

The IWRM Introduction Process and a Role of Strategic Planning

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Putting IWRM into practice is the quite complicated process, which, first, should involve scientists, water practitioners, policy-makers and their planning agencies that are preparing the important decisions, and water users, taking into consideration the complicated system of their relations and links. When and how to start the IWRM planning depends on the following key prerequisites:

- the appropriate level of public awareness concerning the need of radical changes to the existing approaches of water supply to the population and nature;
- specialists of water management organizations and conservancies, as well as scientists working in such areas as economy, ecology and social development should be familiar with the IWRM experiences all around the world particularly, in countries with similar conditions and recognize the need of introducing IWRM in their own country as the path of solving painful problems. They have got the opportunity to disseminate this experience in their own country and to raise the public awareness concerning the advantageous effects of the IWRM introduction; and
- government agencies and policy-makers in various public authorities (parliaments, ministries, and provincial administrations) should be ready to establish the “governance” system that was described in Chapter 2, which will be aimed at developing the national IWRM framework

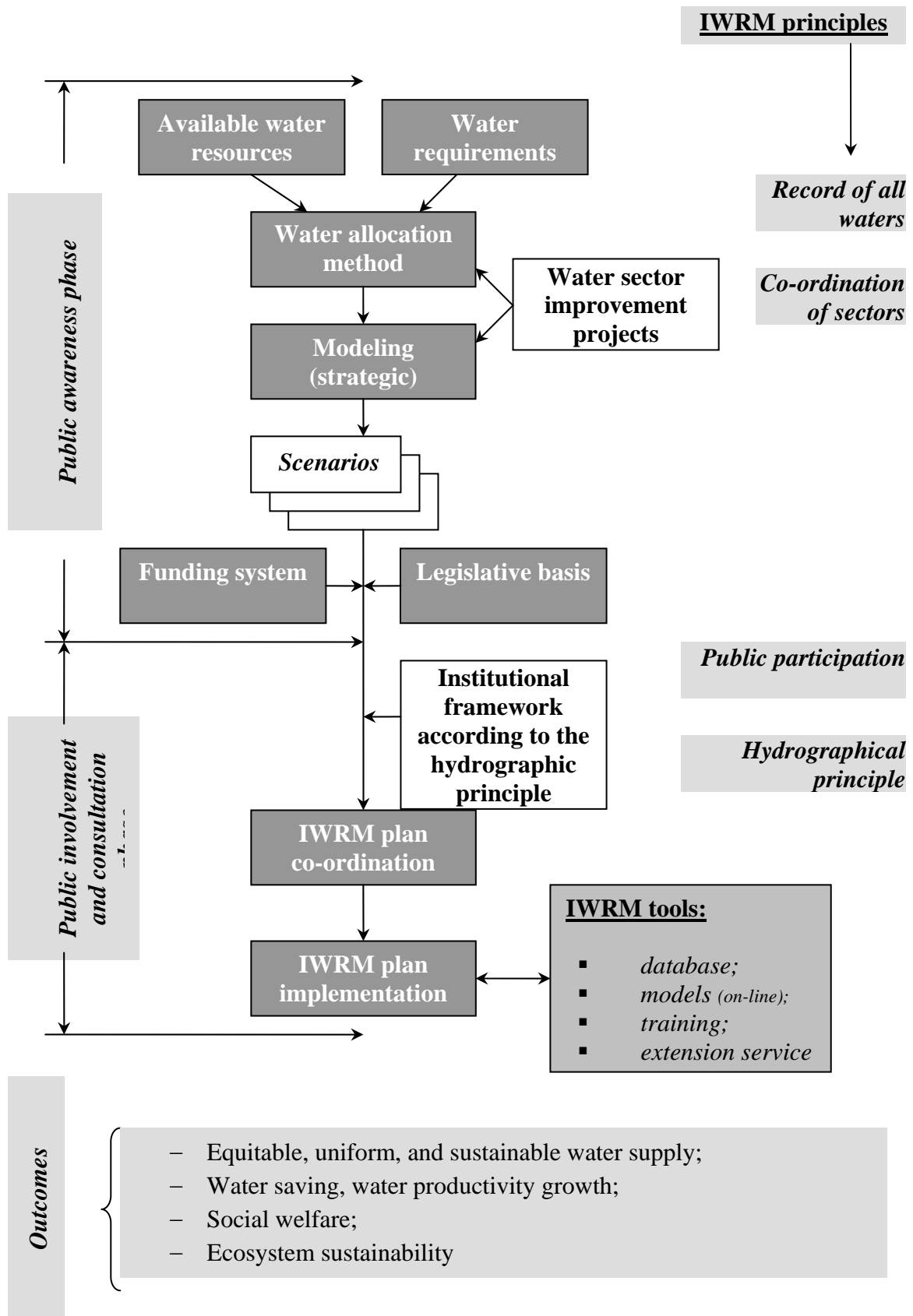


Figure 6.1 Phases of National Planning and Implementing IWRM

The IWRM introduction process goes through the following phases:

