EUWI M&R
EU WATER INITIATIVE

Monitoring and Reporting Working Group
of the EU Water Initiative

Designing and Implementing a Monitoring and Reporting System for the EU Water Initiative

A HANDBOOK

Final Report of the Monitoring and Reporting Working Group
of the EU Water Initiative

Prepared by IPALMO (Rome)
August 2006

COOPERAZIONE ITALIANA

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FOREWORD

The present handbook is the results of the activities carried out for two years by the Monitoring & Reporting Working Group of the European Union Water initiative (EUWI). The tasks envisaged were: elaborating a methodology for monitoring water policies; coordinating the many actors involved in monitoring and improving the comparability of information collected; highlighting the major informational gaps required to set up a monitoring system for water policies.

This handbook has reached two important objectives: it has gained support to the concept of monitoring water-related policies, besides monitoring the sector performance; and it has produced a methodology for the implementation of a monitoring system for complex sector policies. A monitoring model has been conceived, with the view of being used by international organizations and, mostly, by national governments in developing countries to monitor water policies. The model has been tailored to the specific needs of the European Union Water Initiative (EUWI). The process has ensured continuous review and dissemination of monitoring experiences. In this way, the need to comply with expectations at different level of implementation has been explicitly taken into account.

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Several agencies, organizations and institutions have actively taken part to the present effort, either contributing directly to the development of the methodology, or debating their methodological thoughts. All of them have been asked to meet periodically and contribute to a synergic brainstorming, intended to lead to a common understanding of the trade-offs in devising a monitoring methodology. Among the many, we wish to thank: the Governments of France, Greece, Italy, Japan, Netherlands, Spain, United Kingdom; the OECD, UNDESA, UNICEF, WHO and WWC; the leaders of the EUWI Working Groups and the members of the EUWI Monitoring and Reporting Working Group; and the research institutes DIE (Germany), IRC (Netherlands), WELL (UK), and WWF (UK). A special thank goes to Julia Benn, Andrew Cotton, Sylvie Detoc, José Hueb, Guido Scalici, Kathleen Shordt, Martin Walsh, and Daniel Zimmer.

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ABBREVIATIONS AND ACRONYMS

ACP-EUWF: ACP-EU Water Facility
AIDCO: European Commission Service for external aid
CCA: Common Country Assessment of the United Nations
CDF: Comprehensive Development Framework
CSD: Commission on Sustainable Development of the United Nations
CSOs: Civil Society Organizations
CSP: Country Strategy Paper
DAC: Development Assistance Committee
EC: European Commission
EDF: European Development Fund
EU: European Union
EUWI: European Union Water Initiative
GWP: Global Water Partnership
IWRM: Integrated Water Resources Management
JMP: Joint Monitoring Program
JPoI: Johannesburg Plan of Implementation
LogFrame: Logical Framework
M&E: Monitoring and evaluation
M&R: Monitoring and reporting
MDGs Millennium Development Goals
MoFA: Ministry of Foreign Affairs
NGOs: Non-Governmental Organizations
ODA: Official Development Assistance
OECD: Organisation for Economic Cooperation and Development
PRSP: the Poverty Reduction Strategy Paper
RSP: Regional Strategy Paper
S&T: Science and Technology
TBO: Trans-Boundary Organization
UN: United Nations
UNDAF: United Nations Development Assistance Framework
UNDP: United Nations Development Program
UNICEF: United Nations Children's Fund
WG: Working Group
WHO: World Health Organization
WSP: Water and Sanitation Program
WSSCC:Water Supply and Sanitation Collaborative Council
WSSD: World Summit on Sustainable Development (Johannesburg, 2002)
WUP: Water Utility Partnership

Chapter 1
Introduction

1.1 Overview

Water is key to the well-being of humankind. It is a basic element of life, a vital input to economic activities, and an essential requirement for proper functioning of the world's ecosystems. The integral role of water in economic and social development is now widely recognized. It is not surprising therefore that water is on top of the national and international development agenda, with several declarations specifying targets on water resources management and on access to water supply and sanitation services. The most notable example is that water has been explicitly recognized by the international community as one of the Millennium Development Goals (MDGs), and is also pointed as a central element to reach most of the other MDGs.[1] Indeed, a global commitment has progressively arisen during the last decade, which has translated into numerous actions aimed at reversing the threats to water resources and expanding the access to related services, especially in developing countries. Various initiatives have been launched by a wide range of actors, such as international donors, national and local public bodies, users' communities, private companies and research centres. In some cases, complex initiatives have been conceived and implemented. Crucial in this process is mobilizing the required support, and keeping record that what is being done is consistent with the international targets.

Given the amplitude of the challenge in the water sector, the rational planning of development intervention, based on clear facts and sound decision tools, is the only way to avoid waste and conflicts, to properly allocate scarce resources, and to solve complex environmental problems. However, it is proving extremely difficult to effectively confront the many interlinked issues concerning water resource management and water and sanitation services. On the one hand, it is usually problematic for international donors, national governments and non-governmental entities to collaborate and undertake a coordinated effort. On the other hand, problems are often worsened by the fact that management decisions are taken at the local levels,

while strategic decisions fall out from national ministries or international conferences. The task becomes even more complex when cooperative relationships are required to tackle transboundary issues.

