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MODULE SIXTEEN

STATUS AND PROGRESS IN IWRM IMPLEMENTATION AT THE NATIONAL LEVEL IN THE REGION

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MODULE 16 STATUS AND PROGRESS IN IWRM IMPLEMENTATION AT THE NATIONAL LEVEL IN THE REGION (QUESTIONNAIRE)	
RATIONALE	<p>To meet the workshop objective, it is important that the participants assess the status of IWRM implementation and evaluate its progress in their own countries. The participants should link IWRM concepts, principles, and tools to current management practices in their countries, and identify successes in the implementation of IWRM that could be built on, and probably, could be extended to other ESCWA countries having the same socio-economic and political setting. Furthermore, it is even more important to identify the main constraints for IWRM implementation in their countries, and what needs to be done to overcome these constraints.</p> <p>This module is a point of reflection by participants on the status and progress of IWRM in their countries. It underscores the themes discussed in all the modules where the participants need to ask: What is the situation of IWRM strategies in a given country? It is therefore structured along the IWRM framework, i.e. what measures, policies and initiatives have been taken to establish/promote an enabling environment? How institutional roles and responsibilities are being defined and re-defined? What management tools are applied and how effective are they? The participants will discuss IWRM related issues, success stories and constraints, in their respective countries and sub-regions, and what they can be done to support the current management practices to move it towards IWRM process.</p>
OBJECTIVES	<p>The objectives of this module are two folds:</p> <ol style="list-style-type: none"> 1. To increase and strengthen participants' awareness on the application of IWRM concepts, principles, and tools at the country's local. 2. To assess the status and progress in the implementation of IWRM in each country and identify its main constraints and consequently strengthen capacity building in IWRM according to identified priorities and needs.
DELIVERY OPTION	<p>It is suggested that this module is performed as follows:</p> <ul style="list-style-type: none"> • The questionnaire is handed to the participants at the beginning of the workshop by the module instructor (facilitator) after the first session • The facilitator gives a short presentation about the questionnaire explaining the questionnaire, its objectives, and its procedures, and ask the participants to start filling the questionnaire as the related modules progress (see the modules numbers indicated on the questionnaire). • In the final day of the workshop, a special session is made for countries presentation by the participants for the results at the end of the workshop, the presentation should be brief summarizing the main points of the questionnaire (e.g., policy, institutions, legislation, stakeholders, economic efficiency, etc...), 5 minutes each • If time is short, then may be a sub-regional presentation is made, where the participants from each sub-region, make a presentation for the sub-region • The presentation should highlight successes in the implementation of IWRM in the country/sub-region, and can be built on, as well as the main and prevalent constraints for IWRM implementation, and suggested solution.
QUESTIONS FOR DISCUSSION	<ol style="list-style-type: none"> 1. What is the status and progress of IWRM implementation at the participants' countries, sub-regional and in the ESCWA region? 2. What are the successes in the implementation of IWRM in the country/sub-region, and can be built on and extended to other countries? 3. What are the main and prevalent constraints for IWRM implementation, and needs to be done to overcome them?

TABLE OF CONTENT

A. INTRODUCTION.....	4
B. QUESTIONNAIRE	5
POLICIES	5
INSTITUTIONS	6
LEGISLATION.....	7
STAKEHOLDERS.....	8
TRAINING AND HUMAN RESOURCES.....	9
STANDARDS AND REGULATIONS.....	10
EFFICIENCY AND ECONOMIC ASPECTS.....	12
DATA AND INFORMATION	15

MODULE 16
STATUS AND PROGRESS IN IWRM IMPLEMENTATION AT THE NATIONAL LEVEL IN THE REGION
(QUESTIONNAIRE)

A. INTRODUCTION

Formulating a comprehensive water management strategy should take into consideration all aspects of current and future water supply and demand, the technical and economic efficiency and sustainability of current patterns of water consumption, the potential economic costs of these patterns, the environmental impact of the different options of water supply and demand, etc. The aim of developing a well integrated and comprehensive water strategy is to curb the expanding imbalance between water supply and demand, enhance the efficient use of the limited water resources and insure their sustainability and availability for future generations.

A number of countries in the region are in the process of formulating a comprehensive strategy for water development and utilization. The availability of an elaborate database and studies covering the main water-related issues is a pre-requisite in drawing up such a strategy.