- initiating the process and creating the enabling environment for the introduction of IWRM;
- strategic planning;
- planning the work processes;
- pilot projects; and
- dissemination of the experience gained over river basins and countries in the region.

At each phase the following activities are implemented:

- analysis and elaboration of recommendations;
- social mobilization and involvement of appropriate stakeholders and decision-makers for each phase; and
- training of decision-makers, executors and stakeholders that would have a specific role in each phase

These activities are in permanent interaction, supplementing and enriching each other, facilitate a feedback and improvements, and therefore one cannot consider each of them to contribute separately to complete the IWRM introduction process or even to initiate its progress. These activities require driving forces, and, in turn, driving forces can be effective only if there are “brains” and “conductors” of these activities. The process of introducing IWRM can be initiated with establishment of the governance framework and distributing the roles among actors:

- who will play the role of an ideologue, generator of ideas and “leader looking ahead” in this process;
- who is the manager, with required powers and resources;
- who knows how to form public opinion and initiate social mobilization;
- who knows how to finance these interrelated measures;
- who knows how to facilitate the introduction process; and
- who supervises the effectiveness of activities

In its fundamental publications [31, 36, 40, and 56], the Global Water Partnership (GWP), one of major promoter of IWRM introduction, considers that international donors and agencies that act on the basis of WSSD resolutions (2002) or national governments can be “driving forces” of the IWRM planning process. At the same time, the GWP suggests a clear-cut distribution of roles and responsibilities (Table 6.1). When the role of “owner of the process” belongs to the national government that can, *sui juris*, establish the special Steering Committee or working group for governing this process. The GWP network assigns a leading role in this process to its partners and regional coordinators, who should provide the public platform for dialogue and information exchange, and support the processes of developing IWRM plans and strategies based on consultation processes, capacity building, knowledge dissemination and training.

Another an absolutely different approach was recommended in some EU projects. According to them the concept of multi-stakeholders dialogue, which for example, is developed within the frame of EMPOWERS Partnership [56]. Although their approach, so-called SDCA, contains many correct and useful provisions, the key idea (the primary nature of the dialogue, prior to target actions) is wrong in essence. “Innovation can be seen as the outcome of a mutual learning and social change process taking place among a large number of autonomies, actors of mutual interdependence, challenging them to create conditions through, which innovation can take place.” Further, the process boils down to formation of spontaneous understanding among all stakeholders concerning the need of autonomic selection and establishment of common platforms for transition towards IWRM. Although, authors understand very well the complexity of establishing such a platforms in the water sector, they hope that differences and representation of different interests and actual situations can provide the constructive base for innovations and introduction of IWRM. One can agree with some provisions of this concept such as establishment of “horizontal” cross-sectoral coordination and “vertical” coordination of all hierarchical levels, and organizing dialogues between them, employing such instrument of analysis as the Rapid Appraisal of Agricultural Knowledge Systems (RAAKS) developed in the Wageningen University (The Netherlands). However, as a whole, spontaneous mechanisms for IWRM introduction based only on induced awareness, may be a possibility only in well developed countries.

Table 6.1 Breakdown of Roles and Responsibilities for Introducing IWRM [57]

<i>National government</i>	<ul style="list-style-type: none"> • Lead role, "owner" of the process • Mobilize funding • Sets macro-economic policy environment
Steering committee (group with wide representation)	<ul style="list-style-type: none"> • Guide the process • Mobilize support across sectors and interest groups <ul style="list-style-type: none"> • Guarantee quality output • monitor implementation progress
Management team (group of qualified professionals)	<ul style="list-style-type: none"> • Manage day-to-day processes for strategy development, implementation and capacity building
Facilitating institutions, where appropriate (for example, national NGOs, GWP Country or Regional Partnerships or local	<ul style="list-style-type: none"> • Provide neutral platform for dialogue • Support strategy development process by providing

UN country teams)	advice and sharing knowledge <ul style="list-style-type: none"> ● Foster capacity building and training
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The GWP approach is closer to the ground realities in our countries than the EU approach. However, the assigning of a role of “leading owner of the process” to the national government is sooner a particular case than general, because national government agencies are too busy in their day-to-day business and they are unable to execute this leading role, unless a special unit responsible for the IWRM introduction process will be established within their frameworks.