Monitoring the advancements towards the world's water objectives is essential in this respect. Monitoring is a powerful tool for sustaining political commitment and put ambitious objectives into practice, as acknowledged in many international fora (see box 1.1). The existence of political statements that include monitoring as a key recommendation shows that there is a strong demand to measure the performance of the activities undertaken. This is driven in part by the current focus on measuring the contribution to the achievement of the MDGs, and in part by the overarching need to measure the impacts of development interventions, in order to improve the formulation, design and implementation of actual initiatives.

Box 1.1 – The political drive towards monitoring the water sector

The *UN Conference on Water and the Environment* (Dublin, January 1992) first included the imperative necessity of reliable information on the water cycle for resolving water conflicts, improving the knowledge base and implement the appropriate policies to respond to world's water threats.[2] Thereafter, the role of monitoring has been stressed by a large number of key international texts. Chapter 18 of Agenda 21, the final resolution of the *United Nations Conference on Environment and Development – UNCED* (Rio de Janeiro, June 1992) advocates monitoring as a responsibility of all States, according to their capacity and available resources, giving a strong role in that to the bilateral and multilateral cooperation.[3] The issue has been emphasized in a series of other international conferences, including the *World Summit on Sustainable Development – WSSD* (Johannesburg, August-September 2002),[4] and the Third World Water Forum (Kyoto, March 2003). The *Camdessus panel of experts* has also raised the issue of improving the reliability of water information, as a precondition to developing appropriate financial strategies.[5]

However, besides the serious deficiency of national data-collection systems, which calls for an important effort in capacity building and exchange of tools and experience, a lot of data currently collected are either inadequate for global water monitoring, or improperly stored and treated for deriving timely policy indicators. There are many organizations and groups working in different ways for monitoring water-related international targets. They have all dramatically increased in recent

years the quality of the information released. Nonetheless, it is essential in this respect to move a step forward, to promote the integration of such initiatives into comprehensive monitoring frameworks, as also recognized in several occasions.[6] It is worth quoting at length what the *Camdessus Report* affirms about this point: "No single international organization has a clear and undisputed role for monitoring water. A number of international bodies […] fulfil valuable functions. But none has the key mandate of being a *global 'control tower'* systematically collecting, evaluating and publishing data on the performance of the various parties".[7]

One of the virtues of international coordination in monitoring is the possibility of acquiring comparable information, which is a precondition to appropriately planning and managing water interventions on the basis of the best international practices. As a result, a move towards more coordination in the monitoring effort is tremendously warranted. An overwhelming problem in this respect is the difficulty of monitoring the advancements of individual programmes, and verifying that sound principles are effectively put into practices by subsequent management and implementation decisions. As a consequence of the uncertainty caused by the lack of disaggregated information, vital decisions at the national and the international levels about where to concentrate scarce financial resources cannot be taken, or run the risk of being incorrectly biased.

Only recently an agreement has been emerging on the need to share a common methodology to be used in monitoring water-related interventions. The *Committee on Sustainable Development* (CSD) of the UN claims the role of *global 'control tower'*, having been charged by the Secretary General with the task of monitoring the progress towards achieving the MDGs.[8] *UN-Water* is the inter-agency mechanism devoted to the follow-up of the WSSD water-related decisions. It has also been requested to prepare arrangements for progressive participation of non-UN actors in the WSSD follow-up. It is hoped that the present methodological effort will be a further drive towards such coordination of monitoring initiatives.

1.2 Water governance and water policies

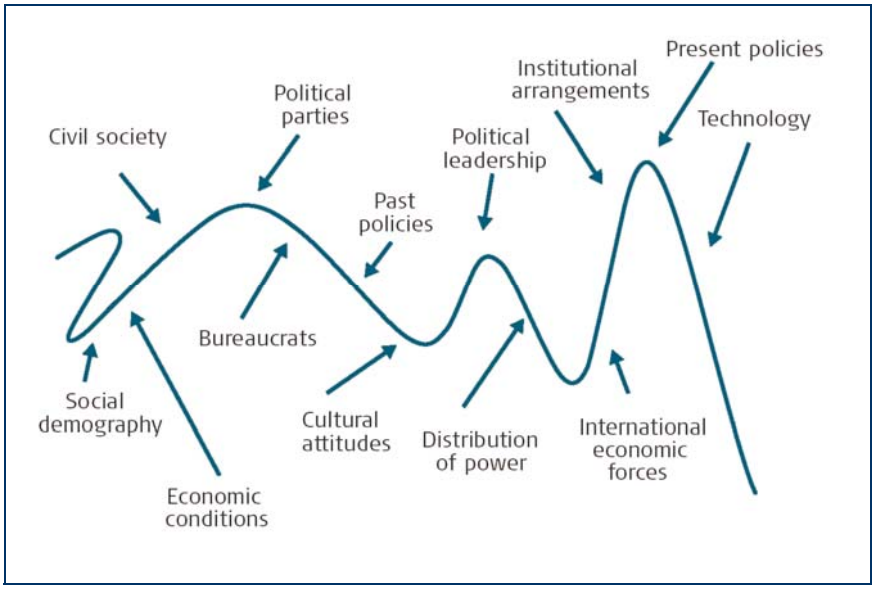
Governance is the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences. Water governance refers to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society. Good water governance is a complex process, influenced by previous standard, customs, politics, conditions, events within and around, and by developments in the global economy.[9]

Public policies are required to shape governance systems in a way that facilitates societies in reaching their goals. A policy is a proposed course of actions of public authorities, designed in a constrained environment, aimed at reaching a specified set of goals.[10] Policies may be comprehensive and provide a framework for broad economic and social development; water policies complement them by specifying important sector goals. The move towards decentralizing public policies implementation and localizing water management is an unambiguous improvement over current practices in the water resources and water supply and sanitation sector. However, this also poses many challenges. The final results of water policies derive by many different concrete undertakings, of several types and scales, that combine with each other in very complex and articulated ways.

