ToR) for the IWRM Plan itself will be established. It is important that the principal framework issues are carefully thought through, in terms of target areas, resources and finances required, both to undertake the IWRM plan and to implement its recommendations. The ToR must be based on these considerations and provide a clear structure for further activities.

The ToR can either be developed in parallel with organising the Management Team or as a principal task for the Team. It is often the case that the roles of the Team are specified within the ToR. It is important to remember that the ToR is intended as a reference document, providing a clear statement of need, scope and objectives. It thus serves to contain ground rules that govern the whole process. Typical components of the ToR include Background information, Strategic Planning objectives, Division of Responsibilitie*s,* Scope of Work/Tasks, Workplan, Reporting requirements, Process Management Structure, Budget and resources required, and Supporting data, materials and information. The outputs from the Team and the time frame are important controlling parameters for the Team.

Acquiring Resources and Funding

The conduct of the planning process is also constrained by the budget allocated. The work plan, numbers of meetings workshops, use of consultants are limited by the funding as well as by other factors. The Team may be expected to develop a budget but more likely the Team will not be established unless a known amount has been committed to the process in the initiation phase. Human and other resources will be necessary and conditions for contracting consultants will need to be clarified.

The work plan

The final stage in the mobilisation process is to develop the Work Plan. Based on the requirements of the ToR, this will integrate the needs of the IWRM plan with the resources that have been assembled and will provide a detailed blueprint for specific actions and activity. The work plan can be structured around the steps identified in this training material.

The work plan has to be prepared by the Team and/or any consultant hired for that purpose, and will form one of the principal outputs of the first stage. Typical areas to be covered by the work plan are:

- Briefing on tasks required
- Work plan and methodology to be applied
- Management and expert responsibilities
- Key project delivery points
- Key meetings / seminars / communication mechanisms

4.3. POLITICAL COMMITMENT

Political support and commitment is essential to the success of any change process and the highest level of political commitment (cabinet, head of state) is necessary if the resulting plan is anticipating changes across ministries or to legal and institutional structures.

Establishing with political leaders the need for sustainable management and development of water resources and an IWRM approach is an important first step. A respected political or social figurehead as a champion may also assist in creating awareness and drawing support to the process.

Some of the reasons for strong political support are to:

> **BOX 6. ABOUT POLITICAL COMMITMENT**
>
> **SOMETHING TO MEASURE**
>
> - Financial allocation to the planning process
> - Leadership of the planning team
> - Number of Ministries and agencies involed in the decision to develop a plan
> - Workshops/activities with politicians
>
> **SOMETHING TO CONSIDER**
>
> - The existence of an official policy or statement of government does not guarantee effective action
> - The government has frequently used a top-down approach, and not consider the stakeholders from the beginning
> - Political commitment needs to be long term and therefore cross political parties
> - NGOs have played an important role in water development schemes

- ensure that priority water resource problems and issues can be addressed from multi-agency dimension;
- enable the strategy coordinating system to work (the secretariat and steering committee will rely on political support for their formation and operation);
- ensure that the water resources vision and objectives incorporate political goals consistent with other national goals;
- conversely, ensure that the water vision and objectives are reflected in political aspirations,
- ensure that sustainable approaches to water management are included in national developments, plans and policy statements from other sectors;
- ensure that the policy implications of the strategy are followed and considered throughout the process, and not merely at some formal end-point (to allow a continuous improvement approach to work);
- make decisions on recommended policy, legal and institutional changes;
- ensure that the plan is adopted and followed through;
- commit government funds (and, if necessary, mobilise donor assistance);

Sustainable management and development of water resources has far reaching implications on the way water is traditionally managed and because of expected changes in power structures and decision making has obvious political implications.

This has to be recognised and consciously addressed throughout the IWRM planning process.

How can you Gain Political Commitment?

Political commitment needs to be long term and therefore cross political parties and meet young as well as mature politicians so that it is not rejected when a new government takes office For this reason a compelling vision that all parties can aspire to provides a good foundation for action.

Some examples of strategies

- Identify opportunities for drawing attention to the broad issues of IWRM
- Build on international commitments. E.g. most governments, including yours, have signed up to the international goal to develop plans for the sustainable management and efficient use of water resources.
- An early step may be to start with key individuals, champions, and gradually build support.
- Use a problem based approach and appeal through parliamentarians to address the water problems of their constituents;
- Use publicity to raise water issues on the national agenda and therefore the relevance to politicians;
- Provide information or make a presentation to the parliamentary committee or other suitable government body with responsibilities for water, land or environment.
- Promotional material, summaries of long reports and other targeted information material in an appropriately short and readable format;
- Take a 'process approach' and build commitment along the way – but don't leave it too late.

Is it possible to get ministries and politicians responsible for Land, Water, Environment, Local government, Energy to work together?

How would you do it?

4.4. STAKEHOLDER PARTICIPATION

(Ref "Improving Wastewater Management in Coastal cities")

A core principle of an IWRM approach to water management is stakeholder participation. Water is everyone's business and for the success of water sector reforms it is important to know what the views and interests are of the stakeholders.

The importance of stakeholder participation should be recognized in a number of aspects of project preparation and implementation. These aspects include:

- The identification of stakeholders' interests in, importance to, and influence over the proposed project;
- The identification of local institutions or processes upon which to build support for the project; and

TABLE 3. TYPES OF PARTICIPATION

	CHARACTERISTICS
Manipulative participation	Participation is simply a pretence
Pasive participation	People participate by being told what has been decided or has already happened. Information shared belongs only to external proffesionales
Participation by consultation	People participate by being consulted or by answering questions. No share in decision-making is conceded and professionals are under no obligation to take on board people's views
Participation for material incentives	People participate in return for food, cash or other material incentives. Local people have no stake in prolonging practices when the incentives end
Functional participation	Participation is seen by external agencies as a means to achieve project goals, especially reduced cost. People may participate by forming groups to meet predetermined project objetives
Interactive participation	People participate in joint analysis, which leads to action plans and te formation or stregthening of local gropus or institutions that determine how available resources are used. Learning method are used to seek multiple viewpoints.
Self-mobilization	People participate by taking initiatives independiently of external institutions. They develop contacts with external institutiosn for resources and technical advice but retain control over how resources are used

SOURCE: Dalal-Clayton B, Bass S (2002)

- The provision of a foundation and strategy for involving the stakeholders in the various stages of preparing and implementing the IWRM plan.

What level of participation do you think is the best for IWRM?

The last point shows that the stakeholder engagement strategy runs right through the planning process as an integral component and is not a one off event.

Benefits of Stakeholder Involvement

- It can lead to informed decision-making as stakeholders often possess a wealth of information which can benefit the project;
- Stakeholders are the most affected by lack of water resources or poor management of water resources;
- Consensus at early stages of the project can reduce the likelihood of conflicts which can harm the implementation and success of the project;
- Stakeholder involvement contributes to the transparency of public and private actions, as these actions are monitored by the different stakeholders that are involved;
- The involvement of stakeholders can build trust between the government and civil society, which can possibly lead to lead to long-term collaborative relationships

Steps of Stakeholder Participation

Stakeholder analysis essentially involves four steps:

1. Identify the key stakeholders from the large array of groups and individuals that could potentially affect or be affected by changes in water management.
2. Assess stakeholder interests and the potential impact of the IWRM plan on these interests.
3. Assess the influence and importance of the identified stakeholders.
4. Outline a stakeholder participation strategy (a plan to involve the stakeholders in different stages of the plan preparation).

Step 1: Identification of key stakeholders

In identifying the key stakeholders, you should consider the following questions:

- Who are the potential beneficiaries?
- Who might be adversely impacted?
- Have vulnerable groups who may be impacted by the plan been identified?
- Have supporters and opponents of changes to water management systems been identified?
- Are gender interests adequately identified and represented?
- What are the relationships among the stakeholders?

Answering these questions will lead to a simple list, which forms the basis of the stakeholder analysis.

Not all stakeholders need or want to be involved in all tasks associated with the process. One purpose of stakeholder analysis is to ensure that the Team, and others involved in managing the planning process, adequately understand the stakes of different interest groups, where they wish to participate, and what their expectations and skills are. So it is important to clarify early on the roles of the key participants in strategic planning processes and relationships between them, as defined in the formal roles and mandates of institutions and organizations in the process, and as promoted by the different policy communities.

Step 2: Assess stakeholder interests and the potential impact of the project on these interests

Once the key stakeholders have been identified, the possible interest that these groups or individuals may have in the project can be considered. Questions that you should try to answer in order to assess the interests of different stakeholders include:

- What are the stakeholder expectations of the plan?
- What benefits are likely to result from the project for the stakeholder?
- What resources might the stakeholder be able and willing to mobilize?
- What stakeholder interests conflict with IWRM goals?

Important to realize when assessing the interests of the different stakeholders is that some stakeholders may have hidden, multiple or contradictory aims and interests. The various organizations and interest groups that need to be engaged in a strategy process each have their own interests that they will seek to promote and defend. They can become involved in the process in different ways and contribute at different levels: for example, to identify and find solutions to problems, to build a vision and goals for the

future, and to debate policy options and possible actions. Involvement in a strategy process may be seen as a right, but it also carries with it certain responsibilities, and it is therefore important to establish and agree roles as early in the process as is agreed to be appropriate. Trade offs will have to be made to change to a sustainable use of water resources and stakeholders need to be engaged and participate effectively if they are to accept the final plan.

Step 3: *Assessing stakeholder influence and importance*

In the third step the task is to assess the influence and importance of the stakeholders that you identified in earlier steps. Influence refers to the power that the stakeholders have over a project. This power may be in the form of stakeholders that have formal control over the decision-making process or it can be informal in the sense of hindering or facilitating the plans acceptance or implementation. Importance relates to the question how important the active involvement of the stakeholder is for achievement of the project objectives. Stakeholders who are important are often stakeholders who are to benefit from the project or whose objectives converge with the objectives of the project. You should realize that some stakeholders who are very important might have very little influence and vice versa.

In order to assess the importance and influence of the stakeholder you should be able to assess:

- The power and status (political, social and economic) of the stakeholder.
- The degree of organization of the stakeholder.
- The control the stakeholder has over strategic resources.
- The informal influence of the stakeholder (personal connections, etc.).
- The importance of these stakeholders to the success of the project.

Both the influence and importance of the different stakeholders can be ranked along simple scales and mapped against each other. The disadvantaged, such as the poor or some gender groups may need special attention to overcome their lack of status. This exercise is an initial step in determining the appropriate strategy for the involvement of these stakeholders. As with the second step, in order to make sure the assessment is as accurate as possible it would be preferable to have 'on-the-ground' consultations.

Step 4: *Outline a participation strategy*

On the basis of the previous three steps in the stakeholder participation process, some preliminary planning can be done in relation to the question of how to best involve the different stakeholders. The involvement of stakeholders should be planned according to:

- Interests, importance, and influence of each stakeholder.
- Particular efforts needed to involve important stakeholders who lack influence.
- Appropriate forms of participation <u>throughout the project cycle</u>.

It is very important to include, within this strategy, steps for improving understanding about water resources management and the IWRM approach. Promotional materials explanatory or educational sessions may be organised using radio, TV or other media.

4

Methods for Stakeholder Participation

Stakeholders should be engaged at all critical steps in the process of developing the plan. These stages should be planned and the work plan should identify the timing, the purpose, the target stakeholders, the method and the expected outcome. The scale and strategy of stakeholder participation must be carefully determined as they contribute significantly to the cost.

Methods may include:

- Stakeholder workshops, in which selected stakeholders are invited to discuss water issues.
- Representation in the management structure for the planning process.
- Local consultations 'on the ground'.
- Surveys.
- Consultations with collaborating organizations (such as NGOs, academic institutions, etc.).

Using multiple sources of information not only has the advantage that the information obtained is likely to be more accurate, but especially the participatory methods of information gathering (stakeholder workshops, local consultations, etc.) can also contribute to creating a sense of local ownership of the process and consensus about the project objectives. Stakeholder participation techniques range from a low level of involvement to a high level of involvement.

How do you prioritise stakeholders and how can the less influential be represented?

We have mentioned the need to identify key stakeholders but representatives may need to be identified from each stakeholder group. Formal structures may allow this to be done easily by the stakeholders themselves but in other cases consultation with the stakeholders can identify accountable leaders or accepted spokespersons. It is important to ask for representatives to

What do you consider to be a good level of stakeholder participation in your country?

provide feedback to their constituencies and also if necessary canvas the opinions of their members and solicit their support for the process.

4.5 CAPACITY BUILDING

The following questions relate to capacity of various stakeholders in the management of water and the planning process.

- To what extent is IWRM new?
- Are stakeholders aware of the importance of the proposed water reforms.
- Are ministers and other politicians adequately informed to be able to make the right political choices?
- Are there really important gender differences in access to and use of water?
- Does the Management Team understand all of the issues and have the skills to facilitate a stakeholder process?
- What are the water management strategic options and how do we decide what is best for us?
- Why should we charge for water?
- Do we have enough knowledge to be able to implement the IWRM plan?

This knowledge is required at different stages of the planning cycle by different categories of people and greatly affects their ability to contribute or perform. In turn the lack of adequate knowledge affects the quality of the plan and its ability to be implemented successfully.

What do you think is the most important capacity building need?

It is appropriate to consider the capacity building needs during the planning process but be prepared to revise and refine it as the work moves along. The failure to carry out enough capacity building is common, - so are failed projects.

The simplest way to address capacity building is to follow each component of the work plan with the question **– do the people involved in this part of the plan have sufficient knowledge to be able to participate effectively?** If not then take the necessary steps to raise their understanding, awareness, skills or competence. This starts right from the beginning with the knowledge of the politician and the skills of the management team. Capacity building needs will change as the plan moves to implementation and different skills are required.