The leading positions in initiating and developing IWRM should belong to ideologues and mediators of this ideology, who can use all necessary tools: analysis, social mobilization, information exchange and training that are combined with the multilateral dialogues. IWRM itself predetermines the need in establishing conceptual, coordination and executive center. The “introduction” is the process of overcoming certain tendencies and inertia of existing status-quo, which as “*swamp*” resists and hampers current reforms and will impede further innovations.

Governing the introduction process is one of preconditions for achieving the success; and it is very important to select a right leader who can combine functions of an ideologue and initiator of this process. A candidate for this role should meet the following requirements:

- excellent knowledge of the IWRM principles, mechanisms and areas of activities;
- possess information on the situation in target areas;
- possess creative and scientific abilities in order to formulate ideas and to plan the ways for their realization;
- possess the practical skills of planning and distribution of assignments per components among executors, who can combined them to a single team; and
- sufficiently sociable and democratic in order to consolidate the team; and, at the same time, be able to create the enabling environment for implementing each of planned tasks

In short, this person should possess combined abilities of a scientist who can suggest ideas, analyze and generalize information and a good manager who can define the goals beneficial for society and put them in practice. Such a principle was practically applied many times, for example, while implementing the very complicated and multidisciplinary programs such as ‘space program’ (S.P. Korolev) or establishing and developing the Microsoft Corporation (Bill Gates & Paul Allen). A triumvirate consisting of three like-minded persons: an ideologue-scientist, a decision-maker, having powers and governmental support and a manager, directly responsible for governing the introduction process is another option that should be grounded on the scientific idea and its development. In both cases, based on the suggested idea, the process must be implemented according to a plan that has to include four types of support: a political support through a decision-maker, who represents the authorities; information support through a specially established group or NGO; social support through the mobilization and involvement of stakeholders; and finally financial support that is very important for funding the introduction process (Figure 6.2: a and b).

It is very important to organize result-oriented research and pilot projects for improving and adapting IWRM principles to specific conditions with follow-up, and putting them into practice according to the

following sequence: “research project – planning of introduction – pilot projects – final large-scale introduction.” Implementing this process in the frame of an exclusively scientific program, initially means the orientation on its low efficiency. The content and formulations of the scientific concept is often built according to laws that are incomprehensible for a practitioner, because any novelty, like an end in itself, captivates a researcher, like a treasure hunter or a gold prospector, by the process of searching in itself. An opportunity to receive results, which nobody reached before and the process of gaining new knowledge allure a scientist, forcing him to forget how and where his discovery can be practically used. Such scientific passion is good for academic investigations, but it is absolutely unacceptable for studies aimed at wide introduction and practical use of their results.

The IWRM introduction process requires strict and purpose-oriented planning and its implementation taking into consideration the national and regional priorities, current trends and legislation, and provides for the phased progress and appropriate measures to cover gaps between phases.

How the projects that listed in “the EU Water Initiative” look in this respect? [46]. How do they reflect this complicated process (if to judge from their abstracts)? We made attempt to systematize their outcomes. Out of 87 projects listed and having abstracts: i) manuals, policy briefs, legal recommendations are envisaged in 12 projects; ii) policy guidelines in 44 projects; iii) information websites in 35 projects; iv) seminars and disseminating recommendations in 18 projects; v) stakeholders involvement in 18 projects; vi) pilot activities in 28 projects; and vii) practical recommendations and putting them into practice only in 19 projects.

In most cases, projects’ outcomes are not aimed at real practical use, but only at preparing manuals, websites, policy briefs, information networks, databases, conducting seminars and rarely at implementing pilot projects for testing recommended technologies and approaches, and transferring them for follow-up introduction (less than 30%). This means that primarily the projects under the umbrella of the EU Water Initiative didn’t envisage the introduction of their outcomes.