How difficult is implementing water policies? On this point, it is worth quoting at length the last *World Water Development Report* of the United Nations: "Within the water sector, there is a widespread belief that we now have most of the needed principles in place in order to make a lasting improvement to the world's water resources situation, which will also make a major contribution to the overall work of alleviating poverty. What is lacking today are the concerted actions and the means for effective implementation of various water policies and development programmes. The implementation of countries' existing water policies would go a long way in meeting the MDGs and the water targets set in Johannesburg".[11]

Implementing a water policy means undertaking a broad range of different initiatives, such as investing in infrastructure, fixing prices, subsidies and taxes, enacting sector laws, defining property rights, enacting abstractions and discharges permits, building administrative capacity, regulating service companies, ect.. Normally, this necessitates reconciling numerous needs and undertaking a multitude of cooperative actions and coherent behaviours, with the view of harmonizing the whole implementation of water policies. The situation may be depicted as in figure 1.1. "Policy-making is not a straightforward linear process, but rather a 'messy' business, in which various actors with different interests, stakes and powers are trying to influence the policy outcome while different policy stages are interlinked and sometimes done in a simultaneous fashion".[12]

Figure 1.1 – Factors shaping policy outcomes



Source: UNESCO (2006)

How is it known whether a policy is able to reach its intended results? How is it known whether that policy is making any difference? How can successes be distinguished from failures? How can monitoring contribute to implement such complex public policies? The challenge for monitoring is finding credible ways of answering such questions. Along with improving standardization in data collection, as well as closing existing informational gaps, a fundamental question must be answered, on what should be looked at for properly informing policy-making. When one considers

the current state of water monitoring around the world, a missing element arises: the implementation of single water interventions undertaken by national and international actors is not tracked, and their direct and indirect results cannot be distinguished. A monitoring system for complex policies should take into account the need of disentangling the relative contribution of the various initiatives to the overall effort of reaching global goals. The *Camdessus Report* is again illustrative on this point, by stating that "information should be produced on progress towards the MDG water targets *and on the performance of the many parties implementing and funding this effort*".[13] At the moment, this kind of monitoring is far from being carried out regularly.

Measuring the performance and impact of complex water interventions is an essential, though difficult and costly task: this is the only way to allow reporting on the path followed by the existing initiatives, and to promote the integration of various activities into overall development frameworks. In this context, monitoring could strengthen the realization of the objectives set at the national and international levels. This in turn might stimulate support to the initiatives being implemented, and improve the formulation of subsequent policies and programs. A 'learning process' works in this direction, which informs decision-making about the lessons drawn from previous and ongoing activities. A complementary approach to the current monitoring practices is therefore required to effectively monitor the path of water interventions towards related targets.

The targeted beneficiaries of a monitoring methodology for complex policies are those national governments and international organizations interested in using their resources more effectively and making the appropriate policy choices. Developing countries, in particular, need better information on policy progress, since they can least afford to put in place initiatives that have weak implementation, no discernible results, or are unfocused. Though, such countries will face very tough obstacles in implementing a comprehensive monitoring system. They should be able to codify intermediate and final goals to set measurable targets; merge national and local priorities in a way that allows deriving information from all levels; link expenditure frameworks to the set of expected results; improve administrative and organizational structures and agencies' internal incentives; design and maintain good sta-

tistical systems. A phased reform would suffice at the beginning of the monitoring exercise, in order to demonstrate the virtues of tracking policy implementation.

It is evident that performing the aforementioned tasks requires a great deal of capacity effort and political will. Incentives to produce and use information for policy improvement and accountability might be absent and need to be strategically considered and weighted. Transparency, that is openness about policy intentions, formulation and implementation, is a key element of good governance, but cannot be taken for granted. As governments move towards a results-based focus by implementing a monitoring system, political and institutional pressures to sustain the status quo in expenditure patterns and practices may be great. This might be complicated by the fact that monitoring systems for MDGs are being developing in a parallel way respect to traditional national monitoring systems. There is no need to implement multiple or parallel systems, since this will lead to redundancy, waste of scarce resources, and lack of comparability. Rather, it should be strongly advocated one single integrated monitoring system for each country or organization, better if based on the same methodological criteria, so as to favour future integration of systems.

A word of warnings must thus be said: complex water policies have multiple dimensions and produce variegated side-effects that should be clearly highlighted before making sound comparisons. The risk is high that value judgments and subjectivity could bias the appreciation of particular interventions. Like any complex governance functions, monitoring requires strong political will, a clear mandate, and continued attention and support. There is no one single approach that is best for all situations. Effective monitoring involves a multi-year effort and the capacity to adapt to the inevitable evolution of implementation strategies. Notwithstanding the numerous complications that are exploited throughout this handbook, monitoring water policies is a doable job. The issue is so important that deserves further analysis, in order to work these problems out, and advance concrete proposals on how to overcome them.[14]

1.3 Objective and structure of the handbook

The objective of the handbook is to provide key methodological insights on how to implement a consistent monitoring system to be used for measuring the contribution of single water policies to global sector goals. The focus is thus not on the aggregated trends in the water sector, but instead on the intermediate steps undertaken, and their relative impact on overall performance across the world. In what follows, the unit of the analysis is the set of choices and instruments set for translating into practice the international, national and local goals. The discussion is centered on the water sector, though the methodology can be easily extended to other sectors. Hence, much of the theoretical work is valid for public policies in general, but the examples provided herein will mainly refer to the water sector.