KEY LESSONS LEARNED

1. Political support and goodwill is crucial to the ultimate success of the Strategic IWRM Plan.

2. Broad consensus and full ownership of Strategic Planning proposals by stakeholders is critical to ensuring implementation of the resulting plan.

3. Involve all stakeholders in an inclusive participatory planning process. This should include political leaders, department officials, specialists, NGOs/community organizations and the private sector.

4. The role of the facilitator (Process Management Team) is to assist management of the participatory planning process, coordinate debates, communicate experiences and help secure consensus on key issues

USEFUL RESOURCES AND TOOLS FROM THE WEB

❑   Building trust tools
    o   http://www.resolv.org/pubs/buildingtrust/index.html

❑   A Guide For Self-Assessment Of Country Capacity Needs For Global Environmental Management. GEF. Copies in english,arabic, chinese, french, russian and spanish are available in
    o   http://www.gefweb.org/Documents/enabling_activity_projects/enabling_activity_projects.html

❑   Stakeholder Methodologies In Natural Resource Management. DFID
    o   http://www.dfid.gov.uk/pubs/files/BPG02.pdf

❑   Stakeholder analysis guidelines. LACHSR
    o   http://www.lachsr.org/documents/policytoolkitforstrengtheninghealthsectorreformpartii-EN.pdf

❑   Stakeholder participation
    o   Participation: sharing our resources. FAO. http://www.fao.org/Participation/ft_find.jsp
    o   Worldbank. Participation source book.
        http://www.worldbank.org/wbi/sourcebook/sbhome.htm

❑   Participation, Consensus building and Conflict management. UNESCO.
    o   http://unesdoc.unesco.org/images/0013/001333/133308e.pdf

❑   Gender Mainstreaming in IWRM. Module 4. Gender Mainstreaming Tools – Training of Trainers. GWA
    o   You can order this material in info@cap-net.org. It is free of charge.
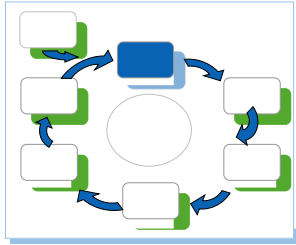
5. ESTABLISH THE STRATEGIC VISION

5.1. WHAT ARE THE EXPECTED OUTPUTS?

The output from this step of the planning process is a formal or informal statement of a water vision or water policy which embraces the principles of sustainable management and development of water resources.

FIGURE 5. STRATEGIC VISION PHASE – DRIVERS, OUTPUTS AND ACTIVITIES
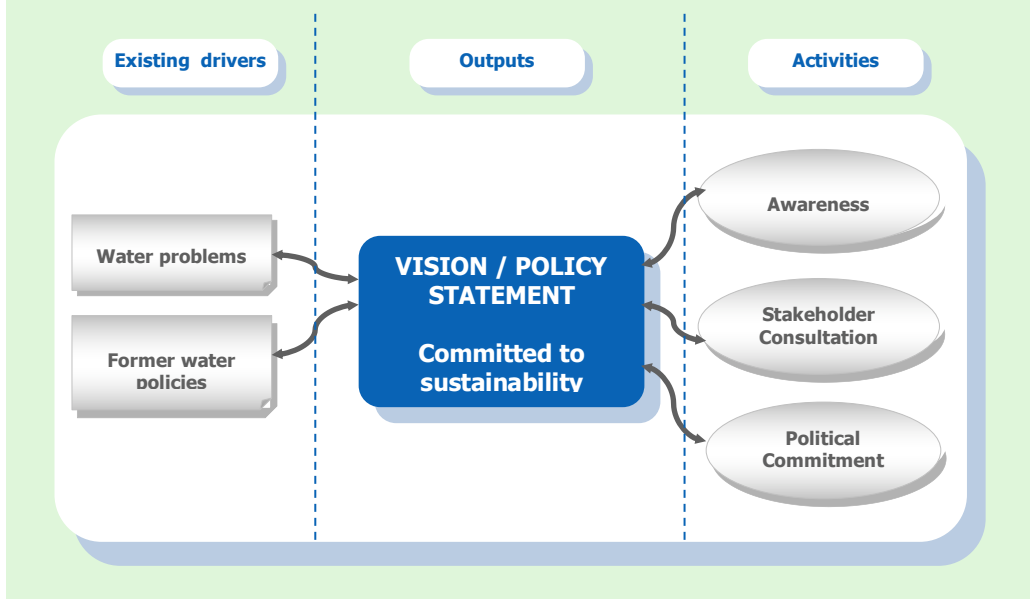
5.2. WHY IS A WATER VISION IMPORTANT?

The achievement of sustainability in national development requires a strategic vision which is both long-term in its perspective and linking various development process so that they are as sophisticated as the challenges are complex. A strategic vision for the sustainable development and management of water resources at the national level implies:

- Linking long-term vision to medium-term targets and short-term action;
- "Horizontal" linkages across sectors, so that there is a coordinated approach to development;
- "Vertical spatial linkages, so that local, national and global policy, development efforts and governance are all mutually supportive; and
- Genuine partnership between government, business, and community and voluntary organizations since the problems are too complex to be resolved by any group acting alone.

A vision of how the water resources are expected to be in about 20 years time is a useful start to a planning process. It allows for a common appreciation to be built of the future avoiding concerns over present conflicts and systems. This common view of the future assists stakeholders to pull together and address difficult issues.

While a policy and a vision are very different, either may act as a basis of agreement and form the foundation to move on to the development of an IWRM plan.

In the context of the development of an IWRM plan there may be a need to convince government and other stakeholders that an IWRM approach is the correct one to achieve the long term goal of sustainable management and development of water resources.

What is a Vision?

A vision is a statement that describes a future state. It is oriented to a given time period, usually about 20 years and should not be very long. The problem is that a vision may be too vague and unachievable. Ideally they should be framed in the context of the national vision for development

The vision can either take the shape of on overall statement of principle for the future of water resources in the country, or be developed in more detail combining:

- Why water management needs to be improved;
- Where you want water management to be in, say, 15-20 years;
- How management and services are to be improved;
- When specific goals will be reached.

> **BOX 7. WATER VISION - EXAMPLES**
>
> **THAILAND WATER VISION**
>
> - By the year 2025, Thailand will have sufficient water of good quality for all users through an efficient management, organisational and legal system that would ensure equitable and sustainable utilisation of its water resources with due consideration on the quality of life and the participation of all stakeholders.
>
> **WEST AFRICA WATER VISION**
>
> - By 2025, water resources are managed efficiently and effectively in an environmentally sustainable manner so that every person in the region has access to safe drinking water for basic need, has safe excreta disposal facilities, food security, poverty is alleviated, human health is protected, and also the biodiversities of the terrestrial and aquatic systems protected.

The vision starts with the development of common view of the future and may include defined common goals and objectives, and translates these into policies, legislation and practice. The vision can be applied at a regional (inter-country) level, a shared watercourse level (internal river basin), a national level or a local level (sub-catchment).

What is a policy?

The range of policy instruments can often be confusing.

- Policy statements by members of the executive are informal but may be a serious commitment by a politician.

- Formal policy statements are typically written and may be formal papers approved by government.
- Practice, what actually takes place, may differ from the above and could be the *de facto* policy.

A key reason for policy is to build commitment of stakeholders. Therefore a written policy document, formally or informally adopted by government, is a valuable indication of government commitment to water sector reform. This very relevant when considering a complex and cross cutting issue like water where many different interests have to be considered.

> *Do you think a water vision or a water policy is necessary before developing an IWRM plan?*

Policies are more detailed than a vision and if the concepts of IWRM are not well understood it may not be appropriate to develop a water policy and this may be an activity to be undertaken later as part of plan implementation.

5.3. STEPS IN DEVELOPMENT OF A WATER VISION.

There are 4 aspects to be considered:

- Examining existing water policies or vision for consistency with sustainable development.
- Ensuring sufficient understanding of IWRM.
- Incorporating the views of the Stakeholders.
- Achieving political commitment to the vision or policy.

However be careful not to invest disproportionate effort into vision development at the expense of planning.

5.3.1. Existing water vision and policies

Existing water policy and water vision (and practice) must be examined for consistency with the principles of sustainable management of water resources. If this is found to be the case then the IWRM planning process may proceed relatively smoothly as there has probably already been a process of promotion of the IWRM principles. The following steps of awareness raising and building commitment and stakeholder consultation, may need a less intensive effort than would be the case if starting from a less developed background.

The absence of such policies or visions or the failure to follow through with implementation suggests the need for raising commitment and awareness to the importance of water issues, especially at the political level.

5.3.2. Ensuring understanding of IWRM.

IWRM is an approach to achieve the goal of sustainable management of water resources. As identified in the previous session, capacity building to raise awareness and increase understanding on means and measures to achieve sustainable management and development of water resources is an ongoing activity. The development of the appropriate materials and tools to transmit the messages to the

target groups is important and very different messages are required to solicit political commitment to the principles than are required to convince stakeholders.

5.3.3. Incorporating the views of the Stakeholders.

The importance of stakeholder participation in formulating national water vision and policies has already been stressed. The appropriate extent of public consultation will differ between countries depending on local circumstances, including the availability of resources.

As a minimum, it would normally be appropriate to develop a draft policy and to make this draft available to interested and affected parties for comment. In addition to this, formal and informal consultations can be held with interested and affected parties through the holding of public meetings and through workshops attended by open or closed invitation.

In some countries, public consultation has been for show only, with little attention being paid to the ideas arising from the consultations. In these instances the final document is essentially the same as the initial draft. In other cases, various drafts have been produced and sent back for further discussion, and the final policy statement has incorporated diverse inputs. The approach adopted by South Africa in formulating its Water Act of 1997 involved pre-announced dates for specific stakeholder inputs and iterations of the policy document ensured a coherent but time-bound consultation process.

Stakeholder involvement is important not only to ensure a "better" final document but because it ensures a sense of involvement and ownership of the objectives and principles that are codified in the document. Securing such involvement gives much greater assurance that things will work smoothly in the rest of the stages leading to the IWRM plan and its implementation. Donors are well aware of this, and are far more amenable to supporting water sector programmes and projects in countries where there is a high level of stakeholder participation.

Example

An inception workshop involving all key stakeholders can be held to discuss and agree key issues and establish the framework for the IWRM plan.

The key at this stage is to open up an active debate and to ensure that all participants have the opportunity to speak-up on issues that are of particular concern to them. Holding key issues discussions in a range of sub-working groups will boost the chances of active contributions being made by all key stakeholders. These workgroups can be designed on the basis of the likely key issue the areas such as the strategic planning framework.

It is important for each group to take full ownership of their findings and recommendations. Appointment of workgroup leaders usually senior participants who are a part of the Steering or working Groups, can be extremely effective.

The Inception Workshop represents the first opportunity for all stakeholders to get together to be introduced to the objectives of the strategic plan, discuss key issues and obtain a further understanding of IWRM and the goals for improved water management.

An output from the meeting can be inputs to a water vision, a draft vision or comments to an existing draft.

The Inception workshop is critical to the success of the overall initiative as it is in this forum that initial interest and involvement can be secured.

5.3.4. Achieving political commitment to the vision or policy

This may be taken as a first test of the likely acceptability of an IWRM plan. How much interest is their from the political level in sustainable management of water resources? The building of commitment at this early point is necessary if the expectation of commitment to adopt the resulting IWRM plan is to be achieved.

What would you do to get a water vision adopted at a political level?

Methods have been outlined in module 4.

USEFUL RESOURCES AND TOOLS FROM THE WEB

❑ Visioning
   o ECDPM, Facilitation tools (From: Institutional Development, Learning by Doing and sharing). http://www.cap-net.org/FileSave/34_facilitation_tools.doc
❑ How to run a brainstorming session
   o http://www.uiweb.com/issues/issue34.htm

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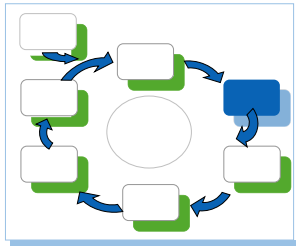
6.1. WHAT ARE THE EXPECTED OUTPUTS?

The output from the situation analysis is a report elaborating the progress with implementing improved management of water resources, the outstanding issues, the problems and some of the solutions. Prioritising these problems, issues and solutions in terms of social, economic, environmental and political priorities is an important aspect of the report. The analysis is carried out with respect to achieving sustainable management and development of water resources.