The introduction processes in any area of activities provides a set of new ideas, technologies and tools. After testing and adaptation of them before transferring these ideas into a critical mass of rational reforms, they should replace the routine technologies. Therefore, *putting scientific ideas into practice requires an integrated approach and introducing IWRM to a wider audience too, because it encompasses social, economic, and environmental reforms based on technical and technological innovations.*

For this purpose, it is necessary to provide an *integrated planning of innovations, as well as* its integrated implementation through pre-envisaged transfer from one target-oriented project to another with continued financial support.

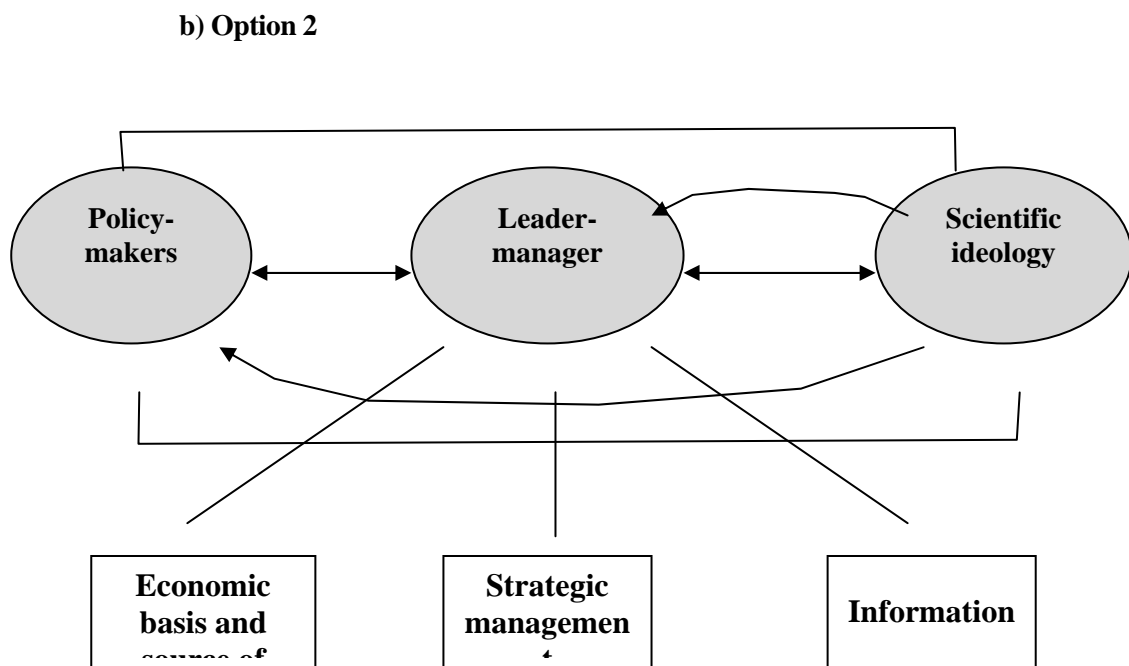
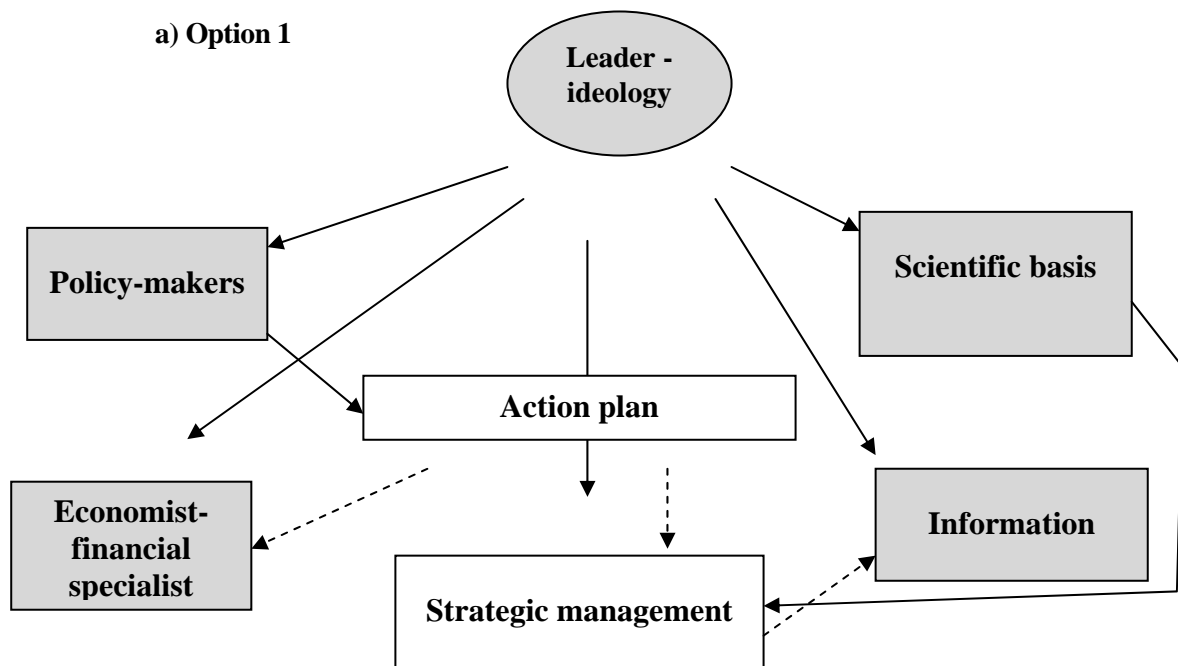