Monitoring complex policies requires various simplifications compared to monitoring projects and programs. A large set of data that are essential to project implementation are conversely irrelevant to policy implementation, or too costly to be used extensively. However, monitoring policies also involves sensible complications, in that the relevant phenomena are more difficult to define, and the information must be collected across various stages and by different actors. Several departures form traditional monitoring models must be introduced to account for all the articulations of a complex policy, and to highlight the links between the stages of formulating and implementing a series of related actions.

First, specific tool must be devised to capture the phenomena that are usually not taken into account at a project level. Second, a supplementary effort must be made to reduce real-world complexities in order to analyze policy implementation by using formal tools. This requires grouping the multiple policy dimensions into tractable logical categories, with a view of linearizing the implementation process. Third, the degree of consistency at various stages of policy implementation is a key element of policy success, hence a critical factor in designing monitoring indicators. Accordingly, both vertical and horizontal consistency among implementation phases should be retained in designing monitoring indicators. Fourth, the architecture should be modular, in order to take into account the particularities of complex interventions, adapting the indicators used to the initiatives being analysed.

At the roots of the proposed methodology there is the need to ensure continuous review and dissemination of information about policy implementation. In this way, the conflicts between objectives and results that may arise can be highlighted and handled in a view to minimizing them. At the same time, it has been taken into account by the present methodology the need to comply with expectations about reporting at different levels of policy formulation and implementation, in so giving emphasis to those voices that have been increasingly calling for more accountability and transparency of national and international development interventions.

These guidelines provide two important advances: first, they contain a theoretical justification and a precise formulation of the policy approach to monitoring water-related activities, besides that of monitoring individual projects and sector performances; second, they offer a methodology for setting up and implementing a monitoring system for complex development policies. The model has been applied to a specific international policy, the EU Water Initiative, given the great monitoring challenges posed by its peculiarities. The approach followed is nonetheless modular, in that it is thought to be used by other international initiatives and, mostly, to be adapted to monitoring national policies in developing countries, while retaining the consistency and comparability of the information produced.

The handbook is structured as follows. The EUWI is presented in Chapter 2, which describes the functioning of the initiative. Chapter 3 lays down the theoretical and strategic foundations of monitoring. Chapter 4 analyzes existing monitoring initiatives. Chapter 5 introduces the proposed analytical framework and describes the proposed tools for developing a new approach to monitoring the water sector. Chapter 6 applies the proposed methodology to the EUWI, describing in detail the tools and some possible indicators, which are consistent and usable under various circumstances. Chapter 7 explores the potential sources of information for monitoring the EUWI, and gives some implementation guidelines. Conclusions close the handbook.

Part 1

Background and methodology

Chapter 2
The EUWI approach to water issues

2.1 The EUWI and the international targets

At the World Summit on Sustainable Development, held in Johannesburg in 2002, a new approach to global policy making has been proposed for strengthening the governance of the world's environmental issue. This involves the creation of intermediate structures called **Type II Partnerships**, that are non-negotiated, voluntary umbrellas between governments, international organisations, non-state actors from the private sector and civil society, aimed at reaching the MDGs and the targets fixed in the Johannesburg Plan of Implementation (JPoI).[15]

Such an approach could present a number of advantages over traditional policy-making. Type II Partnerships can:

- break with the purely inter-governmental system of sovereign relations;
- allow non-states actors to contribute to policy design and implementation;
- provide a tailored form of governance/self-or co-regulation
- target specifically the MDGs and JPoI goals;
- ensure more effectiveness through a "joint effort";
- catalyze new resources of non-state actors (finance, know-how);
- provide means for strengthening accountability of state and non-state actors.

As the largest water donor in the world, with €1.4 billion annually, the EU has embraced an effort to change the way water-related interventions are realized under the development cooperation. Given the influence and visibility derived from the EU economic weight, it was thought that substantive technical and scientific inputs, the critical financial mass and significant economies of scale can be generated by working together.

As a result, the EU has launched at Johannesburg a significant Type II Partnership, the **EU Water Initiative (EUWI)**, as its main contribution to the achievement of the international goals, within the context of an integrated approach to water resources management (IWRM).

The **five objectives of the EUWI** are:

- Reinforce political commitment to action
- Promote better water governance arrangements
- Improve coordination and cooperation
- Encourage regional and sub-regional cooperation using the IWRM approach
- Catalyse additional funding

Through the EUWI, the EU has taken significant steps to move towards better coordination of its water cooperation, and considerable increases in efficiency. The EUWI aims to add value to ongoing activities within the EC and EU Member States to improve collaboration with partners in other regions. It seeks to provide an enabling environment for complementary actions.