Since water is the concern of all, and stakeholders participation is no longer an option but rather a necessity, initiatives to promote IWRM process is increasingly a collective effort from various ministries, water professionals, associations, academic circles, training and research institutes, NGOs, Water users Associations, private sector companies and the media. While it is important to encourage such initiatives, it is equally important to coordinate these efforts, disseminate information about them, exchange experience and know-how in order to maximize their benefits. In this module, an attempt is made to take stock of what are these actions, initiatives, policy measures and legislation enacted and how can they be monitored, evaluated and coordinated. The following questionnaire is designed as a tool to aid the participant in this process, in establishing a “knowledge map” of the situation, highlight main issues for discussions and focus for developing further CB statistics in IWRM.

B. QUESTIONNAIRE

Country:

Name:

POLICIES **Setting goals for water use, protection and conservation (Module 2)**

1. Does the country follow a comprehensive water policy?

- Not yet
- In the process of formulating a strategy
- Currently implementing a comprehensive water strategy

2. What are the main characteristics of that strategy?

- Oriented towards water supply augmentation
- Oriented towards water demand management, with concentration on:
 - Changing agricultural crop patterns
 - Reforming water pricing structure
 - Charging for irrigation water to cover the cost of water supply
 - Charging for irrigation water to encourage water conservation
 - Allowing for water private markets
 - Allowing for private management of water supply/distribution
 - Manipulating economic tools (subsidies, taxes, tax breaks, cheap loans, grants, etc.) for the enhancement of technical efficiency
 - A mix of both water supply augmentation and conservation, with more emphasis on:
 - Supply augmentation
 - Demand management and water conservation.

3. Who develops that strategy? And who is in charge of its implementation?

4. Is the government committed at the highest level to implement the designed strategy?

5. Have all sources of water supply (conventional and non-conventional) been accounted for in formulating the water strategy?

6. What measures are usually used in allocating available water resources among the various sectors and various users?

7. Does the new formulated water strategy (or the expected one) depend on the same kinds of measures mentioned above?

INSTITUTIONS

Creating An Organisational Framework (Modules 2 & 3)

1. Is there a central council (agency) responsible for coordination of decisions and actions among various users of water (municipalities, industries, farmers, hydropower generation, navigation, tourism, etc.)?

Yes No

2. If yes, what is this agency?
What are its main responsibilities?

- a)
- b)
- c)

3. What other institutions are working under that central water council? And what are their responsibilities? Authorities? Caliber of its operators? And to whom do they report?

Name of institution	Responsibilities	Authorities	Caliber of		To whom they report
			Decision maker	Operator	
i)		Non Limited Full			
ii)		Non Limited Full			
iii)		Non Limited Full			
iv)		Non Limited Full			

4. Do authorities match assigned responsibilities?

To a high extent To a certain extent Not at all

5. What sorts of reform could improve the performance of these institutions?

- a)
- b)
- c)
- d)

6. To what extent is water pumping/extraction actually controlled?

Not at all To a limited extent Very much under control

7. What departments or institutions are involved in enforcing the water strategy?

	Name of department(s) and affiliation
Central	
Local	

8. What are the prospects for the development of organizations such as “water users associations”?

.....
a) Are such organizations legally permitted?

Yes No

b) What kinds of obstacles delay their formulation and development?
.....

LEGISLATION

Legislative Framework - Water policy translated into law (Module 2 & 3)

1. What are the institutions responsible for initiating laws and setting water standards and regulations?

	Name of responsible institution
Initiating laws
Setting water standards
Setting water regulations

2. Are current water laws efficiently appropriate for developing and implementing the water strategy?

- To a high extent
 To a certain extent
 Not at all

3. How effective are the water laws in controlling water use and its allocation among various users?

- Very effective
 Somewhat effective
 Not effective

4. Is it easy to issue a new law or change an existing law?

- Very easy
 Somewhat easy
 Not at all

5. On average, how long does it take to introduce a new law or change an existing law?

6. To what extent are various laws enforced?

- Limited enforcement
 Reasonable enforcement
 High enforcement

7. What are the major problems that lower the level of law enforcement?

8. What other problems do you envisage regarding laws involving water supply and use?

9. What steps have been taken recently towards reforming the legal framework concerned with water issues?

10. What kinds of new laws or law modifications are expected in the foreseeable future?

11. What are the entities responsible for settling conflicts among different water users? And how effective are these entities in doing their job?