Figure 6.2 Options for Governing IWRM Introduction Process

Focus on target, efficient and practical use of scientific results is the first precondition for successful implementation of follow-up activities, related to introduction and disseminating the results achieved and gained experiences. A “generator” of scientific ideas, who formulates the program and plans the expected output, should clearly envisage what he would like to obtain already at this phase. He should clearly present what obstacles should be overcome in the process of research and follow-up pilot operation cycles (this should be substantiated by the executors), and he has to focus on the scientists and/or their partners, on their outputs that they need to produce.

To reach the final purpose, it is important to specify the phases of introduction process and necessary instruments. The following five phases are proposed as constituents of the process:

- start-up stage for the initiation of the process;
- strategic planning;
- development of work plans;
- pilot projects; and
- experience dissemination and extension of IWRM coverage

The following set of instruments will be used for activities at the last four phases:

- analysis and development of key approaches;
- social mobilization;
- mechanisms and practical tools; and
- training.

Taking into consideration that each country coordinates its water management tasks and requirements with political targets and plans of social and economic development, it is important to specify necessary set of instruments for each phase, the sequence of their application and their links as shown in Figure 6.3. Continued inflow of new analytical and practical solutions and information and interchange of them between instruments (mechanisms) of the introduction process takes place. At the same time, all fundamental approaches and mechanisms, over both vertical and horizontal links, must be clearly specified at the beginning of initiation of any IWRM introduction process, in order to establish the specific systems of activities, links and public participation, which shall be approved by the government with resolutions at the beginning and at follow-up phases.

At the same time, all approaches and mechanisms should pass through “the filter of public opinion” involving policy-makers and other stakeholders. The awareness of these approaches and mutual understanding of various stakeholders’ groups have to be reached through the process of training and dialogue.

the composition of stakeholders (SH) needs to be differentiated, according to the specific phase. At the

“*initiation*” phase, according to Figure 6.2 “a” and “b”, the framework of governance and main leaders, needs to be specified forming the “core” who holds the same views and partners-promoters. At the “*strategic planning*” phase, it is important to have the personal interest and support of decision-makers in the government and provincial (or basin) organizations, on which supposedly initiation of this process depends. At the same time, the most advanced and active representatives of stakeholders from the grassroots organizations, who can be a mouthpiece of water users and water consumers, as well as representatives from other target groups and the appropriate water authorities, should be involved.

At the “work plans development” phase, when the plans of IWRM introduction process is being drawn up, it is necessary to involve specialists and water users who stand close to practical tasks and their implementation and to turn them into owners and enthusiasts of this process rather than executors of somebody else’s ideas (in the follow-up activities they should act in the same manner regarding the participants of pilot projects and further IWRM introduction).

Let us review separately the each phase shown in Figure 6.3.

Initiation of the process is the most important phase, where the foundation is established for all successes in the future. Based on scientific analysis, it is necessary to raise the awareness of “pregnancy” (preparedness) of the water sector and all other water users for the transition towards IWRM. This analysis has to be based on evidences of the “revolutionary” situation when, -rephrasing Karl Marx, water users “do not want to live as before” and top water managers “cannot govern in a new way.” For our region, occurrence of this situation was revealed from a number of studies: the WARMAP-TACIS (1997 to 2000) [13]; INCO-Copernicus (2000) [4]; etc. These projects have shown that with reforms or restructuring of the agricultural and other economic sectors, the large state water users and water sector as a whole cannot meet the needs of private and cooperative water users. There exist a huge potential for improving water resources management.