FIGURE 6. SITUATION ANALYSIS PHASE — DRIVERS, OUTPUTS AND ACTIVITIES

Existing drivers | Outputs | Activities

Water Problems

Management problems

Supporting data

Political and Social priorities

SITUATION ANALYSED
Problems, Causes, Effects
IWRM process

GOALS IDENTIFIED

Stakeholder Consultation

Political Commitment
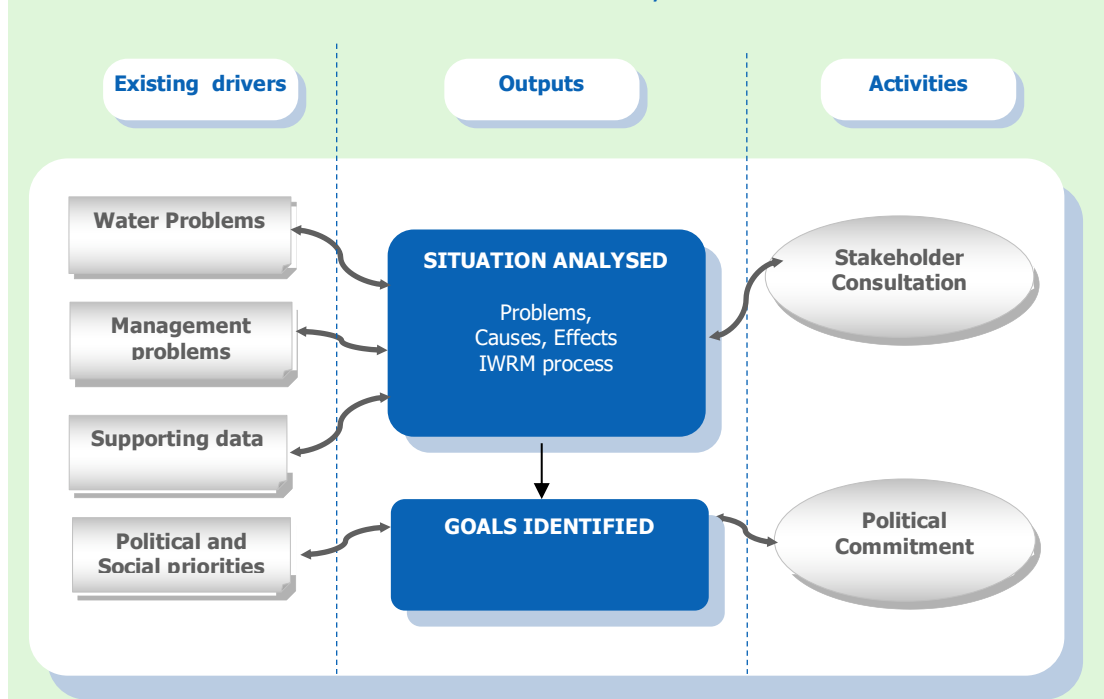
6.2. WHAT NEEDS TO BE ACHIEVED

The purpose of this step is to help characterize the present situation and to use the information to predict future adjustments necessary for an IWRM approach.

The situation analysis examines the key factors of influence in a given situation. It is especially important to view the situation first from the perspective of those directly affected. Awareness of the problems and the motivation to seek solutions are a function of the condition experienced by the stakeholders.

For the purposes of an IWRM plan the situation analysis is assessed against the principles of sustainable management and those embodied in the IWRM approach. Analysis and interpretation made against these goals and the national water vision or policy can be focused and targeted to address the main constraints and causes rather than the symptoms.

The report should adequately reflect the concerns and impacts of the present water management systems on users, development, the environment and society as a whole. The report should be shared widely and this means summarised as appropriate. The report should serve as an important indicator of the transparency of the process and the commitment of government to address the issue of sustainable management of water resources. The sharing of the report with politicians and other senior members of government helps to maintain political commitment, enlist their support for the solutions and action emerging, and create awareness of the implementation implications of the forthcoming plan.

6.3. STEPS IN DEVELOPMENT OF THE SITUATION ANALYSIS

Approach.

While there is an emphasis on the participation of stakeholders this should not be done to the extent of ignoring the statistical aspects and quality of data. One challenge in the situation analysis is to get the balance between the analytical tasks and the stakeholder inputs.

There is a role for specialist expertise in conducting the analysis when highly technical skills are required, large baseline surveys need to be done or there is particular need for an independent viewpoint.

There are several related principles for coordinating the collection of knowledge:

- Multi-stakeholder groups should design the information gathering, analysis and research process themselves, to ensure **ownership** of the strategy and its results.
- All the 'analysis' tasks are best implemented by bringing together, and supporting, *existing centres* of technical expertise, learning and research.
- Since analysis is central to strategy development, it should be **commissioned, agreed and endorsed at the highest level** (i.e. by key government ministries or by the planning steering committee). This will increase the chance that analysis will be well focused and timely in relation to the plan's evolution and timetable, and that it will be implemented.
- In the same way, analysis needs **good coordination**. It is logical for the Management Team to coordinate the analysis but it should not undertake all the analyses itself and, indeed, not necessarily any of it. Many players need to be involved. Through their active involvement in reflection and analysis, the strategy will help in building learning institutions.

Objectives

The objectives of the analysis must be clear. The water sector is large and covers a huge number of issues. However the assumption in these materials is that there is the

intention to address the goal of sustainable management of water resources, which already narrows down the scope of the analysis.

The purpose of the situation analysis is to examine the existing water resources management system in terms of the IWRM principles and the goal of sustainable management and development. Weaknesses, problems and issues identified may stem from the following substantive areas:

- Water resources policy
- Water (resources) legislation
- Water Management institutions, and
- Water (resources) management practices.

Is there a difference in importance between hydrological data and sociological data?

Causes of the problems may not lie in the same area.

An analysis of the present water resources management situation in the country should therefore identify gaps in the management framework and allow a prioritisation of action.

Data Collection

Information for the situation analysis comes from a variety of sources.

For reasons of efficiency and effectiveness, the planning process should build on and exploit earlier knowledge and experience and draw on lessons learned. Such knowledge is rarely readily available nor well documented. It often exists in an ad-hoc form among professionals and practitioners as well as among government and non-government staff within water resources and water relevant sectors. The political level holds important knowledge on the various processes involved in achieving overall endorsement of the goals of the plan and rallying support to its implementation.

The knowledge to be compiled and made available include the following areas:

- IWRM experience at country level, where elements of IWRM frameworks may have been completed in part or in full. National water laws, management organisations and water resources assessment tools are constantly changing in many countries around the world and constitute important requisites for IWRM
- International IWRM experience, which can mean both experiences collected from several countries or groups of countries or experience where transboundary waters and regional aspects are dominating.
- Experience from past and present national planning processes within other sectors and in particular those cutting across several sectors. Examples of such processes are development of poverty reduction strategies, strategies and plans for sustainable development, development of environmental conservation strategies and of watershed management plans.
- Experience from cross-cutting areas in the IWRM planning process such as participation and partnership development, involvement of women in water resources management, capacity building, empowerment and decentralized decision making.

An assessment of the current situation for IWRM, incorporates cross-sectoral tools such as shown in Box 8.

The analysis of the current situation can start by reviewing the national development goals and indicators and examining the role of water resources in relation to the achievement of these goals. The social/cultural/institutional context and macro-economic policies that condition current policies and practices for the development, management and use of water resources should also be taken into account.

6.4. WATER RESOURCE SITUATION ANALYSIS

The situation analysis should examine the quantity and quality of both surface and groundwater as well as the potential for utilising unconventional sources emanating from reclamation, re-use, recycling, desalination and water demand management. It should identify the pertinent parameters of the hydrological cycle, and evaluate the water requirement of different development alternatives. The analysis should pinpoint the major water resources issues and potential conflicts, their severity and social implications, as well as risks and hazards such as flood and drought. A summary of the main areas to be covered is given in Box 8. For the purposes of IWRM planning care should be taken not to embrace an approach which is too technical but to emphasise the management systems and the enabling environment for efficient, effective and sustainable use.

The understanding of the terrestrial and aquatic ecosystems is an essential element of resource assessment. A sound water resources assessment needs to be based on good physical and socio-economic data. However often these data are not available and this in itself is an indicator of the weakness of the water resource management system.

Socio-economic aspects are important looking at the impacts of the present water management system on water users (including environment) and society as a whole. Water resources assessment for IWRM puts hydrology within a wider context of social and economic development issues such as urban growth, changing land-use patterns, environmental sustainability and transboundary issues.

What is the most important water resource management issue for your situation?

The above approach is of central importance to regional co-operation in IWRM. The relevant unit of analysis is the basin as a whole, irrespective of whether it crosses national boundaries. National policies and strategies need to make a particular commitment to pursuing water resources assessment on this holistic basis, because international agreements and management of international waters will benefit significantly from well established water resource management at the national level.

Indicators

There have yet to be established a consistent set of indicators for sustainable management of water resources. Once in place they would provide a valuable basis from which to assess progress and carry out the situation analysis.

What are good indicators for sustainable management of water resources?

Defining Provisional Goals.

The situation analysis report should present the issues and problems and prioritse those requiring most urgent attention. The criteria for this should be developed, for example see table … The report, while not a planning document, will raise the types of solutions that have been identified in the consultations and provide some analysis of these in terms of acceptability to stakeholders, feasibility and strategy. The purpose of this is to establish a process of gradual movement towards consensus decisions on the future water resources strategy. The situation analysis opens the door to possible solutions and allows them to be considered before the water resources strategy and Plan has been developed. When the process of strategy development takes place the stakeholders are well enough informed to be able to respond more effectively to proposed approaches.

Articulating priority goals can focus attention on the future management situation and less attention on the means to arrive there. Similarly providing an initial perspective and basis for discussion of the priority goals ahead of the strategy and plan development. The involvement and feedback to political level is important at this point to maintain political commitment to the process and ensure that they embrace the situation analysis and are aware of the

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likely solutions and actions to emerge.

6.5. ISSUES OF CONCERN FOR THE STAKEHOLDERS

Stakeholder participation has been dealt with in a general sense in Module 3.

Stakeholders play an important role in the situation analysis being able to reach beyond numbers and statistics to the real impact of the water management system on society and development. The aim of including them at this stage is to identify, prioritize and formulate the problems in a clear way and with a common understanding. It is important to be aware that the views and interest of the stakeholders can be conflicting. Negotiation skills and conflict resolution techniques will be a useful skill.

For the identification of issues of concern, the following approach can be used;

Step 1: *Make an analysis of who is participating*

This first step analyses the major project/programme actors, their interests and goals and their interrelationships. It aims to shed light on the social reality and power relationships prevailing in the institutional setting of the project/programme. Major actors include not just potential winners but also potential losers.

Step 2. *Problem analysis*

Priority issues in terms of significant and urgent water resources problems to be dealt with are identified by the stakeholders and grouped into a problem-tree with cause and effect and identification of the core problem. Inevitably conflictive views and demands on water resources will arise.

BOX 10. STAKEHOLDERS

CORE STAKEHOLDERS

- Government Ministries and related institutions involved in national development planning and policy making
- Government Ministries and related institutions involved in key water-related sectors, including domestic water supply and sanitation, irrigation, agriculture, energy, health, industry, transport, fisheries and tourism
- Water utilities, agencies and related bodies (e.g., Water Development Boards)

ESSENTIAL STAKEHOLDER TO BE BROUGHT INTO THE PROCESS

- Local communities and community-based organizations (mayors and religious leaders, for example)
- The private sector, including but not limited to water supply and sanitation service providers
- Sectoral interest groups such as farmers and fishermen
- Women's groups and associations
- Representatives of indigenous communities
- Non-government organizations
- Media representatives
- Research and training institutions, including Universities
- Facilitating partners (e.g., in developing countries—UN agency country offices, Global Water Partnership country water partnerships)

The issues can be divided into livelihood/demand issues (e.g., meeting the increasing and often conflicting demands of different economic sectors) and resource-impact issues (e.g., impact of climate variability and changes, impact from human activities and land management).

- **Livelihood/demand issues**
  In many countries the challenges to be dealt with comprise issues such as securing access to safe drinking water and basic sanitation for the presently unserved; the challenge of rapidly growing urban water demands and wastewater discharges; securing water for increased food production; reducing vulnerability to floods and droughts (including considerations of possible impact of climate change); reducing risk to human health and production from diseases and hazards; meeting increased demands from irrigated agriculture, industry and other economic activities; protecting the resource base and vital ecosystems; and the prioritisation among these often conflicting demands. Providing equal opportunity for men and women in dealing with these issues is an important challenge.

- **Resource-impact issues**
  The above livelihood/demand issues need to be balanced based on an understanding of the resource base and the threats to this resource base: the impact of human activities and land management causing for instance deforestation, erosion and siltation, pollution and ecosystem deterioration, reduction of wetland areas, declining groundwater tables and salt water intrusion, the impact of natural phenomena such as climate variability and change, desertification, floods and droughts.

Much of integrated water resources management is essentially conflict management. It is ultimately Government's role to sort out potential conflicts at the strategic planning stage. While these measures will reduce the numbers of conflicts that emerge at later implementation stages, they will not eliminate them. Thus, it will normally be necessary to set up some formal process for conflict resolution on an ongoing basis.

*Where do you see conflicts arising between stakeholders and how would you solve them?*

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> **EXERCISE.**
>
> In a small group write a contents page for a situation analysis report on the water resources management situation in your country.

1. It is a challenge to build commitment to share information and to gain participation. Other sectors may feel threatened and chose not to co-operate fully

2. A water resources assessment often needs to be carried out in several steps of increasing complexity. A rapid water resources assessment may help identify and list the most important issues and identify priority areas. On the basis of this early assessment, more detailed investigations may be required.

3. A poor knowledge base is indicative of poor water resource management.

4. Prioritisation of data needs based on key water issues and assessment of risks and damages can help to develop political support and resources.

5. When data needed for water resources assessment are collected by a number of different organisations, their systems need to be compatible in terms of standards, quality assurance, electronic access and transfer.

6. Water management solutions often emerge alongside the problems from stakeholders who are directly affected.

USEFUL RESOURCES AND TOOLS FROM THE WEB

❑ Water Resources Assessment. WMO UNESCO. Handbook for review of National Capabilities
  o http://www.wmo.ch/web/homs/documents/english/handbook.pdf

❑ California Watershed Assessment Manual
  o http://cwam.ucdavis.edu/Manual_chapters.htm

❑ WB. Participation and Social Assessment: Tools and Techniques.
  o http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1996/04/01/000009265_3980624143608/Rendered/PDF/multi0page.pdf

❑ Status of Women, Government of Canada. Gender-based Analysis: A Guide for Policy-Making
  o http://www.swc-cfc.gc.ca/pubs/gbaguide/index_e.html

❑ Practitioner's guide. Data and Information Assessment Matrix.
  o http://www.methodfinder.net/pdfmethods/methodfinder/methodfinder_method67.pdf

❑ Gender Mainstreaming in IWRM. Module 5. Gender Mainstreaming in Organizations and Policy process – Training of Trainers. GWA
  o You can order this material in info@cap-net.org. It is free of charge.