Name of entity	Level of effectiveness		
	Very high	Average	Low
A			
B			
C			

STAKEHOLDERS
Encouraging a Water-oriented Society (Module 4)

1. Are stakeholders (NGOs, universities, research centers, private specialized companies, consultant offices, public agencies, etc.) allowed to be involved in the different phases of strategy formulation?
 Absolutely To some extent Not at all

2. The stakeholders that are allowed to participate at the different stages of strategy formulation are:

Stage of strategy formulation	Name of stakeholder/group
I. Water resource assessment	
II. Interim	
III. Formulating strategic options and recommendations	

3. On what bases are stakeholders chosen? (please rank in descending order):
 Having great information regarding water issues.
 Involvement in water utilization.
 Involvement in water supply or development.
 Having significant influence on water users.
 Other bases (please specify)

4. What steps have been taken towards actively engaging various stakeholders in strategy formulation?

TRAINING AND HUMAN RESOURCES
Building Institutional Capacity - Developing human resources (Module 2)

1. To what extent are personnel trained to deal with various issues of water management?

High ranking planners and organizers	Technical operators	Maintenance personnel	Clerical workers
<input type="checkbox"/> Adequately qualified	<input type="checkbox"/> Adequately qualified	<input type="checkbox"/> Adequately qualified	<input type="checkbox"/> Adequately qualified
<input type="checkbox"/> Reasonably qualified	<input type="checkbox"/> Reasonably qualified	<input type="checkbox"/> Reasonably qualified	<input type="checkbox"/> Reasonably qualified
<input type="checkbox"/> Inadequately qualified	<input type="checkbox"/> Inadequately qualified	<input type="checkbox"/> Inadequately qualified	<input type="checkbox"/> Inadequately qualified

2. What institutions need more intensive training programmes for their personnel, and at what level?

Name of institution	Planners and organizers	Training operators	Maintenance personnel	Clerical personnel
a)
b)
c)
d)

3. Do different categories of personnel receive adequate training for achieving higher levels of efficiency in water management?

a) Planners and organizers	<input type="checkbox"/> More than adequate	<input type="checkbox"/> Adequate	<input type="checkbox"/> Less than adequate
b) Technical operators	<input type="checkbox"/> More than adequate	<input type="checkbox"/> Adequate	<input type="checkbox"/> Less than adequate
c) Maintenance personnel	<input type="checkbox"/> More than adequate	<input type="checkbox"/> Adequate	<input type="checkbox"/> Less than adequate
d) Clerical personnel	<input type="checkbox"/> More than adequate	<input type="checkbox"/> Adequate	<input type="checkbox"/> Less than adequate

4. Are there adequate funds allocated for training programmes?

- Very adequate Adequate Less than adequate

5. Are there specific programmes planned and ready to implement for training human resources dealing with water?

- No Yes such as

6. Are there specific programmes planned and ready to implement for increasing public awareness regarding the water problem?

- No Yes such as

7. What institutions are responsible for increasing public awareness of water problems and the need for conservation?

- a)
b)

8. Are there enough funds for introducing and implementing programmes for:

a) Training personnel?

- Adequate funds Barely adequate funds No funds

b) Training farmers and water users?

- Adequate funds Barely adequate funds No funds

c) Enhancing public awareness of the goals and tools of the water strategy?

- Adequate funds Barely adequate funds No funds

STANDARDS AND REGULATIONS

Legislative Framework and Regulatory Instruments - Allocation and water use limits (module 2 & 3)

1. Are there enough applicable regulations and standards to control water rights?
 Yes Exist but not enough Enough but not applicable Neither

Water extraction?

- Yes Exist but not enough Enough but not applicable Neither

Water use?

- Yes Exist but not enough Enough but not applicable Neither

Water quality?

- Yes Exist but not enough Enough but not applicable Neither

Water pollution?

- Yes Exist but not enough Enough but not applicable Neither

2. What institutions are involved in enforcing water rights?

.....
Surface water extraction?
.....

.....
Ground water extraction?
.....

.....
Quality of water supply for domestic use?
.....