Through other projects (“Principal Provisions of the Water Management Strategy in the Aral Sea Basin” GEF, 1997 [9]; “Strategic Planning and Sustainable Water Resources Management in Central Asia”, UNESCAP, 1999 to 2000, [8]) and during study tours abroad, the Ministers of water resources from Central Asian countries, firsthand acquainted with the world experience of putting IWRM into practice. This activities allowed a deeper understanding of the need for transition towards IWRM in the region. Collaboration with the Swiss Agency for Development and Cooperation (SDC) and International Water Management Institute (IWMI) allowed finding the financial resources for the development of the first solutions and implementing pilot projects in three countries. This has resulted in the selection of “key executors”, and the coordination of these solutions with three Ministries of Water Resources and was crowned with the decision of the ICWC to establish a regional working group and the Steering Committee. Deputy Ministers of national ministries of water resources were assigned as key executors. The group of initiators has developed the road map and, together with Canadian and Israeli specialists, organized the training seminar for key executors to raise their awareness on IWRM based on the international experience.

Using the international experience and own analysis of pilot projects are important for raising awareness concerning the need, appropriateness, and profitability of putting IWRM into practice. Bombarding with information, it is necessary to convince the higher echelons of stakeholders on the appropriateness to refuse former practices, since, otherwise it can be dangerous not only for the society, but also for the subjects under “pressure for innovation.” One of the ministers said: “A government official can refuse from the routine style of management and attempt to convince the government to start reforms only if, he understands, of course through the pressure of information, that unless he does make it happen, he might lose his position and all perspectives.”

National IWRM plans for Kyrgyzstan, Tajikistan, and Uzbekistan were developed through the project

initiated by the GWP CACENA and UCC-Water (2005 and 2006) and was conducted according to well-tested steps of the “road map” [15]:

- preparing the fundamental ideas based on findings of earlier developed projects (EU INCO-COPERNICUS Program project, Grant INCO-ICA-2-2000-1039 [4], the ICWC and ESCAP: Strategic Planning and Sustainable Water Resources Management in Central Asia [8]) and generalization of the world experience;
- presenting basic IWRM indicators to decision-makers at the governmental level and to leaders of stakeholders to raise their awareness of IWRM through the training seminars and round tables;
- discussion of the future projects with end users and decision-makers and incorporating their inputs into the project activities in the form of conceptual, technical, and financial assistance; discussion of expected results and project resources;
- selection and appointment of project executors and members of the Steering Committee; and agreement on communication and feedback with them;
- selection of pilot projects;

Strategic planning should include the following key activities:

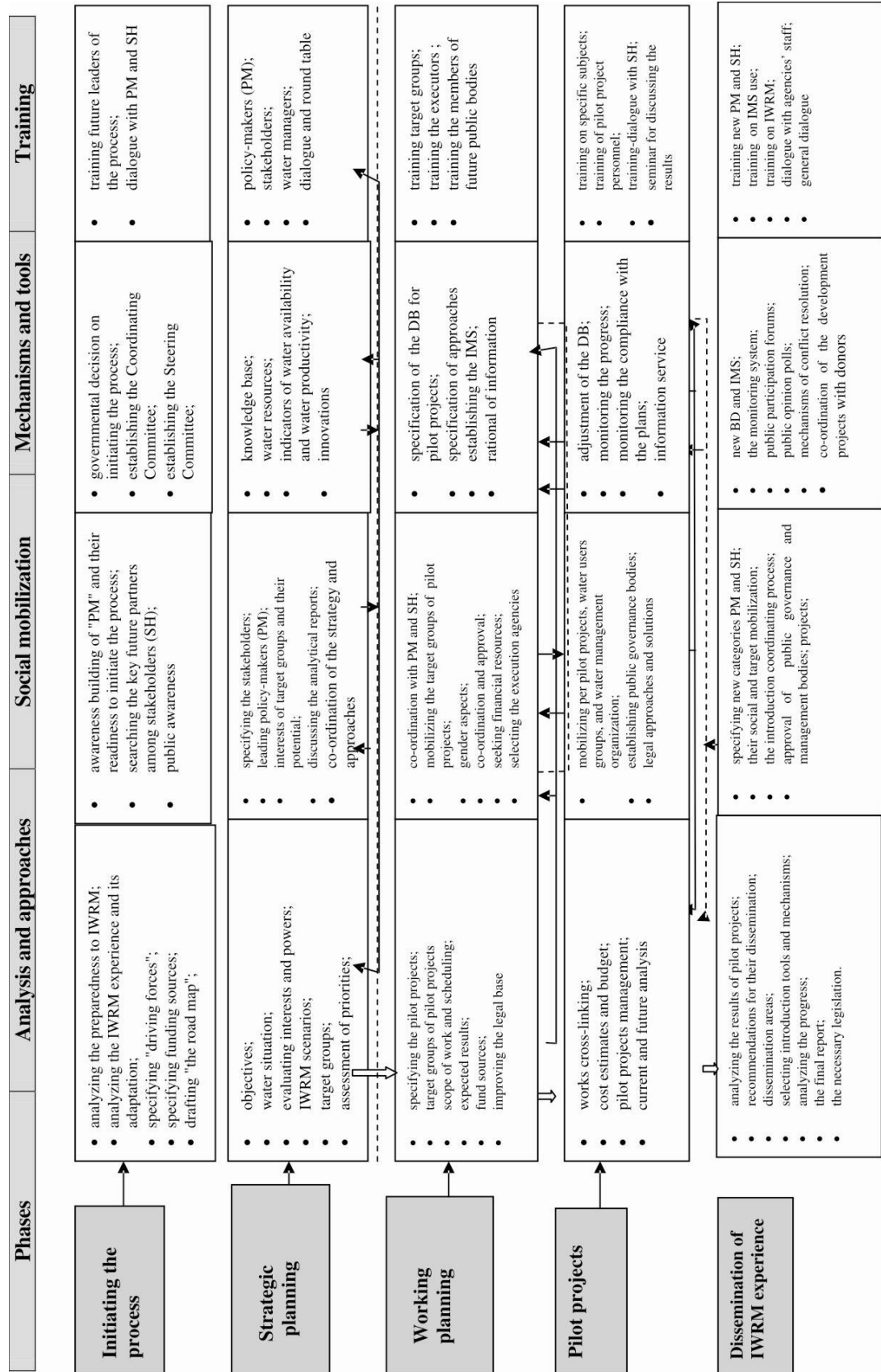
- analysis of the current situation and destabilizing factors;
- assessment of the preparedness to introduce IWRM in the planned zone, basin or region based on the following indicators:
 - social need for introducing IWRM;
 - awareness of these needs among decision-makers and advanced part of the society;
 - scientists and practitioners can suggest solutions relevant to these needs; scientific criteria meet with public interests;
 - suggested solutions will be feasible for the government and society;
 - “decision-makers” are ready to listen to scientists and practitioners and to cooperate with them;
- phases of IWRM introduction, scope of works and appropriate instruments: the information system, training, social mobilization, developing the “road map” in detail;
- specifying the target groups and the level of stakeholders’ knowledge, their interests and abilities; and
- definition of IWRM strategic objectives for achieving the MDGs.

The strategic planning, as the first phase of IWRM introduction, creates the basis for involving all stakeholders; but they don't have to participate absolutely and simultaneously at all stages.

Development of Work plans is started with selecting pilot projects and definition of their objectives. Only irrigation systems where the maximum potential of IWRM may be shown, both in enhancing the efficiency of water resources use and its socio-economic and environmental effects should be selected for the pilot projects. The selected systems should be coordinated with local authorities, stakeholders and, more important, with decision-makers and the fact that their consent has to be reflected in relevant documents. At the same time, specific considerations should be given to key aspects, socio-economic and water management situation, and especially selecting the local partners that has to be organized on the competitive basis.

In the framework of the IWRM-Fergana Project [3, 41], the work plans were prepared jointly with SIC ICWC, IWMI, SDC, three Ministries of Water Resources (Kyrgyzstan, Tajikistan and Uzbekistan), water authorities of seven provinces in the Fergana Valley and were completed within six months. The information on this activities and further practical implementation of the IWRM approaches are described in other chapters of this book.

Figure 6.3 Coordination of Works under Introducing IWRM Tools at



A specific feature related to introduction IWRM consists of continuous adjustment and development of the “road map” to achieve the planned objectives:

- evaluation of achieved results together with the end users and decision-makers;
- recommendations to “governance” regarding further improvements of the legal, financial, institutional and other kinds of activities;
- feasible scope of works and projects for further development;
- action plan with the cost-benefit analysis;
- definition of the target groups of stakeholders and approaches for involving them in the introduction process; a plan of social mobilization of stakeholders, taking into consideration their specific character and organizing them into appropriate groups;
- training plan for the target groups of stakeholders and dissemination of gained experience;
- capacity building of the information system; and
- assessment of the progress and feedback.