❑ Practitioner's guide. Problem tree.
 o http://www.methodfinder.net/pdfmethods/methodfinder/methodfinder_method1.pdf

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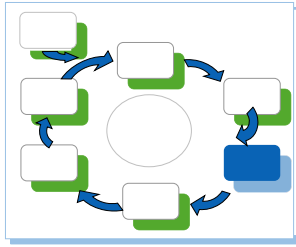
7.1. WHAT ARE THE EXPECTED OUTPUTS?

The output from this stage of the planning cycle is a water resources management strategy with clear goals. The strategy should go beyond the actions needed to solve current problems or achieve short term objectives and establish a clear long term framework to achieve sustainable management and development of water resources. The IWRM plan will then be used to operationalise the strategy from one planning period to the next.

FIGURE 7. STRATEGY AND OPTIONS PHASE — DRIVERS, OUTPUTS AND ACTIVITIES
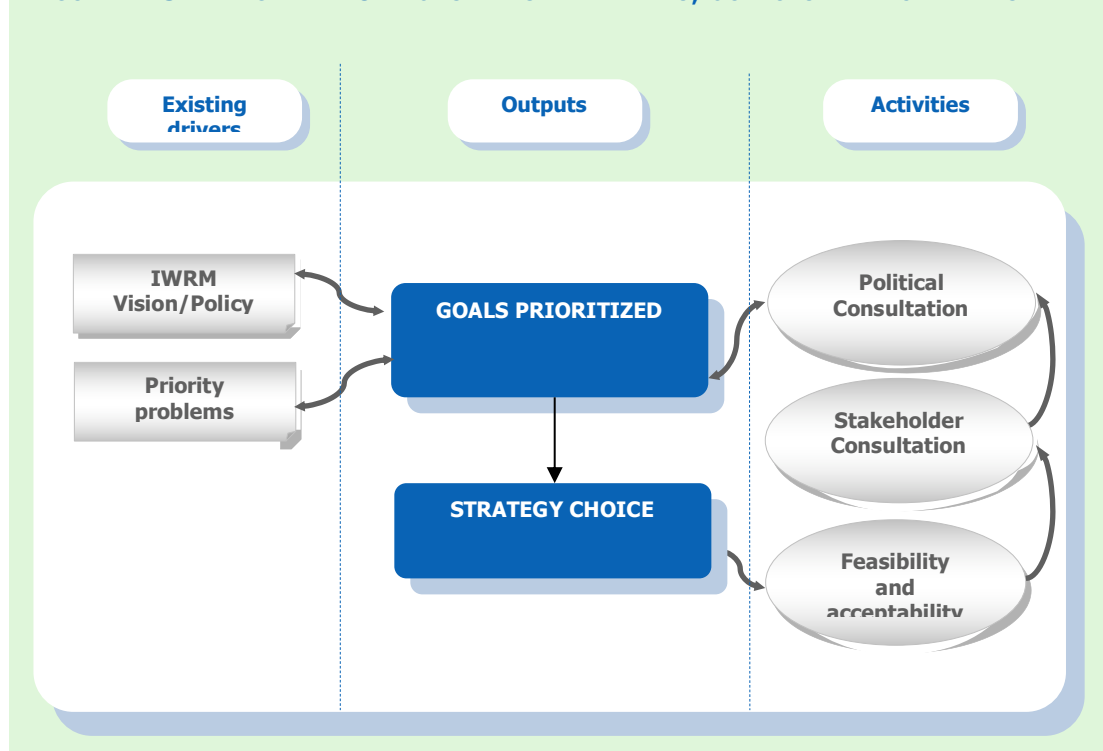
7.2. WHERE TO START.

Recognising that integrated water resources management provides principles for the sustainable management of water resources the question arises how to decide what measures to put in place. What should be changed in the way we manage water and what are the implications of the proposed changes? These are not easy questions to answer and it may in fact take many years before complete water

What is the difference between a strategy and a plan?

reforms are implemented and are working effectively.

In theory, a comprehensive approach that seeks to optimize water's contribution to sustainable development across the board should have a greater impact. In practice, starting with concrete issues can yield better results. Being too ambitious at the outset— ignoring the political, social and capacity problems that must be solved for effective implementation—can result in a strategy that looks great on paper but doesn't translate into doable actions. Experience suggests that major initial reforms are not essential to catalyzing change—first steps that can easily be implemented are often enough to begin the process of moving towards more sustainable water development and management.

Regardless of the initial approach strategies should aim at nothing less than institutionalizing changes that will promote more strategic and coordinated decision-making on an on-going basis. For this reason the aspects to be considered is not only 'what' needs to be changed but also 'when' should the changes take place. Rather than try to carry out everything at once the actions will need to be phased over several years.

This module will address

- the scope of the strategy decisions
- the framework for making strategy decisions, and
- the IWRM change areas.

7.3. THE SCOPE OF THE STRATEGY DECISIONS.

Goals drive the selection of strategy. Alongside the issues and problems identified in the situation analysis, solutions are suggested. There may be varying degrees of consensus around these proposed solutions but they reflect the wishes of the stakeholders consulted. These proposals need to be brought forward to a step where the goals behind the IWRM plan are clearly articulated and agreed.

A policy (or a vision) is often the starting point being a statement of intent. The essential difference in translating the policy to strategy a strategy is that it seeks to meet certain goals through specific investments. In a strategy the investment resources available and options to reach the goals have to be assessed and a programme devised for these resources to be spent in an equitable but at the same time economically efficient manner. Stakeholders may have much stronger views they would like to express about the trade-off decisions which need to be made in designing a strategy, yet it is much more rare for thorough stakeholder consultations to take place on strategies than it is on policies and legislation.

The strategic goals describe how the vision might be achieved. Each goal should cover a given issue (problem or opportunity), address the main changes required to make the transition to sustainable development, be expressed in a way that is broad enough to encompass all aspects of the issue and ensure 'buy-in' by all relevant stakeholders, but also specific enough to allow measurable targets to be defined. The strategy should cover sufficient goals to address the main economic, social and

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environmental concerns of sustainable water resources management, but few enough to be achievable and comprehensible.

Key goals in IWRM may be drawn from the following major areas:

- In an international context *water resources shall be managed observing international agreements, conventions, global values and good neighbourliness which entails an equitable sharing of water and benefits of transboundary watercourses*
- In a national context *water resources shall be managed to support the achievement of national development goals such as poverty reduction, the millenium development goals and sectoral development goals within food production, energy production, industry and environment*
- In a context of human and ecosystems´ need *water resources shall be managed in such a way that they are accessible for everyone, satisfy basic human needs and aquatic ecosystem requirements. These human needs and environmental requirements shall take priority during allocation of water resources*
- In a context of management principles the most significant principles include *decentralisation of responsibilities to the lowest appropriate level, participatory management and decision making including gender mainstreaming, cooperative governance (across sectors and across agencies) and management within hydrological units (catchments)*
- In a context of financial sustainability water resources management benefit from *full cost recovery within the management system and that users and polluters pay for the services. Charges and tariffs, subsidies, incentives and disincentives are key.*

Some goals may be agreed as priorities, to be accorded targets (see below) and implemented within a short timeframe. Other goals, which are not current priorities, may come into effect only when progress has been made with the priorities, or if circumstances change and they have become of higher priority.

Targets for each goal describe specific and measurable activities, accomplishments or thresholds to be achieved by a given date. These form the core of any action plan, and serve to focus resources and guide the selection of options for action. Because targets imply concrete actions and behaviour changes by specific stakeholders, they should be the product of negotiation.

Reaching such goals will often require a legal and institutional reform supported by specific management skills and instruments. Setting the goals for this reform process and finding and prioritising the management instruments and skills is an important part of the process of moving towards IWRM.

Institutional roles covers the roles, partnerships and systems required to implement the strategy. This may include linkage between the IWRM plan and other strategic plans and between plans at different spatial levels: national, sub-national, local, or for different sectors or geographical regions. It would identify which institutions are responsible for which parts of the strategy action plan, their degrees of freedom and where they have an obligation to defer to other stakeholders or strategy coordinators. It might also signal a rationale for streamlining institutions (especially where

responsibilities overlap or conflict) or even propose the establishment of new institutions as necessary.

Once a country has determined where it wants to go—in terms of goals, objectives and priorities—the next step is to figure out how to get there along the specific IWRM change areas. An example of the contents for a water resources management strategy is given in the Annex.

Give an example of an important goal for water resources management in your country.

The action plan is developed from the outcome of the strategy and is presented in the next module although there is an inseparable link that refers the plan back to strategy as further assessment and adjustment takes place.

7.4. THE FRAMEWORK FOR MAKING STRATEGY DECISIONS.

Understanding the problems affecting water resources management is a fundamental first step towards action towards sustainable management and development of water resources.

Strategy decisions have to be tested and adopted taking into account:

- The views of the stakeholders, including politicians;
- The feasibility of the strategy, including risks;
- The trade offs and other factors;
- And the cost.

This will require a review of the proposed strategy for acceptance by political interests, stakeholders and in terms of financial and technical feasibility. As the process moves to the actual detailed planning stage this cyclic process is repeated until the activities, scheduling and resources are feasible and likely to be acceptable to the stakeholders.

7.4.1. Important considerations

Dealing with trade-offs is an unavoidable aspect of an IWRM plan. There are always winners and losers and addressing these in an informed and transparent way is difficult but necessary. The most obvious tradeoffs are between different water users with some losing water (loss of economic benefit) and others gaining (access to basic services). Private sector interests and water sector interests can be powerful opponents. Other trade offs may be between generations (usage now may be a loss to future generations) or between apparently different goals of economic development versus environmental protection.

Dealing with the real world. Often plans are made with idealistic goals and fail to recognise the reality of critically important factors or constraints. Plans are often politically naïve and fail to recognise the central role that political decisions take on development issues. Financial and other resource realities are often not faced and subtle value systems favour opinions of some stakeholders over others.

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Using accepted value systems is critical to the acceptability of the plan and the likelihood of its implementation. For example if the strategy does not reflect local values it is unlikely to be 'owned' or implemented even if its approach seems logical. This can be in such challenging areas as payment for water or gender roles where special attention may need to be given if the value system is expected to be changed.

The transboundary nature of water requires that countries share a value system for agreements to be successful. Globally accepted value systems such as acceptance of IWRM principles, human rights, and equity may help to drive international consensus but may not always be fully endorsed at a national level.

> *In your country which group will be most resistant to changes in water management and why?*

7.4.2. Procedural arrangements

How do we do it?

How do we arrive at the major decisions that can determine the overall purpose and approach of an IWRM plan?

If it is to be effective the strategy has to have broad support across government, the private sector and civil society. This has to be established and maintained from the start of the planning process. This implies that stakeholders from civil society, the private sector as well as government are involved in all stages of the process of developing and implementing the strategy and in making decisions about the scope, the process and the outcomes. In many countries there is a tangible lack of ownership of the planning process by one or more key parties. The primary reason for this is the lack of balanced participation and excessive control by government or influence of external agencies.

Activities should include a full analysis of the prevailing management arrangements for water resources (including aspects of the main water users that impact on water resources) in relation to the goal of sustainable management and the principles and experience of IWRM.

Examine the way in which the water sector may be adapted and the need for this. What are the options and what are the costs. What would be socially, politically, economically and environmentally acceptable? Make decisions about appropriate options and be prepared to defend these with justification.

Multi stakeholder process of consultation

Workshops are inevitably important for explaining the basis for, and ageing, key decisions. Dangers are that they may be used to 'rubber stamp' decisions made elsewhere or that decisions may not be reached at all by trying to gain consensus.

Process for consensus/ partial consensus

Consensus means agreement. A solution that all can live with but may not be the best choice for any of the different stakeholder interests. Where there are trade offs to be

made, winners and losers, even consensus may be hard to achieve. Finally, sight must not be lost of the critical role that politicians play. It is important that decision makers, who bear ultimate responsibility for both the decisions and the impacts, are fully involved and consulted at all stages and events if the strategy is to be adopted and implemented.

Coordination and consistency between strategies

It may be too optimistic to achieve both coordination and consistency between the various policies and strategies at national level. However, the articulation of a clear water strategy can assist in other policies and programmes adopting water goals that are consistent with sustainable management of water resources. A passive dissemination of the IWRM plan will not be enough to achieve this but should be followed by active engagement through government institutions for coordination of planning.

> **BOX 11. PRINCIPLES WHICH ASSIST IN STRATEGY SELECTION**
>
> - **Maximise use of existing capacity.** Wherever possible, make use of existing capacity within existing institutions rather than establishing new institutions.
>
> - **Create co-ordinating mechanisms.** It may be appropriate to create one "coordination unit" (or another suitable mechanism) which co-ordinates the involvement of stakeholders and ministries in strategy selection and planning.
>
> - **Knowledge management**. Good co-ordination should facilitate and maximise the learning across and between institutions, programmes and plans (such as poverty reduction strategies, water and sanitation programmes, environmental programmes) and consequently enable more efficient use of resources.