The 2005 review set the following operational guidelines through which to create such enabling environment:[16]

- Promoting a new approach to water cooperation
- Mobilising knowledge for innovative action
- Mobilising a critical mass of funding for water
- Promoting IWRM as the essential framework for addressing the water challenge

Thus, the most significant factors of success for the EUWI lay in its ability to pool EU resources, orient more partners and funding instruments explicitly into line with political commitments, mobilise a critical mass of funding, convince of the importance of an integrated approach to water management at the basin level. The EUWI is expected to continue until 2015, the target year for achievement of the MDGs.

2.2 The EUWI organizational structure

The EUWI organizational structure has been designed to facilitate the active participation of a broad group of stakeholders involved in water and development. At the same time, such structure respects the existing decision making processes established among the EU institutions. The EUWI adopt a modular or building block approach. It puts together a cluster of building blocks that assist in bringing different stakeholder activities within a common framework, aiming at adding value to ongoing activities within the EC and EU Member States and to improve collaboration with partners in other regions, also seeking to provide an enabling environment for complementary actions within the thematic areas.

In order to be successful the EUWI, which is based on a participative multi-stakeholder approach, should be developed in a transparent and inclusive manner based on strategic partnerships – including the Commission, Member States, Civil Society, the private sector and others- to guide the overall process and achieve the water related MDGs.

The organizational structure of the EUWI

The EUWI Steering Group is the body in charge with guiding the achievement of the strategic objectives as well as directing the annual working plan of the Initiative and, in order to respond to the participatory spirit described above, the SG includes many selected stakeholders active in the EUWI. Various strategic partnerships in specific regions involved together government, civil society, private sector and other stakeholders.

Several working groups have, moreover, been established, with either a regional/thematic focus or concentrating on cross-cutting issues (e.g. Research, Finance). According to the EU Institutional setting, the normal channel between the Commission and the Channel is respected for all kinds of for financial decisions requiring Council involvement.

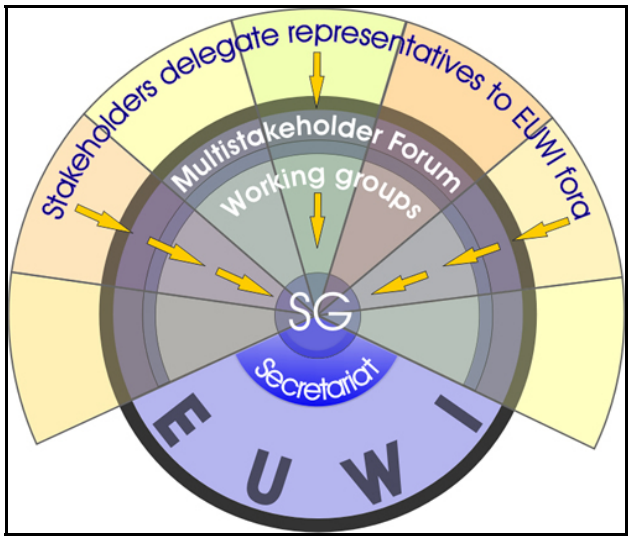
More in detail the EUWI is based upon four main bodies (see figure 2.1):

- **The Multi-Stakeholder Forum** (MSF), open to all, which represents the advisory body of the EUWI. It is composed by all EUWI partners representing active water development interests and committed to support the various objectives and actions of the EUWI[17];
- **The Steering Group** (SG), meets three times a year and is chaired by the European Commission (DGs DEV&ENV). Its main tasks are those of driving and coordinating the EUWI, through agreeing the strategic orientations of the Initiative. The implementation strategy is to be reviewed regularly and adjusted to reflect progress, problems and changing priorities. The SG outlines the priorities for the following years' annual work programme, ensuring the delivery on the strategic objectives and annual work programme of the EUWI and the coordination among the components, taking practical decisions about the operating of the Initiative and, in a restricted configuration limited to member States, also playing a role in ensuring appropriate level of coordination and harmonisation among member States, optimising cohesion across the 21+5 EU donors on water related ODA. It is composed by member States active in the development of the EUWI, by the European Commission (DEV, ENV, AIDCO, RELEX, RTD[18]), EIB[19], nominated members from MStF[20], Chairs and co-chairs of WGs, Switzerland and Norway on ad hoc rotating basis, invitees from donors (other than EU member States) and funding institutions (World bank, African Develoment Bank etc.) with an interest and active commitment in water development and management, on case by case depending on the agenda.
- **The Working Groups** (WGs), in charge of implementation at the Regional level. They are divided into cross cutting components, which respectively cover research, finance, monitoring & reporting and regional/thematic components. In order to fit with the modular approach of the EUWI, implementation is organised in a way trough which regional components (Africa, Latin America, EECCA[21] and Mediterranean[22]) are supported by thematic components, Water Supply and Sanitation (WSS), Integrated water resources management (IWRM). The interface between these units are conceived as a unique opportunity for exchange of knowledge and experience. Cross cutting working groups are in charge of addressing in a coordinating manner specific cross cutting issues essential to the development of the EUWI and of ensuring the production of agreed deliverables (guidelines, methodology tools etc.). Regional/thematic working groups are, on

the contrary, in charge of the implementation of the regional components of EUWI. Each working group has to attain to ah hoc terms of reference approved by the SG. The WGs responsible for the different EUWI components elaborate each year a work programmes, subsequently endorsed by the SG. Progress toward expected outcomes are expected to be assessed in a monitoring system.