It is important to ensure the sources of financing for this process, active role of its participants and involvement of stakeholders, as well as mobilization of donors’ investments of associated sectors; the last task is the most difficult.

Let us consider a role of various instruments at different phases of IWRM introduction.

Analysis and key approaches

Considering the multiplicity of aspects of IWRM, the analytical part of initiation phase should cover, first of all, the baseline situation (prior to the IWRM introduction) in water use, management and protection, and the management and use of other natural resources (land, energy potential, flora and fauna), as well as social and economic factors. Then plan the targets and levels for each of these factors. Further, under strategic planning, it is necessary to select feasible scenarios and define phases of their implementation. Those should be developed in detail for each stage at the phase of work plans development. At the phase of pilot project implementation, the analysis has to show, to what extent those targets, which were planned at previous phases are feasible; and taking into account the outcomes of pilot projects, adjustments of the plans has to be made. From the very beginning, the analysis must cover not only water management aspects but also the set of key results of introducing IWRM, especially those that are aimed at achieving the MDGs, keeping in mind, first, efficient use in all economic sectors of allocated water from the sources and satisfaction of the water needs of the society and nature.

Social mobilization shouldn’t be considered as the campaign of involving stakeholders for one occasion. At “*initiation*” and “*strategic planning*” phases, the social mobilization campaign is aimed at “looking-ahead”

representatives of society and future leaders of the IWRM introduction process. With transition towards the phase of developing work plans and then pilot projects, these activities should be step-by-step extended to increase the number of target groups and directions of their activities and for further deepening and developing their links both over “vertical” and “horizontal.” At that, key tasks of social mobilization also change from such activities as familiarization of stakeholders with IWRM principles to their involving into strategic planning activities and step-by-step transferring to them a role of “owner” of this process. Thus, they should become not only bearers of ideas but also creative participants of IWRM who, has an excellent knowledge of water use and distribution problems, breathe new life into the IWRM introduction process. Social mobilization gradually changes its direction towards involving of stakeholders into governance, elaboration of new forms of management and, finally, development of management directives (a business plan, schedule of water use) and follow-up monitoring of their implementation and achieving planned indicators, etc.

Stakeholders are a source of feedback during the IWRM introduction process that is used for its in-process adjustments, and is the basis for systematic transferring the process into hands of those who are most interested in introducing IWRM.

Instruments and mechanisms of introducing IWRM are not confined only to institutional instruments. Here, it is necessary to focus on the communication systems and equipping the same; databases that gradually accumulate information with development of the process and covering more and more areas of activities; the system of monitoring water use and adjustment plans of water use, according to real demands of water users; models for operational management and planning; conflict resolution system, etc.

In parallel to these instruments and social mobilization, the training system should be active with changing thematic coverage and trainees from decision-makers and leaders of stakeholders towards executors at grassroots level. For follow-up, enhance the training courses arranged according to the “top-down” principle by practical “bottom-up” results. Lectures should be accompanied with “dialogues” and “round tables” with following on-the-job training for personnel of the Canal Administrations and Canal Water Users Councils, WUAs’ members and staff, as well as for farmers in the frame of consulting activities. The more experience learnt from the process of IWRM introduction the wider and more diverse coverage of training activities; however, just such an approach guarantees the progress, since the training is not only dissemination of existing knowledge but also gathering and accumulation of new collective knowledge about the IWRM introduction process.

There is one very important conclusion we would make based on the foreign and our own experience. Introducing IWRM presents a long-term and phased process that step-by-step, involving more and more intellectual potential, participants, and objects. In Chile, for example, “community pregnancy” related to the need in reforming the water sector arose in the 1980s, but the IWRM system was finally established in the national scale only in 2005 [7]. We have initiated the process of introducing IWRM in Central Asia almost ten years ago, but managed to cover only small part of the region.

IWRM has to be broadened and deepened, because, with time, the potential of technical progress, on the one hand, and social and economic conditions on the other hand, are changing. These changes and new opportunities dictate the need in new adjustments to the strategy and instruments, to raise the IWRM efficiency and to win more and more supporters “top-down” and “bottom-up.”