7.5. IWRM CHANGE AREAS

Adopting a more sustainable and integrated approach to water management and development requires change in many areas and at many levels. And while this can be a daunting proposition, it is important to remember that gradual change will produce more sustainable results than an attempt to completely overhaul the whole system in one go. When beginning the process of change, consider:

- What changes **must** happen to achieve agreed-upon goals?
- Where is change possible given the current social, political, and economic situation?
- What is the logical sequence for change? What changes need to come first to make other changes possible?

When considering how water should be managed in the future, the various options for change available to the planners, three aspects may be considered. These are the three pillars of the Enabling Environment; the Institutional Framework and the Management Instruments (Fig. 8). The change areas have been identified in the GWP ToolBox and are listed in Box 12.

7.5.1. The enabling environment

This includes policy, legislation, and financing systems.Legislative processes take a long time, frequently several years and changes are cumbersome. Legislation is often lagging behind in terms of responding to the dynamic changes in the water resources situation and the society. Typically laws and associated regulations that impacts water resources are found in many different sectors and customary laws further makes the

FIGURE 8. THE THREE PILLARS OF INTEGRATED WATER RESOURCES MANAGEMENT

Figure 8. The Three pillars of Integrated Water Resources Management
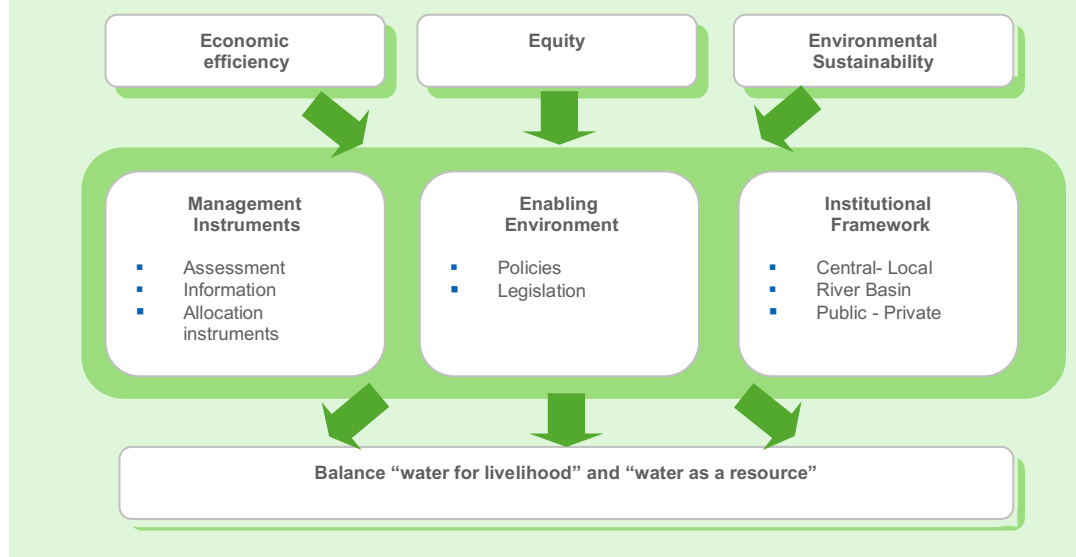
situation complex. Environmental laws and regulations, sewage discharge regulations, water supply laws and regulations and hydraulic works regulations are often uncoordinated and prepared by different agencies in very different points in time. The overall goal for a legal reform process is to ensure that the key policy aims can be pursued with a legal backing and that there is consistency in laws and regulations across all sectors that impact water resources. The key goals for the enabling environment include:

- Establishing government as the "owner" of all water resources and a selected ministry as a water resources management authority and regulatory agency
- Recognition of international conventions and agreements including transboundary protocols e.g wetland convention and protocols for shared water courses
- Setting out effective water allocation mechanisms including decision support for prioritisation; e.g domestic use and environmental flows as first priority
- Setting out mechanisms for pollution management in harmony with the environmental laws and regulations, e.g. classification of water bodies, discharge standards and monitoring standards
- Providing legal basis for institutional reform, e.g. management on a catchment basis, water resources committees, government as an enabler not a provider
- Regulating conditions in case of water shortages, flood and pollution emergencies
- Making provision for cost recovery, charges, incentives and financing arrangements to assist sustainability
- Setting out provisions for enforcement and for sanctions in cases of non-compliance

7

Which of these goals will be most difficult to get agreement on in your country?

7.5.2. Institutional roles

The government institutions, agencies, local authorities, private sector, civil society organisations and partnerships all constitute an institutional framework that ideally should be geared towards the implementation of the policy and the legal provisions. Whether building oj existing water management institutions or forming new ones a challenge will be to make them effective and this requires capacity building. Awareness creation, participation and consultations should serve to upgrade the skills and understanding of decision-makers, water managers and professionals in all sectors. The key goals for the institutional framework are:

- Separate water resources management functions from service delivery functions (irrigation, hydropower generation, water supply and sewerage) and consolidate the government as the owner of the water resources - the enabler but not the provider of services. This will avoid conflicts of interest and encourage commercial autonomy
- Manage surface water resources within the boundaries of a catchment, not within administrative boundaries, decentralising regulatory and service functions to the lowest appropriate level and promoting stakeholder involvement and public participation in planning and management decisions
- To ensure balance between the extent and complexity of regulatory functions and the skills and human resources required to deal with them. A continued capacity building program is required to develop and maintain the appropriate skills
- To facilitate, regulate and encourage private sector potential contributions in financing and delivery of services (irrigation, hydropower generation, water supply and sewerage)

How should major water users such as irrigation and hydropower be brought into the institutional framework for making water management decisions?

7.5.3. Management instruments

The policies and legislation sets out the "game plan", the institutional roles defines who the "players" are and what they should do, while the management instruments are the "players' competencies and skills" needed to play the game. The water resources issues in the particular country decides which management instruments are most significant and where efforts should be concentrated. Issues such flood risks, water scarcity, pollution, groundwater depletion, upstream/downstream conflicts, erosion and sedimentation all require their special combination of management tools to be effectively addressed. The key goals within management instruments are:

We already have many management instruments that don't work – why will it be any different this time?

- Establish a hydrological and hydro geological service tailored for the water resources situation and the key water resources issues
- Establish a water resources knowledge base based on monitoring and water resources assessments, supplemented by modelling if necessary and make suitable parts available as part of public awareness raising
- Establish a water allocation mechanism, a surface water, groundwater abstraction and wastewater discharge permit system and associated databases
- Establish policy and planning capabilities and develop skills in risk assessment, environmental, social and economic assessments
- Establish competencies in demand management and in use of prices and value for efficiency in use and equity in access
- Establish human resources development and capacity building tailored to the water resources and institutional issues

LINKED TO REDUCING POVERTY:

Will our strategy help us:
- to expand access to water for productive uses—for example through groundwater development, affordable small-scale technologies, and multiple use supply systems?
- to respond to poor people's water needs?
- develop the most appropriate services given users' needs, their ability to pay, and their capacity to manage and maintain infrastructure?
- address people's water needs for farming, livestock, fisheries, and cottage industries?

LINKED TO ADDRESSING WATER SCARCITY AND COMPETITION FOR WATER

Will our strategy allow us to:
- allocate water strategically?
- improve water efficiency and promote demand-side management?
- encourage the development of non-conventional water resources?

LINKED TO IMPROVING THE SITUATION OF WOMEN

Does the strategy give increased attention to:
- providing nearby access to good quality water for drinking and domestic use?
- income-generating activities of women requiring water?
- water rights for women?
- anchor women's issues strategically in water-related institutions and programs?
- involve women in the dialogue on water and to ensure that their views and needs are heard?

LINKED TO PROTECTING ECOSYSTEMS

Does our strategy address:
- allocation of water for environmental flows?
- management of water to meet the water timing and quality needs of ecosystems, as well as the quantity?
- how to value the goods and services ecosystems provide?
- control of water pollution?
- impact of freshwater management on coastal and marine environments?
- • the sustainable use of groundwater?

LINKED TO HUMAN HEALTH

Does our strategy actively support:
- better water development and management to reduce water-related diseases such as malaria, schistosomiasis, and diarrhoeal diseases
- improvement of sanitation in urban and rural areas?
- sustainable delivery of water and sanitation services for the poorest populations?

LINKED TO ECONOMIC DEVELOPMENT

Does our strategy:
- allocate water between sectors in a way that encourages economic development, while also considering poverty reduction and environmental sustainability goals?
- create a macro-economic environment conducive to good water management?

USEFUL RESOURCES AND TOOLS FROM THE WEB

- ❑ GWP Toolbox
    - o http://gwpforum.netmasters05.netmasters.nl/en/

- ❑ IWRM management tools
    - o http://www.cap-net.org/showhtml.php?filename=imi

- ❑ IWRM Training Material
    - o http://www.cap-net.org/showhtml.php?filename=tm_tm1

- ❑ Metaplan. Visualization Strategies for Team-Oriented Problem Solving, Analysis, and Project Planning.
    - o http://www.techcomm-online.org/issues/v45n4/full/0296.html#METHODS

- ❑ Decision Tree Analysis - Choosing Between Options by Projecting Likely Outcomes
    - o http://www.mindtools.com/dectree.html

- ❑ Force field analysis
    - o http://www.acig.com.au/library/forcefield.PDF

- ❑ Six Thinking Hats - Looking at a Decision From All Points of View
    - o http://www.mindtools.com/pages/article/newTED_07.htm

7
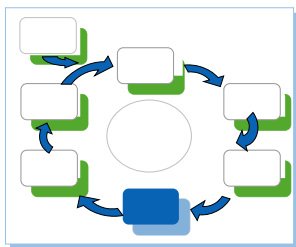
8. IWRM PLAN PREPARED AND APPROVED

8.1. WHAT IS THE EXPECTED OUTPUT?

Following the agreement on a water resources management strategy the next step is to operationalise this into a plan which details what has to be done, by whom, when and using what resources. The production of a feasible, acceptable and relevant plan is the expected result of this step in the planning cycle.

FIGURE 9. IWRM PLAN PREPARATION AND APPROVAL PHASE — DRIVERS, OUTPUTS AND ACTIVITIES
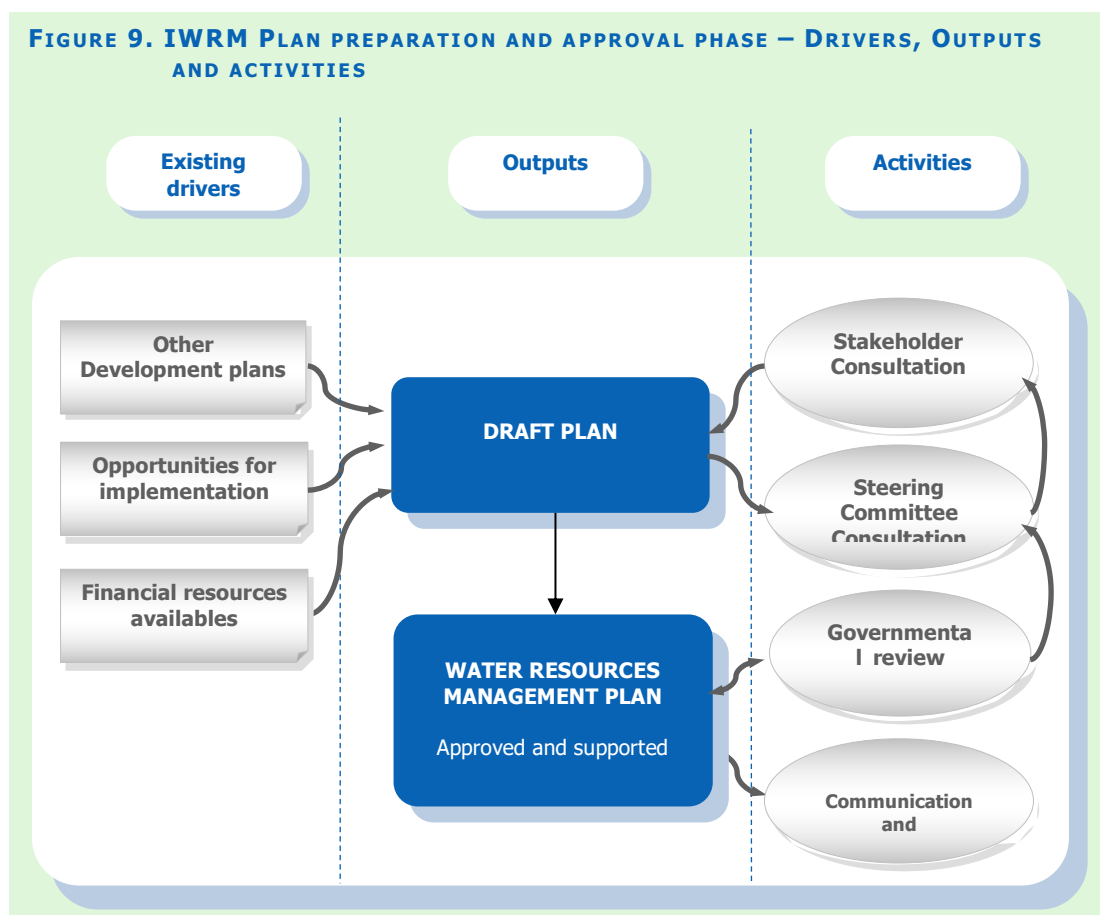
8.2. FOUR QUESTIONS

When it comes to the actual writing of the plan there are four questions that need to be answered regarding:
- The content of the plan;
- Political and public participation;
- Timeframe for completion of the plan, and
- Who writes the plan.

8.2.1. What is the content of the plan?

There are a range of issues that an IWRM plan could address. These issues will differ from country to country depending on what the state of water and water management is in a particular country and should be driven by strategy and long terms objetives. A plan may only deal with short term actions or could also provide indicative activities for the medium term (e.g Box 14).