- **The Secretariat**, whose members are the following DGs of the EU Commission: DGs DEV and ENV (joint leaders) RELEX, RTD and AIDCO. The Secretariat acts on behalf of the EUWI SG to promote the agreed strategic orientations and facilitate the implementation of the annual programme of the EUWI, carry out day-to-day management and administrative tasks, ensuring proper internal and external information flows through the management of the Information system, centralising progress reports received from the regional components, consolidating results and producing annual progress reports of the EUWI SG.

Figure 2.1 – Organisational Structure of the EUWI



Source: EUWI official Website

A strong link is also established with the **ACP-EU Water Facility** (ACP-EU WF). The ACP-EU WF is a € 500 million financial instrument, specifically dedicated to the water sector in developing countries, funded by the development budget of the European Union (9th European Development Fund). ACP-EU WF may be considered in a sense a creation of the whole EUWI process, and may be though of as the 'financial arm' of the EUWI, though it is functionally and operationally separated.

The main instruments of the EUWI

Essentially, **seven kinds of activities** are undertaken under the EUWI umbrella. These can be summarized as follows:

- facilitate **Country Dialogue Processes**, with the purpose of coordinating, streamlining and increasing funding to the water supply and sanitation sector, and at reaching the EUWI political outcomes.
- facilitate **IWRM National Processes**, with the purpose of devising a draft plan for integrated management of water on a basin scale and push the implementation of an IWRM strategy in the country.
- facilitate **Transboundary Basin Processes**, with the purpose of bringing about cooperation between riparian states, creating and strengthening transboundary institutions and agencies;
- facilitate **Cooperation Processes**, with the purpose of building capacity and strengthening institutions on water resources management;
- inform and advise on **National Financing Strategies**, with the purpose of finding innovative and sustainable sources of funds through exploiting conventional and new financial sources, including non-governmental ones;
- organize **international conferences**, official meetings, special events, participate to international events, with the purpose of spreading the knowledge about the EUWI aims and advocate international cooperation;
- manage an **information system**, with the purpose of strengthening the partnership, facilitating knowledge diffusion, economizing in communication costs, systematizing the interaction between EUWI partners.

Such activities are spread across the WGs, which are ultimately responsible for realizing them, at the country and basin level.

2.3 The Monitoring & Reporting Working Group

The Monitoring and Reporting Working Group (M&R WG) of the EUWI was established in September 2004, under the leadership of the European Commission and the Italian Ministry of Foreign Affairs. The first Terms of Reference of a Monitoring/Reporting system for the EU Water Initiative were included in the first official document established after the launching of the EUWI, in 2002 (EU Water Initiative: Water for life, Implementing the Programme of action WSSD,). Then two workshops (held in May and October 2003) set up some important "recommendations". The first one, held in Brussels, in May 2003, stated that the EUWI should not aim at establishing a new global monitoring regime, but at working with the Joint Monitoring Programme (JMP) to enhance its work in connection with the MDGs. Moreover it should support capacity building for monitoring at country level, establishing some guiding principles for monitoring of Water Supply and Sanitation within normal project management and implementation and working with professional networks to support training workshops aimed at capacity building. The second meeting, convened by Agence de l'Eau Seine-Normandie in Nanterre in October 2003, has emphasized some of these conclusions confirming that the water MDGs cannot possibly be implemented without improving at all levels the reliability of water information and data through reinforcement or establishment of proper monitoring and reporting mechanisms and instruments.

Main tracks to the developing of an EUWI monitoring and reporting system are set by the conclusions of the Multi-Stakeholder Forum held in March and June 2004, outlining an effective M/R system for the EUWI , giving mandate to a working group to undertake the work, with the support of Italy.

The first Meeting of the M&R WG took place in September 2004 and leaded to the updated Terms of reference of the M&R Group which clearly defines the ultimate objective of the programme and the timeline of Its implementation. The main tasks of the EUWI M&R WG involve conceiving and outlining a monitoring framework suitable to simplify, quantify, communicate, create order and related to each other, different kind of collected or potentially collectable information about European donors' policies in the water and sanitation sector. This will be aimed at pro-

viding policy- and decision-makers, and the public, with a tool to be used in tracking progress and trends, compare results in different areas or aspects, and raising awareness about water issues in the formulation and implementation of development assistance strategies, programmes and projects.

We can distinguish between an overall objective and a specific objective:

- the overall objective of the M&R WG is monitoring the EUWI's contribution towards implementing the water-related targets and ensuring that the EU contribution goes in the right direction;
- the specific objective is monitoring progress made in implementing the EUWI's five objectives.

In order to effectively monitor progress made towards these two sets of objectives, the EUWI model should rely on existing monitoring and reporting systems when they are suitable.

Chapter 3
Monitoring and reporting of public policies

3.1 Monitoring as a strategic device

Monitoring is a key tool in governing hierarchical relationships, such as policy implementation, in which part of the authority is delegated to entities that operate at different geographical and administrative levels from that of the policy makers. Designing as accurately as possible a set of clear tasks, and supervising the activities undertaken for implementing a policy, are effective, albeit costly, ways for ensuring that the proper actions are taken to maximize the expected benefits from the policy (see box 3.1). As a result, planning and monitoring are key elements in any project management approach, and are used in the practice by many donors and governments for their development interventions.

Several different approaches to monitoring have gradually overlapped with each other over time. Some of those focus on collecting primary data on economic sectors and related social and institutional linkages. Some use participatory techniques that have the beneficiaries as unit of reference for the analysis. Some concentrate on information for senior decision-making. Finally, the political impetus generated by the MDGs has recently driven monitoring towards focusing on global end-results.