.....
Quality of water supply for industrial use?
.....

.....
Quality of water supply for irrigation use?
.....

.....
Quality of water discharged by industries?
.....

.....
Quality of water recycled for irrigation use?
.....

.....
Quality of water recycled for industrial use?
.....

3. Are the set standards enforced in cases of:

Domestic water supply?

- Strongly enforced Somewhat enforced Not enforced

Wastewater discharge?

- Strongly enforced Somewhat enforced Not enforced

Water recycling?

- Strongly enforced Somewhat enforced Not enforced

4. What obstacles face the enforcement of the various water standards? (Please rank in descending order)

- Lack of personnel to enforce standards
 Incapable personnel
 Insufficient funds/budgets for monitoring
 Insufficient funds/ budgets for enforcement

- Insufficient authorities for enforcement
- Low salaries of involved personnel and financial persuasion on violators side
- Negligence in law implementation
- Lack of interest in enforcement by high-ranking personnel
- Other reasons (please specify):
.....
.....

5. What kind of penalties are imposed in cases of standard violations?

- Financial penalties Imprisonment
- Close down or suspend economic activity
- Others such as

6. To what extent are water pumping/extraction quotas or shares enforced?

- Strongly enforced Somewhat enforced Not enforced

7. What are the obstacles hindering the enforcement of these regulations?

- a)
- b)
- c)

8. What steps have been taken towards reforming the regulatory framework related to water management?

9. Have there been any actions taken to increase the degree of decentralization in the process of decision-making and strategy formulation?

EFFICIENCY AND ECONOMIC ASPECTS
Economic Dimensions Of Water (Modules 5, 10, and 11)

1. To what extent are water-saving technologies now applied in the:
Agriculture sector?
 Not applied Applied to a limited extent Widely applied

The domestic sector?
 Not applied Applied to a limited extent Widely applied
2. To what extent are water-saving technologies expected to be applied in the near future in the:
Agriculture sector?
 Not applied Applied to a limited extent Widely applied

The domestic sector?
 Not foreseen Expected to a limited extent Expected to a wide extent
3. What measures are being taken to increase water resource conservation in the:
Agricultural sector?
.....
Industrial sector?.....
.....
Household sector?.....
.....
Others.....
4. What other measures are being taken to enhance technical efficiency of water use in the
Agricultural sector?
.....
Industrial sector?.....
.....
5. Are there tendencies towards privatization in the water sector?
 Not yet
 To a certain extent in the form of.....
and in the sectors of
 Highly expected in the areas of
and in the form of
6. What is the role of water-pricing in the comprehensive water strategy?
7. Is it foreseeable that charging water use for irrigation purposes will occur?
8. How much is the charge for issuing a well-drilling permit?
9. How often is the license for well-abstraction renewed? And under what conditions?

10. Are there other charges for the use of underground water?

11. What could be the obstacles preventing installation of a metering system for underground water use?

12. What kind of charges are being implemented for the use of surface water in irrigation?

13. What is the possibility of introducing or increasing charges for irrigation from surface water?

14. What obstacles face the introduction or the increase of charges for irrigation from surface water?

15. Would it be easy to charge for irrigation water according to the type of cultivated product?

16. Is there a tendency towards changing crop patterns in order to conserve water use?

17. What instruments should be used to implement such changes?
 - a) Economic instruments (tariffs, subsidies, taxes, tax rebate, etc.):
.....
.....
 - b) Legislation:
18. How would you charge for industrial effluent discharges?

19. Would these charges be effective in protecting water sources from pollution?

20. In what way could the system of effluent discharges be improved?

21. What incentives are/or could be used to minimize waste and conserve water for all uses?
 - a) In case of farming:
 - b) In case of households:
 - c) In case of industries:

22. How often are water tariffs, subsidies, taxes and other charges reviewed? And who initiates the need for their revision?

23. Is special legislation needed to impose or to change such water charges?

24. To what extent is the “polluter pays principle” applied in cases of water pollution?

a) In what sectors/ sub-sectors?

b) What are the problems facing the implementation of this principle?

25. To what extent is the private sector involved in the provision/distribution of water services?

Not at all

Expected to be involved in:

.....

.....