> *How would you ensure the plan is realistic?*

At the minimum an IWRM plan should address the following:

- The description of the water management approach which is intended to be replaced by the IWRM Plan. Where it came from, how long has it been in place, what legal instruments (policies, laws and institutions) supports it, and what are the constraints of the current approach to water management.
- A description of the current water resources situation in the country (a water resource assessment) that addresses the following issues:
    - The spatial and temporal rainfall distribution, the major rivers, lakes, reservoirs, etc. Essentially a description of where the water is and where it is not.
    - The water uses and who are the users, how much do they use and for what purposes.
    - The current social and institutional arrangements regarding water management.
    - A description of floods and droughts, the frequency of occurrence as well as the extent of flood and drought events.
    - Water conservation and demand management strategies currently in place.
    - A description of "other" water sources (desalination, recycling, etc) in use.
    - Issues that have been raised by stakeholders during the participation process.
- A description of the scope of the plan. What are the goals, aims and objectives we wish to attain with the IWRM Plan. The vision for water management and also the level at which the plan is addressed (national, provincial or local level).
- A description of how we plan to achieve the vision, goals, aims and objectives. Either with direct reference to the water resources strategy or incorporating the relevant issues into the plan itself. In the Burkina Faso plan it would be all the sections contained under chapter 6. It could also be described under headings the stakeholders decided for themselves (example: Governance, Land-use, Water efficiency, Resource Protection, etc.). This means an Implementation strategy.
- The plan must include a section that links the IWRM plan to other national processes and/or plans. How relevant is the IWRM Plan for a Poverty Reduction Plan or an Integrated Development Plan, for example.
    - Resource requirements to implement the plan.

8

BOX 14. BURKINA FASO IWRM PLAN – TABLE OF CONTENT

8

8.2.2. How do we ensure effective political and public participation in the compilation of the plan?

The process to ensure political and public participation has been elaborated on in section 1 (mobilizing the planning process). Decisions on how widely participation would be, how often will stakeholders be afforded an opportunity to contribute, what will be the communication approaches? How will we get information to stakeholders, how do we get stakeholders views and how to we incorporate stakeholder views into the plan? (Consultation, communication and feedback). These need to be implemented in the context of gaining commitment to the plan

The political commitment should have been maintained throughout the planning process but at this stage resistance may arise if there are any threats to power and major changes in institutional arrangements being proposed. Close consultation and cooperation with affected and interested ministries at the highest level is important to maintain during the drafting of the plan.

What steps would you take to ensure political involvement and commitment when writing the final plan?

8.2.3. Who writes the plan?

The final question is: who writes the plan? Do we have one person write the plan? Do we use a team? Is it persons from the Planning Department or a Ministry? Do we use consultants? Who selects and appoints the consultants?

It will be important to ensure that the person(s) writing the plan are engaged in or aware of the outputs of all stages of the process.

8.3. APPROVAL OF PLANS

After completion of the plan, it needs to be accepted by the all stakeholders including government. It makes no sense to spend all the resources on a developing plan that is rejected at the end or consigned to the shelf never to be implemented. That is why political and stakeholder participation from the onset of the process of developing an IWRM plan is so important. If your participation process was good, then approval should not be problematic. Decide at the first stakeholder meeting what the conditions of acceptance would be. In this way, it can be monitored from the start whether the process will meet the conditions for approval. In South Africa for example, it is spelt out very clearly by the Department of Water Affairs and Forestry that approval for the establishment of a Catchment Management Agency will only be granted if it is proved that the public participation process was acceptable.

Agreeing on the conditions of what the process to develop the plan and what the content of the plan should be in the beginning enhances the change that the plan will be approved by stakeholders and Government. If all the stakeholders (including Government) has been involved in the development of the plan from the very beginning, approval should be a mere formality.

What steps would you take to get the water priorities incorporated into other government development programmes?

8

A communication strategy for the plan should have been part of the communication strategy established by the management team during the whole planning process. The final IWRM plan should be made widely known and easily accessible. This is important because, whatever the consultation process, it will have been impossible to reach all interested parties. Most consultation processes can only be samples and therefore once a national plan has been adopted it is important that everyone has access to it and is able to debate and prepare for the implications of implementation.

BOX 15. ASSESSMENT OF IWRM PLAN – A CHECK LIST

The following are some questions to be used to assess the plan.

BUILDING COUNTRY OWNERSHIP THROUGH PARTICIPATION:

- Does the IWRM plan describe the participatory process used to build ownership for the plan?
- Does the IWRM plan summarise the major issues raised during the participatory process and the impacts of the process on the content of the plan?
- Does the plan envisage its linkage to other national development plans and government documents which do, or should, address sustainable management and development of water resources?
- Are there plans for the public dissemination of the plan?

DIAGNOSING THE WATER RESOURCES PROBLEM.

- How adequate are the existing water data?
- How well have the nature and causes of the water resource problems been identified? Are there any discernable trends?
- To what extent has the analysis of the problems considered current thinking on water resources management?

TARGETS, INDICATORS AND MONITORING.

- Does the IWRM plan define medium and long term goals towards sustainable management of water resources, establish indicators of progress and set annual and medium term targets?
- Are these indicators and targets appropriate and consistent with the policy and strategy choices in the plan?
- Are current and proposed monitoring and evaluation systems adequate and sustainable?

PRIORITY ACTIONS.

- Does the plan present clear priorities for action, relevant to the goals and targets and feasible in the light of the diagnosis, the targets, their estimated costs, available resources, institutional capacities and effectiveness of past policies?
- Does the strategy have an adequate and credible financing plan and is it amenable to adjustment responding to variable financing flows.
- To what extent do the structural and sectoral goals and actions of the plan address key policy, institutional and management constraints (governance) to sustainable management of water resources?
- Do these address or encompass water as an economic as well as a social good, downstream responsibilities, the various forms and interdependent nature of the resource and the competing water uses in basins?
- To what extent are participatory and gender constraints and impacts of present water resources management systems addressed?

8

USEFUL RESOURCES AND TOOLS FROM THE WEB

- ❑ Logical Framework Approach
  - o NORAD. LFA Handbook. http://www.baltichealth.org/getfile.php/11071.354/LFA%20handbook.pdf

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FEATURES		
CONCEPT: GOOD GOVERNANCE		
PROCEDURAL PRINCIPLES	Rule of law	• Predictability • Absence of arbitrary exercise of power	• Impartial enforcement of laws • Independency of judicial system
	Participation	• Freedom of association and speech • Access to information • Mechanisms for accessing to participation	• Legitimacy on decision process (from planning to implementation) • Gender and Ethnical Equity in participation process
	Effectiveness	• Knowledge about the water problem • Knowledge about the causes of the water problem • Aims of policies oriented to solve the causes of problems	• Coherence among policies in diverse sectors • Capacity of influence exertion over relevant actors • Capacity of coordination of actions • Capacity for implementation
	Efficiency	• Minimization of financial, political, social and environmental cost	• Minimization of transaction cost
	Equity	• Reduction of differences in power distribution related with income, gender or ethnicity in access to resources or decisions	• Impartial formulation and application of law
	Responsiveness	• Coverage to all stakeholders • Opportune delivery of decisions to stakeholders demands	• Response to lowest appropriated level • Subsidiary response
	Transparency	• Access to knowledge of procedures • Access to enough information	• Understandable information
	Consensus orientation	• Participatory approach for agreements • Cooperative approach	• Mediation mechanism to enhance territorial and sectoral cooperation
	Accountability	• Obligation to answer for the discharge of responsibilities that affect others • Access to a public forum in order to answer • Clarity of rules • Identification of the directing mind	• Monitoring of policies • Disclosure of achievements or lack of achievement • Accountable private sector, civil society and government
	Peaceful resolution of disputes	• Mediation mechanism for solving disputes among stakeholders	• Arbitrage enforcement mechanism to resolve disputes that could not be mediated

Table. Principles to consider in evaluating WRM options

FEATURES		
CONCEPT: IWRM		
Integrated nature of water	• Recognition of relationship among groundwater and surface water • Recognition of relationship among water quality and quantity and terrestrial and aquatic ecosystems	• Recognition of limits in self purification capacity of water • Recognition of upstream and downstream relations in water quality and quantity
Integrated development of water related policies	• Consideration of all uses • Consideration of all users • Coordination mechanism for enhance coherence	• Integration of water and wastewater management • Integration of supply and demand management • Watershed management and water sources protection
Role of women	• Gender mainstreaming in water issues	• Promotion of women's empowerment
Water as economic good	• Economic and environmental valuation of water • Full cost of providing water as tool for deciding alternative uses	• Full cost recovery • Use of economic instrument to manage demand • Discourage of wasteful use of water by pricing
Lowest appropriated level	• Decisions made at lower level possible • Participation at lower level possible	• Resolution of disputes at lower level
CONCEPT: ENVIRONMENTAL PRINCIPLES		
Sustainable use	• Optimum sustainable yield concept in planning and implementation of activities	• Carrying capacity concept in planning and implementation of activities
Precautionary principle	• Not delaying of actions to avoid environmental damage due to uncertainty	• Prevention rather than mitigation measures
Polluter pays principle	• Compensation of damage to third part due to environmental impacts	• Internalization of environmental cost
Prior Environm. Assessment	• Consideration of environmental impacts or projects and activities	• Assessment in order to evaluate alternatives and reduce impacts
Prior Notification	• Information to people affected by some activity or project	• Grant of equal access and due process in administrative and judicial procedures in order to avoid/reduce affectation
Environmental standards and Monitoring	• Establishment of protection standards • Monitoring changes	• Publication of relevant data in state of environment
Inter and intra generational equity	• Long term perspective in conservation and use	

Table. Principles to consider in evaluating WRM options

Annex

ANNEX 2 EXAMPLE OF A WATER RESOURCES STRATEGY

From the South African National Water Resources Strategy, 2004:
http://www.dwaf.gov.za/Documents/

Chapter 1: Water Policy, Water Law and Water Resources Management
1.1 The National Water Policy
1.2 The National Water Act
1.3 The National Water Resource Strategy
1.4 Integrated Water Resources Management

Chapter 2: South Africa's Water Situation and Strategies to Balance Supply and Demand
2.1   Introduction
2.2   A Broad Perspective of the Water Situation
2.3   Water Resources
2.4   Water Requirements
2.5   Strategies to Balance Supply and Demand Reconciliation
2.5.1 Current Situation
2.5.2 Future Perspective
2.5.3 Development Opportunities
2.5.4 Reconciliation Interventions
2.6   Other Factors Influencing Water Availability and Water Requirements
2.6.1 Land Use
2.6.2 Climate Change
2.7   Water Resources under the Direct Control of the Minister
2.7.1 The Reserve
2.7.2 Water Required for International Rights and Obligations
2.7.3 Water Use of Strategic Importance
2.7.4 Contingency to Meet Projected Future Growth
2.7.5 Reservations for Transfer between Water Management Areas

Chapter 3 Strategies for Water Resources Management
Part 1   Protection of Water Resources
3.1.1 Introduction
3.1.2 Resource-Directed Measures
3.1.3 Source Directed Controls
3.1.4 Protection of Groundwater Resources
3.1.5 Wetlands

Part 2   Water Use
3.2.1 Introduction
3.2.2 Water Use
3.2.3 Authorising Water Use
3.2.4 Water Quality

Part 3   Water Conservation and Water Demand Management
3.3.1 Introduction
3.3.2 The National Water Conservation and Water Demand Management Strategy
3.3.3 The Principles of Water Conservation and Water Demand Management
3.3.4 Sectoral Strategies
3.3.5 Control of Invasive Alien Vegetation

Part 4   Water Pricing and Financial Assistance
3.4.1 Water Pricing

Annex

PART 2

Operational Guide

1. FACILITATORS NOTES

INTRODUCING THE COURSE.

The opening of a course is always an important time and an opportunity to ensure that expectations are in line with the course purpose. Use the opportunity of the first 1 – 2 hours:

- To introduce the course and its objective and explain why it is being held here.
- For participants to get to know each other.
- Build rapport and team spirit among the participants.
- Introduce the host organisation and any other partners.
- Level off expectations for the course and link it with the course content and overall program schedule.
- Discuss the workshop management issues starting times etc.

> **BOX 16. POWERPOINT/ OVERHEADS. GENERAL TIPS.**
>
> - You will spend on average 2-3 minutes explaining each slide. Therefore do not have more than 10-15 slides for a 45 minute presentation.
> - Avoid large amounts of text on a slide and do not just read from the slide.
> - Put short statements on the slide as headings and reminders to yourself about what to say and in what order.
> - Avoid colours that are difficult to read such as red or yellow.
> - Most importantly, check the slides yourself from where the participants will be sitting to see if they are readable.

Objective of the course

The Training course aims to equip the participants with knowledge and skills required to support a process leading to the development of an Integrated Water Resources Management (IWRM) plan which is both politically and socially acceptable and can be implemented.

SESSION 1. INTRODUCTION TO IWRM.

Learning objectives.

This is a brief introduction to integrated water resources management and the principles that guide it towards the overall goal of sustainable management and development of water resources. At the end of this session participants will:

- Be able to describe the meaning of IWRM and its main principles;
- Understand the main reasons for taking an IWRM approach;
- Be able to describe the main issues to be addressed in an IWRM strategy in his/her country

Needs for the session

Presentation material.
Discussion points.

Approach.

Tips.