The present handbook adopts a management approach, in which monitoring is defined as the continuous and systematic assessment both of the functioning of the designed set of activities in the context of their implementation schedules, and of the use of inputs, the production of outputs, and the realization of outcomes, in the context of design expectations.[23] Monitoring is a results-oriented tool that aims at guaranteeing coherence of policy implementation throughout its various stages, helping parties focusing on the areas of greatest concern to them. It also provides 'early warnings' that allow timely and appropriate intervention, if something is not functioning well. Monitoring, therefore, provides indications to managers and policy makers, regarding the factual operations and their induced effects.

Box 3.1 – Monitoring to overcome implementation problems

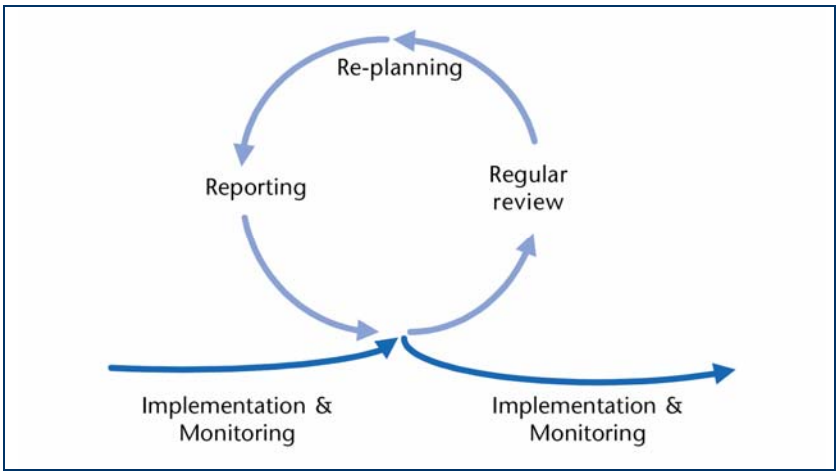
The theoretical justification of monitoring comes out form the need to delegate the implementation of a policy to specialized entities (agents), which in turn poses to a policy maker (principal) the special problem of ensuring that the actions undertaken by the agents put in effect into practice what are the underlying policy objectives. This might be not the case in many instances, since agents are separated entities with their own ambitions, constituencies, and objectives, which are not perfectly aligned to those of the principal. When an agent is delegated to act on behalf of a principal by virtue of her superior knowledge and experience on the ground, this agent can take unobservable actions that add to her own benefit, rather then to the benefit of the principal and, in the very end, of the society. In these cases, the agent is said to exploit her informational advantage, and she will keep doing so unless given appropriate incentives.

Offering to the agent a contract that specifies precisely all the tasks that she must perform to reach the principal's objectives, and then verifying that the agent's actions correspond to the tasks assigned, is the first-best solution to the principal's problem. However, many unforeseeable circumstances may arise that affect the agent's performance, and in the very end the policy results, in a way that makes it impossible to distinguish between factors that are under the control of the agent, and factors that are exogenous to her, and thus cannot be ascribed to her responsibility. This prevents devising such a complete contract.

Monitoring the agent's performance is a complementary way of circumventing the principal's problem. Monitoring provides reasonable and verifiable proxies that allow measuring the agent's performance. Monitoring also constrains discretionality in implementation. However, monitoring does not come without a cost, so the principal must devise a monitoring mechanism that trades off the benefits of measuring the agent's performance, against the costs of implementing it. Moreover, in order to be effective, monitoring must be credible and resistant to policy changes, which means that there must be a commitment to carry it always out. Otherwise, the agent will always prefer pursuing her own objectives, which give assured benefits, then to conform to the principal's objectives under the threat of an uncertain future monitoring.[24]

Monitoring allows that locally defined milestones are actually being followed, with disbursements linked to effective achievements. Such programmatic approach entails a continuous process of aligning the activities with the intended objectives, outputs and outcomes, with regular midcourse corrections. This both stimulates support to the initiatives being implemented, and improves the formulation of subsequent strategies, through a learning process informed by the lessons drawn from previous and ongoing activities (see figure 3.1).

Figure 3.1 – The learning process of implementation



Source: EC (2004)

In recent years, governments and donors have been increasingly called to put in place a uniform and consistent system to monitor their water policies. The desire to improve the performance of development policies has imposed to devote greater attention to the collection and treatment of information on ongoing advancement and obtained results. Moreover, the decision- and policy-making bodies have felt the need to expand the sources from which to draw information on the implementation of water policies. Overall figures are also required for national and international advocacy and for awareness purpose. A proper and routinely monitoring can satisfy all of these needs and even more (box 3.2). It plays a functional and dynamic role, providing decision-makers with a powerful tool for keeping implementation 'on-track'.

Among the examples of comprehensive monitoring systems, that of the European Union is an international best practice. The EU features a long-established monitoring methodology based on the management approach, which is coherently applied from the managers of field activities, through Regional authorities and Member States, to the European Commission services. The methodology assesses in a continuous way the results of the EU economic and social cohesion policy. The success of the European experience lays on the results achieved in terms of strengthening the capacity to manage development funds, and stimulating the adoption of common practices by many economic and social actors, such as public authorities, professionals, not-for-profit entities, and the private sector.