DATA AND INFORMATION
Water Resources Planning and Assessment (module 2)

1. Does your country possess a water-related data base?
 Yes No In the process of creating one

2. What are the institutions involved in creating/developing the data system necessary for formulating and implementing a water strategy? And to whom do they report directly?

Name of institution	Reporting to:
a)
b)
c)

3. Is the process of data collection central or local?

4. Are the available information and data sufficient to formulate a comprehensive water strategy?
 Not at all To a limited extent To a high extent

5. Are there enough studies on the problem to help in suggesting solutions and choosing appropriate options?

- | | | |
|------------------------|-----------------------------------|---------------------------------------|
| Economic studies: | <input type="checkbox"/> Adequate | <input type="checkbox"/> Not adequate |
| Social studies: | <input type="checkbox"/> Adequate | <input type="checkbox"/> Not adequate |
| Environmental studies: | <input type="checkbox"/> Adequate | <input type="checkbox"/> Not adequate |
| Technical studies: | <input type="checkbox"/> Adequate | <input type="checkbox"/> Not adequate |
| Agricultural studies: | <input type="checkbox"/> Adequate | <input type="checkbox"/> Not adequate |

6. What are the major areas of deficiency in the current system of water data and information?

7. How soon do you expect such difficulties to be overcome?

- Some deficiencies will be addressed in the near future, such as:
.....
.....
- Other deficiencies will need longer time to address, such as:
.....
.....
- Other sorts of information and data will be difficult to secure even after a while, such as:
.....
.....

8. Indicate whether the current (or planned) data system includes (or plans to include) the following kinds of data or information:

Type of data/information	Included now	Not included	To be included	
			soon	later on
Estimates of different sources of water
Quality of each source of water
Intensity of water use in various sectors, sub-sectors, crops
Future options for water supply
Estimated current demand for water by various sectors
Anticipated sectoral and total demand for water in the future
Current and future water demand-supply imbalances
Adequacy and quality of water supplied to each sector and sub-sector
Frequency of water shortages, breakdown in water-treatment facilities, suspension of normal services or rationing episodes
Household precautions to ensure a safe supply of drinking water, and its expenses
Supplementary sources of water to the industrial sector and the cost
Sources of water loss/leakage and estimates
Quantity and quality of wastewater and possibilities for re-use
Number of working and dried-up groundwater wells
Water monitoring units and their distribution (central and local units)
Institutions involved in water supply, distribution, management, control, etc. and their interrelationships
Institutions involved in water data collection, verification, analysis, organization, dissemination, etc.
Users of the generated water data
Current and projected investment in water supply projects

Type of data/information	Included now	Not included	To be included	
Current and future availability of different manpower skills in water-related institutions
Size of budgets allocated to training and education in various levels of manpower in all sectors
Legislation involved with water rights, water use, water recycling and re-use, water delivery, water charges, water markets, water unions
Protection, dealing with conflicts among water users, etc.
Debt services of water projects
Estimates of various types of cost of water supply to each sector or sub-sector:				
- Operation and maintenance cost
- Capital cost
- Capital replacement cost
- Full cost
Estimates of wastewater treatment quantities and cost
Cost of operating wells and pumping cost
Cost of water re-cycling and its channels
Subsidies of water supply to every sector (including energy subsidies)
Water tariffs and charges for the various uses
Economic incentives for increasing water use efficiency (taxes, subsidies, grants, tax rebates, etc.)
Privatization trend and its prospects in sectors of water supply and distribution
Size of water market, its domain, its structure, its prices, and its limitations
Sources of water pollution, its intensity, its effects on fresh water supply and use
Incidences of water-related illness and health deterioration
Positive externalities of water use and development:				
- recharging groundwater aquifers
- increase in productivity of livestock,
- social benefits (increase in employment, savings of women's efforts and time,

Type of data/information	Included now	Not included	To be included	
Various water negative externalities:				
- effects on downstream water users
- effects on navigation
- effects on hydropower generation
- effects on fisheries and ecosystems
- effects on habitats and fauna-flora
Different NGOs involved in water use and development
Current and anticipated reforms and changes in:				
- Technical efficiency of water delivery and water use
- Organizations of water institutions
- Manpower capacity and skills
- Water legislation and regulations
- Water charges
- Economic incentives for enhancing water
- Agricultural crop patterns