- Check the knowledge of the participants first to adjust the length of this session. It may be presented as a refresher in an hour or take the whole morning for a less experienced group.
- Try to get copies of the IWRM tutorial by Cap-Net to participants in advance so that they come prepared and better able to discuss.
- Break your presentation every few minutes to get feedback from the participants. Use the questions in the manual to help you.
- Depending on the region, challenging questions may come e.g. on basic principles of payment for water or gender issues. Facilitate the discussion with participants, don't try to sidestep the issue, but don't let it consume too much time.

SESSION 2. PLANNING PROCESS FOR WATER RESOURCES MANAGEMENT, AN INTRODUCTION.

Learning objectives.

This session seeks to introduce an IWRM planning process and the key elements. These elements are briefly described to introduce their presentation in later chapters. At the end of this session participants will:

- Understand the relevance of IWRM plans to water resources management;
- Identify the main stages in the planning cycle and understand, in a general sense, what they mean in the context of sustainable management of water resources;
- Appreciate the different activities and the scale and scope of actions required to develop an IWRM plan.
- Understand why the plan is necessary and the intermediate steps in the planning process.
- Consider what this means in the participants own circumstances.

Needs for the session

Presentation material.
Discussion points.
Guide for group work.
Pens, cards, tape or adhesive, flip charts.

Approach.

1. The same principles of planning apply whether dealing with national, basin or sub-catchment planning. There will be a need to adapt the presentation and exercises depending upon the needs of the participants.
2. If possible try to use the exercises to assist the participants develop an actual work plan or improve an existing work plan. This way the exercises through the course build on each other and are also useful after the course.
3. Incorporate key discussion points into the presentation as a means to break the presentation and engage the participants.
4. Exercise. An example structure for group work exercise is given below. However be prepared to change this according to the focus of the participants and whether they are expecting to go into an actual planning activity or if the course is just a theoretical learning experience.

Exercise. Programming the planning cycle. (1hr)

Form groups. Divide participants into groups by country or region. Alternatively make random groups if it is a theoretical exercise or all participants are from one country.

Assign a task. The instruction to each group can be the same. "Develop an outline programme with a time frame for an IWRM plan through the whole cycle" This can be targeted at a country level, or basin level as appropriate.

Ask each group to assign a chairperson and a reporter.
Allocate the time for discussion and when the report back will take place.

Report back. Give clear guidance as to how the report back is expected to happen, including the time for each presentation. Make sure the necessary materials are available to the reporter – computer, flip chart or overhead sheets as appropriate.

SESSION 3. INITIATING THE PLANNING PROCESS.

Learning Objectives
This session focuses on initial steps in starting up a planning process for water resources management. At the end of this session participants will:
1. Understand the main factors in initiating a strategic IWRM planning process
2. Be able to give guidance in forming a management team for the planning process.

Needs for the session

Presentation material.
Discussion points.
Guide for group work.
Pens, cards, tape or adhesive, flip charts.

Approach.

1. The initiation of the planning process, presentation 30 minutes, group work 60 mins;
2. The manual refers to government commitment for a national plan. However when dealing with local planning this will need to be adapted to the local decision making structures and how to ensure that they are supportive.
3. Incorporate key discussion points into the presentation as a means to break the presentation and engage the participants.
4. A suggested exercises is given below.

Exercise Whose plan is it? (1hr)

Form groups. Divide participants into groups by country or region. Alternatively make random groups if it is a theoretical exercise or all participants are from one country.

Assign a task. The following questions may be used.

- Where is the demand for an IWRM plan coming from?
- Who is expected to implement the plan and are they already involved?
- Is there sufficient knowledge of IWRM amongst those people?
- What would be an appropriate management structure in your country for the plan development?

Ask each group to assign a chairperson and a reporter.
Allocate the time for discussion and when the report back will take place.

Report back. Give clear guidance as to how the report back is expected to happen, including the time for each presentation. Make sure the necessary materials are available to the reporter – computer, flip chart or overhead sheets as appropriate. Allow discussion on areas of apparent differences between presentations.

SESSION 4. DEVELOPING THE WORK PLAN.

Learning Objectives

This session focuses on development of the work plan. At the end of this session participants will:

1. Be aware of the main elements of the work plan
2. Appreciate what is involved in each major task and the needs for capacity building
3. Be able to identify strategies they will use in gaining and maintaining political and stakeholder commitment

Needs for the session

Presentation material.
Discussion points.
Guide for group work.
Pens, cards, tape or adhesive, flip charts.

Approach.

1. Addressing the establishment of a work plan: presentation 45 mins, group work 90 mins.
2. The manual refers to government commitment for a national plan. However when dealing with local planning this will need to be adapted to the local decision making structures and how to ensure that they are supportive.
3. Incorporate key discussion points into the presentation as a means to break the presentation and engage the participants.

Exercise. Political and stakeholder involvement in planning. (1.5hr)

Form groups.

Three groups

Assign a task. Three tasks. They can be spread across the groups if they are all from the same country or each group can tackle all three questions.

- What steps would you advise to be taken to gain, and maintain, political commitment through the planning process into plan adoption and implementation?
- How much stakeholder participation is enough? At what stages is it necessary and how would stakeholder consultation be carried out?
- Make a plan for capacity building identifying which groups need capacity building in what subjects.

Ask each group to assign a chairperson and a reporter.
Allocate the time for discussion and when the report back will take place.

Report back. Give clear guidance as to how the report back is expected to happen, including the time for each presentation. Make sure the necessary materials are available to the reporter – computer, flip chart or overhead sheets as appropriate. Allow discussion on areas of apparent differences between presentations.

SESSION 5. ESTABLISH THE STRATEGIC VISION.

Learning Objectives

This session will explain the importance of a national water vision or water policy as a guide to the national planning process.

At the end of the session the participant will:
- Know the relevance of a water vision or water policy to planning;
- Understand the steps or activities that may be taken to lead to a vision;

Needs for the session

Presentation material.
Discussion points.
Guide for group work.
Pens, cards, tape or adhesive, flip charts.

Approach.

1. Incorporate key discussion points into the presentation as a means to break the presentation and engage the participants.
2. Remind participants where they are in the planning cycle.
3. The exercise should form the main part of the session. The role play can help to highlight the problems with current water management systems and the need for a different future. The problems can be used as a basis for establishing a vision of where the participants would like to be in 25 years time.

Exercise 1. Role Play (45min).

Use a role play to get participants to bring out the existing problems with the way water is managed.

After the role play ask the participants to reflect on the role play and bring out examples which highlight the issues of inequity, economic inefficiency and unsustainable use.

These points can then be used to develop a vision for a desirable future – next exercise.

Exercise 2. Vision development (30min).

Form groups. Form three groups.

Assign a task. Building on the problems identified in the role play and the commitment to sustainable development negotiate in the group a vision for water resources management in the year 2025.

Ask each group to assign a chairperson and a reporter.

Allocate the time for discussion and when the report back will take place.

Report back. Each group will pin up their vision, read it out and leave it on the wall. Check if there are any disagreements or clarifications necessary. Allow discussion on areas of apparent differences between presentations.

SESSION 6. SITUATION ANALYSIS.

Learning Objectives

This session addresses the analysis of the existing water resources management situation and how it forms the basis for deciding on future action.

At the end of the session participants will:

- Understand what is a situation analysis and how it contributes to the development of an IWRM plan.
- To be able to focus the situation analysis on the most important areas and define the best scope and scale for the analysis.

Needs for the session

Presentation material.
Discussion points.
Guide for group work.
Pens, cards, tape or adhesive, flip charts.

Approach.

1. Incorporate key discussion points into the presentation as a means to break the presentation and engage the participants.
2. The presentation will need to be adjusted to the audience and the use of the questions may help to get to the depth of discussion that they feel comfortable with.
3. A situation analysis needs to be conducted in an analytical way therefore the demonstration of analytical tools such as Metaplan can be useful.

Exercise. Problems and their causes. (1.5 hr)

Done in plenary by an experienced facilitator using cards (Metaplan – *give a ref - Look this up if you are not familiar with the technique*).

Distribute cards and pens.

Participants write down on cards what they think is the situation or problems with water management.

Cards are read out and pinned up on a wall or pinboard using small pins, sticky tape, blu-tack etc (careful not to damage the walls!).

The facilitator with help of the participants can arrange them into a problem tree linking problems to their causes. (if this gets too complicated just take one problem area as an example and leave the others to one side).

This exercise shows how situations are linked and that several causes may have to be addressed to solve one problem. Often this problem tree is then changed into an objective tree. This is too rigid for our exercise which should stop at the organisation of the problem tree.

Discuss with participants:

- the range of problems that have arisen;
- their linkage to each other
- ask if they see any underlying management problems that contribute to this situation and write these down.
- discuss the complexity of all of the different factors involved and the commitment that is needed to make the necessary changes.
- The results of this session are directly relevant to the next session.

Alternative Exercise. Carrying out the situation analysis. (45min)

Form groups. Form two groups.

Assign a task. Develop a work plan for carrying out a situation analysis in your region including feedback to stakeholders.

Ask each group to assign a chairperson and a reporter.
Allocate the time for discussion and when the report back will take place.

Report back. Give clear guidance as to how the report back is expected to happen, including the time for each presentation. Make sure the necessary materials are available to the reporter – computer, flip chart or overhead sheets as appropriate. Allow discussion on areas of apparent differences between presentations.

SESSION 7.   WATER MANAGEMENT STRATEGY AND OPTIONS IDENTIFIED.

Learning Objectives

This session will examine how to develop a water resources management strategy. At the end of the session the participant will:

- Recognise the importance of having clear goals for water management;
- Understand how to develop the strategies for an IWRM plan that are appropriate and acceptable and feasible for implementation.

Needs for the session

Presentation material.
Discussion points.
Guide for group work.
Pens, cards, tape or adhesive, flip charts.

Approach.

1. This session addresses both the process for decision making and the technical decision areas.
2. Remind participants where they are in the planning cycle. The vision, the goals, the situation analysis discussed so far all feed into this session.
3. Presentation – 45 mins.
4. Incorporate key discussion points into the presentation as a means to break the presentation and engage the participants.
5. Two alternative exercises are proposed.

Exercise 1. Key IWRM change areas. (1 hr)

Form groups. Form three groups.

Assign a task. Each group will address one of the three main IWRM change areas:

- The enabling environment;
- Institutional Roles
- Management Instruments

For each of the areas listed in Box 3 what would they like to see change and what would be achieved by making the change?

Ask each group to assign a chairperson and a reporter.
Allocate the time for discussion and when the report back will take place.

Report back. Give clear guidance as to how the report back is expected to happen, including the time for each presentation. Make sure the necessary materials are

available to the reporter – computer, flip chart or overhead sheets as appropriate. Allow discussion on areas of apparent differences between presentations.

Alternative Exercise . Group work. (1.5hr)

Form groups. Form three groups.

Assign a task.

- Group 1: Who should be involved in developing, agreeing and approving a strategy and how will this be done?
- Group 2: What steps should be taken to make sure the strategy does not conflict with other laws, policies and strategies?
- Group 3: Starting with the self assessment questions (Box 4) what changes in strategy are necessary to achieve these results? (Focus on strategy changes not activities)

Ask each group to assign a chairperson and a reporter.
Allocate the time for discussion and when the report back will take place.

Report back. Give clear guidance as to how the report back is expected to happen, including the time for each presentation. Make sure the necessary materials are available to the reporter – computer, flip chart or overhead sheets as appropriate. Allow discussion on areas of apparent differences between presentations.

SESSION 8. IWRM PLAN PREPARED AND APPROVED.

Learning Objectives

The purpose of this session is to address the content of an IWRM plan and the process for writing, reviewing and gaining acceptance of the plan.

At the end of this session the participant will:
- Be able to identify the main contents of an IWRM plan;
- Be familiar with the steps and activities desirable in developing and gaining approval for the plan;
- Consider what the plan may address in the participants own country.

Needs for the session

Presentation material.
Discussion points.
Guide for group work.
Pens, cards, tape or adhesive, flip charts.

Approach.

1. Remind participants where they are in the planning cycle. The vision, the goals, the situation analysis, and the strategy form the basis for plan development.
2. Presentation – 30 mins.
3. Incorporate key discussion points into the presentation as a means to break the presentation and engage the participants.
4. Writing a plan is the final step to operationalise the strategy but these days it is important that a plan is written with a Logical Framework Approach. LFA should be introduced and if necessary some time should be allocated. However it will not be possible to include a full explanation in the short time available in this course.
5. Draw attention to the assessment criteria and their usefulness in ensuring that the plan will be relevant and adequate.

Exercise. Acceptance of the plan. (1hr)

Form groups. Form three groups. One of the groups should be with people who have some experience of the LFA.

Assign a task.

- Group 1: What process should be followed to get approval of the plan? Is it necessary to get stakeholder approval and how will this be done? How will the plan be synchronised with other development programmes?
- Group 2: How can financing of the plan be ensured? Are there measures to be taken which will increase the chance that the plan will be acceptable and feasible to implement – both financially as well as politically?

- Group 3: Develop an example of the IWRM in an LFA structure.

Ask each group to assign a chairperson and a reporter.
Allocate the time for discussion and when the report back will take place.

Report back. Give clear guidance as to how the report back is expected to happen, including the time for each presentation. Make sure the necessary materials are available to the reporter – computer, flip chart or overhead sheets as appropriate. Allow discussion on areas of apparent differences between presentations. The facilitator will particularly need to be prepared to assist with interpretation of the LFA.

Exercise 2 . Case study: How would you do this differently?

Form groups.

Assign a task.

Read the case study. Advise on how you would do this differently or aspects that have not been given enough attention.

Case study

An external agency (let us say for example the Global Water Partnership, GWP) has secured funding to assist Country A to develop an IWRM Plan. GWP has requested the GWP-Regional and the Country Water Partnership (CWP) to assist with the process.

GWP-Regional enters into a dialogue with a Ministry of Country A and manages to convince the Minister and Permanent Secretary that IWRM is a good thing and that an IWRM Plan would assist Country A to manage its water more effectively. GWP also convinces the Department that the plan should be developed in collaboration with the CWP.

GWP-R starts communicating to the CWP and other stakeholders the background of IWRM Plans.

GWP-R organizes the first stakeholder conference where representatives of all stakeholders are present (government, CWP and stakeholders outside of the CWP). At this conference the basic parameters as set out in section 7.2 is decided (the four questions are answered).

The outcome of this first meeting is as follows:

Content:
- *Background and need for IWRM*
- *Water Situation*
- *Vision and Objectives (formulated in terms of the MDG)*
- *Implications of the objectives for water management.*
- *Attaining the vision:*
  - *Water for Food*
  - *Water Services*
  - *Water and the Environment*
- *Resource Requirements.*

Stakeholder involvement (Public Participation)
Stakeholders will be kept up to date through regular slots on radio, articles and reports in newspapers and pamphlets.
Regional meetings will be held every three months and national meetings every six months.

Timeframe
The process has to be completed within two years. The Stakeholder conference will take place on 31 December 2006 and the regional meetings will take place in March 2005, June 2005, September 2005, March 2006, April 2006 and June 2006, whilst the national meetings will take place in June 2005, December 2005, June 2006 and December 2006.

The writers	Completion date	Meeting date
Mr X of CWP will write the Background and need for IWRM.	February 2005	June 2005
The Department of water commissioned a report on the water resources of Country A two years ago. WM Consulting Engineers will be tasked to review the report and report on omissions by April 2005.	May 2005	June 2005
Ms Y of AN Consulting will write the visions and objectives	August 2005	Dec 2005
Implications of the objectives for water management.	August 2005	Dec 2005
The Agricultural Union will write the section on Water and Food	January 2005	June 2006
The Chief Engineer of the Capital will write the section on Water Services	January 2005	June 2006
The Department of Environment Affairs (Dr Z to coordinate) will write the section on Water and the Environment.	January 2005	June 2006
The Department of Water will write the section on the resource requirements	August 2005	Dec 2006
Approval and submission to Government		Dec 2006

Report back
Give clear guidance as to how the report back is expected to happen, including the time for each presentation. Make sure the necessary materials are available to the reporter – computer, flip chart or overhead sheets as appropriate. Allow discussion on areas of apparent differences between presentations.

(From Gender and Water Alliance. Gender Mainstreaming in Integrated Water Resources Management - Training of Trainers Package. Available at http://cap-net.org/captrainingmaterialsearchdetail.php?TM_ID=101)

These can be used at any time to revive interest, to bring some laughter, or to wake people up after lunch.

1 Familiar Objects

Objectives: Know the participants better and learn a little about their personalities; help participants to relax.

What you need: Different objects such as a soft toy, spoon, glass, paperweight, cap, belt, pencil, stone or mirror. There should be one object for each participant.

Duration: 20 minutes

Procedure:

- Participants should be seated in a circle and objects placed in the center of the room.
- Ask participants to choose one object that represents them in some way or that they can identify with.
- Participants should share with the group why they chose a particular object and what it explains about their behavior/personality.

Note to the facilitator: This exercise helps participants to open up and share personal experiences.

2. Walk the Talk

Objectives: Become aware of one's own perceptions about gender and any associated discomfort; reduce inhibitions and help participants overcome shyness and self-consciousness.

What you need: Tape recorder and some light music (optional)

Duration: 25 minutes

Procedure:
- Ask participants to walk around the room. They should spread out and walk in all directions, maintaining eye contact with other participants passing them.
- Give the following instructions while they are walking:
    o Walk fast
    o Walk slowly
    o Walk like a man
    o Walk like a woman
    o Walk like a child
    o Walk like an old woman

o Walk like an old man
o [Add more variations here]
▪ Change instructions every few minutes.
▪ Ask participants to share how they felt acting like a male/female. Were they comfortable or uncomfortable? Encourage them to discuss reasons for how they felt.

Note to the facilitator: Discuss how females and males see themselves differently and how society teaches us our gender roles.

3. Fruit Salad

Objective: Energize participants.

What you need: Flip chart

Duration: 15 minutes

Procedure:

▪ Ask the participants to sit on chairs in a circle and tell them that they are going to make a fruit salad. The facilitator stands so there is one chair less than the number of people playing the game.
▪ Ask the participants to name their favorite fruits and choose any four fruits with the help of the participants, for example Apple, Orange, Guava, Banana
▪ Write the four fruits on the flip chart. Tell participants that they are now going to become a fruit. Ask participants to call out the name of the fruit listed on the flip chart one by one. Each participant 'becomes' the fruit they call out. For example, the first participant is an 'Apple', the second an 'Orange' and so on. After the fourth participant has called out 'Banana' the next starts with 'Apple' again.
▪ Tell the participants that they have to quickly change their seat if the name of their fruit is called out. For example if the facilitator calls out 'Apples', all the 'Apples' have to change their seats. If the facilitator shouts 'Fruit Salad', then all the participants change seats with each other.
▪ The facilitator also takes part and tries to get a seat after calling out. Whoever gets left without a seat makes the next call.

Note to the facilitator: The facilitator can call out one or more fruits at the same time. For example 'Apples and Bananas'

4. The Number Game

Objective: Help participants concentrate and focus; energize the participants.

What you need: None

Duration: 10 minutes

Procedure:
▪ Ask the group to stand in a circle.

- Tell them that they are going to count from 1 to 50. The first participant calls out 1, the next calls out 2 and so on. Participants who get the number five or its multiples (10,15,20..) have to clap instead of calling out the number.
- If someone makes a mistake (for example calling out the number instead of clapping), s/he is out of the game and the next participant starts counting again from 1. If the next participant does not start the counting again from 1, s/he is also out.

Note to Facilitator: The facilitator should encourage participants to count at a brisk pace. Some other variations can also be used, for example:
- Clap at number 7, multiples of 7 (14, 21, 28…) and at all the numbers ending with 7 (17, 27, 37…).
- Clap at 5 and multiples of 5 (15, 25, 35 and so on…) and click at 10 and multiples of 10 (10, 20,).

5. Coconut

Objective: Energize participants.

What you need: None

Duration: 5 minutes

Procedure:
- Ask the participants to stand in a circle
- Demonstrate how to write the word **C O C O N U T** by representing the letters with the following body movements
  o **C:** Bend your arms slightly at the elbows and raise them to shoulder level in front of you, leaving space
  o **O:** Bend your arms slightly at the elbows and raise them to shoulder level in front of you and join the fingers of both hands to make a closed circle
  o **N:** Bend down and touch your toes with both hands
  o **U:** Keep both arms straight and raise them above your head
  o **T:** Raise both arms sideways till they are parallel to your shoulders with palms facing downwards
- Call out the letters one by one and ask them to make the corresponding body movement as you call the letter
- Change the pace from slow to fast. You can also call out the letters jumbled up.

Note to the facilitator: The facilitator should be enthusiastic and energetic when calling out the alphabets.

6. What's Your Name?

Objective: Help the participants remember each other's names and energize the participants

What you need: Small ball or a roll of masking tape

Duration: 15 minutes

Procedure:

- Ask the participants to stand in the circle.
- Ask the participants to throw the ball at each other randomly. The participant who catches/receives the ball has to recall the name of the participant who threw the ball.
- If the participant is unable to recall the name, s/he performs a jig in the center for everyone.

Note to the facilitator: The facilitator or group members can also think of other entertaining punishments in lieu of a jig. This exercise can also be used to remember countries where different participants have come from.

7. Catching Change

Objective: Increase participants' awareness of the change process.

What you need: None

Duration: 15 minutes

Procedure:

- Put the participants in pairs and ask them to stand facing each other in a circle.
- In pairs, one partners is asked to close their eyes while the other changes some thing (clothes, hairstyle, glasses etc) about him/her.
- When the change has been made, the partner other partner is asked to open their eyes.
- This is repeated 3 times and then partners switch roles.

Note to the facilitator: The facilitator can discuss the following questions briefly:

- How did you feel while making the change?
- How did you feel when identifying the change?
- Was it easy to make or identify the change?
- What are the factors that helped you identify the change?

8. Sharing

Objective: Promote interaction between group members through sharing.

What you need: None

Duration: 20 minutes

Procedure:

- Divide the participants in two teams.

- Ask them to stand in two circles. In the inner circle the participants face outwards. The participants of the outer circle face inwards so members of the inner circle are facing members of the outer circle.
- The participants facing each other share something about themselves with the other – about the session, about what they did after the session etc.
- The participants spend about 2 minutes with one person and then the group moves in a clockwise direction.
- This process goes on for some time till the sharing in the entire circle is complete.

Note to the facilitator: This exercise can be used as an icebreaker in between sessions and can also be used for introduction or recap/evaluation of the session. The facilitator can decide the theme that needs to be discussed/shared among the participants.

9. The Knot

Objective: Show that cooperation and lateral thinking can help to solve problems which appear to have no solution.

What you need: None

Duration: 10 minutes

Procedure:

- Ask the group to stand in a circle holding hands.
- Tell the group that without letting go of each others hands they have to face outwards rather than inwards
- Let the group struggle for a few minutes.
- Ask two members to lift up their hands and let the rest of the group pass through to the other side. This will result in the entire group facing outwards

2. SAMPLE COURSE PROGRAMME

Time	Subject	Content/ purpose
Day 1. 0900 – 10.30	**Introduction**	Introduce ourselves. Brief participants about the development of the materials and its expected use. Introduce the package of training materials, including the support materials. GWP introduction ppt.
1100- 1230	**What do we understand by IWRM?**	IWRM principles Refresher on IWRM, questions answered. Approach: short presentation, questions and answers.
1230 - 1300	**Lunch**	
1300 - 1500	**Principles of planning**	Planning cycle: Introduce the planning cycle, establish the elements of the planning cycle that will be dealt with in the course; show the cycle as the basic frame for the course. Presentation and discussion 45 min. Exercise: In groups compile the activities for each step of the planning cycle that you think are necessary in your country. 1 hr + 15 min report back.
1500 - 1515	**Break**	
11515 - 1700	**Initiation**	Initiating the planning process : Structure and approach to setting up the management team for the process. Roles, work planning. How to start with awareness raising to build commitment and raise understanding. Role of capacity building in process. Approach: Presentation and discussion 30 mins. Exercise: Discuss who is driving the planning process, how to ensure government commitment and the management structure for the process. (facilitated session with cards or group work) 45 mins + 15 min report back.
Day 2. 0900 -0915	**Review**	*Review of the previous day.*
0915 - 1145	**Work plan**	Political will and stakeholder participation. Ensuring political commitment. Benefits of, and how to identify key stakeholders and their role in the planning process. Developing the work plan. Capacity building. Approach: Presentation and discussion 45 mins. Exercise: two groups, 1 hr. + 30 mins report back- 1. What steps will you advise to be taken to gain, and maintain, political commitment through the planning process to the adoption and implementation? 2 What steps will you advise to be taken to ensure stakeholder participation throughout the planning process?
1330-1500	**Strategic vision: Where**	Establishing the strategic vision:

	do we want to be?	Show the commitment to IWRM and a new vision of sustainable management of water resources as a guide to the analysis and decision making process for the plan. Establish that goals are essential to the justification for making a plan. Establish the basis for a water policy or vision. Government commitment at the outset. Approach: Presentation, (30 mins) Discussion on how to get a water vision or water policy developed to incorporate the IWRM approach – opportunities and barriers. (45 mins + 15min report back.)
Day 3 0900 - 1200	**What is the present situation?**	Situation analysis: Establish how the situation analysis should be done and the contribution to the plan.. The criteria for the analysis (IWRM, vision) elements of problem issues and goals to drive the analysis. The importance of the participatory process, consulting stakeholders. Approach: Role play with farmer, poor urban, rich urban, industry and a politician meeting a civil servant who wants to introduce a new water charge to finance the water ministry. (30 mins) Presentation and discussion on how to carry out situation analysis. (45min) Exercise, two groups: (45 min, 30 min report back) 1 How to do a situation analysis in our country - write the work plan for it. 2. Write a contents page for a situation analysis report on the water resources management situation in your country.
1330 - 1630	**Water management strategy identified. What is the best way to move forward?**	Water management options/ strategy identified: Identification of goals. Focus on what strategy to take to achieve the goals and address the problems. Link to the principles of IWRM. Address the broad areas of enabling environment, institutional framework, management instruments. Capacity building implications, funding implications, feasibility. Consultation. Approach: Presentation and discussion on goals and how to develop the strategy. (30mins)
		Presentation on IWRM change areas. (30 mins) Exercise: Identify priority change areas for our country situation. What process would we use to develop the strategy? (1 hr)
Day 4. 0900 - 1015	**Writing an IWRM plan**	IWRM plan: Structure, scope, content. Consultation, feasibility, financing plan, promotion plan. Assessment of the plan. Approval process Approach: Presentation on plan development and content. (30 mins) Discussion using cards on process of plan development through to approval by government. (45mins)

1100 - 1230	**Planning for implementation**	Implementing the plan: Mobilising public and political support. Mobilising financial and donor support. Integration into other national and local plans. Implementation plan. Evaluation of progress and renewing the plan (rolling plans). Approach: Focus group discussion
1300 - 1700	**Where to go from here?**	Action plan: Taking the next steps, making it happen. Approach: Exercise group work. Bring together the outputs of the previous sessions into an action plan. (90 mins)