Box 3.2 – The benefits of policy monitoring

Supporting policy implementation. Information about ongoing activities can feed back into day-to-day managerial decisions and can help identifying actual or potential factors of successes or problems as early as possible, to facilitate timely adjustments of operations.

Upgrading strategic planning. Relevant analysis from undertaken activities can highlight the outcomes of previous interventions, and their relative strengths and weaknesses, as a basis for designing future interventions.

Improving policy design. The process of selecting indicators is a test for the soundness of policy objectives and can lead to a better understanding of causal-effect relationships.

Enhancing transparency and accountability. Providing evidence on policy implementation responds to the call of guaranteeing that public resources are used in the best possible way to reach policy objectives, and that successes on the ground are actually reached and emphasised.

Incorporating the views of the stakeholders. Involving all parties in selecting relevant indicators improves awareness about the perceived needs, increases the sense of ownership of the entire policy, strengthens the commitment to the chosen strategy, and encourages the sustainability of the resulting effects.

Leveraging additional resources. Sustained emphasis from national and international bodies depends on an ability to demonstrate improved results, identify priorities, determine budget utilization, actual resource flows from different sources, and value for money committed.

Source: adapted from World Bank (1996)

Monitoring must not be confused with data collection or evaluation, though there are common features and synergies that make it muddled the relationship between the three activities (see box 3.3). In particular:

- **monitoring** entails the creation and management of an information system dedicated to the collection, treatment and transmission of regular, timely and pragmatic information about the realized activities and the performance achieved in policy implementation;
- **data collection** usually precedes monitoring or is carried out simultaneously, providing the statistical basis for running an information system;
- **evaluation** is the assessment of the induced impacts that requires comparative techniques and a long time span to be performed.

Hence, monitoring is somewhat in between, since it is based on the data actually collected, and provides most information to ongoing and (less often) to subsequent evaluations. But it goes beyond, requiring the design, elaboration and transmission, in a punctual and readable format, of a set of indicators that are designed to assist management activities and decisions. Monitoring is descriptive in its intent. This motivates the focus of this handbook on monitoring and reporting (M&R), instead of monitoring and evaluation (M&E).

In particular, monitoring involves the following tasks:

- **studying the relevant documentation**, determining the relative importance attached to each objective and their relationships with overall goals, identifying the intended beneficiaries or target groups, reviewing the assumptions, analysing processes, activities, planned inputs, scheduled outputs and expected outcomes;
- **discussing findings and proposals**, with relevant stakeholders at all the pertinent levels, bringing their attention to critical areas, potential bottlenecks and constraints;
- **determining the information needed**, targeting those needs that are relevant and meaningful, and selecting as much as possible objective measurement tools;
- **reviewing existing information**, analyzing carefully monitoring systems and statistical databases already build, and the data supporting policy formulation
- **collecting data**, designing technical tools and arranging information flows, by organizing the submission, storage, elaboration and publication phases;
- **analyzing the information**, in order to find out whether everything is advancing as anticipated in accordance with schedules and budget, identifying and documenting the causes for delays or shortfalls, and recommending corrective actions to remedy or forestall a similar problem in the future;
- **reporting and communicating findings**, providing timely information to all relevant stakeholders, to be used as instruments to check the relationship between original policy objectives and actual implementation, and receiving comments and feedback to expand the set of possible corrective measures.

Box 3.3 – Monitoring "is not …"

… data collection, since the latter means recording physical, economic, social, and environmental phenomena through the use of specific techniques (examinations, investigations, questionnaires, etc.) in order to produce basic statistics. Monitoring most times includes data collection, but also requires the supplementary tasks of analysing and elaborating the statistics, to give decision-makers useful information concerning the functioning of the activities. For example, data collection produces regular information about the number of people with access to safe drinking water sources in a given area, while monitoring estimates the efficiency of providing targeted beneficiaries with a defined type of access.

… evaluation, since the latter involves the periodic assessment of the relevance, performance, efficiency, and impacts of a policy in comparison to counterfactual situations, in order to isolate the relative contribution. Evaluation then draws on what recorded by the monitoring process, supplementing it as necessary with data on impacts, and reviewing the combined information over an extended period, to judge the achievements and make a case for reappraisal of the strategic assumptions and choices. Evaluation has thus the objective of comparing policy performance over time and against comparable 'control' information, while monitoring records policy implementation, with a view of comparing it against what scheduled at the outset. Monitoring represents a box of tools that make possible to provide reliable and timely data to decision-makers. As a result, operational tasks are facilitated and the capacity to implement policies is improved.

An interim, or ongoing, evaluation may be carried out internally by the implementing agency, and therefore could be based more firmly on the monitoring data alone. But still, this is a different task, since it will assess the likely outcomes if the current experience continues, and will highlight any sensible adjustments that would be needed to correct a wrong implementation.

The distinction between monitoring and evaluation is so fundamental, yet neglected or controversial, that deserves special clarification. An example of monitoring and evaluating a journey by car may further illustrate this point. "Monitoring a journey by car entails regular checks while on the road, to verify that the trip is proceeding according to the planned itinerary and schedule, and to decide on refuelling stops before the car runs out of fuel. In so doing, the well-informed driver will be able to react quickly if conditions change. An evaluation of the same journey, whether undertaken about halfway or upon arrival, entails reassessing whether the chosen destination is still the right one and whether the itinerary followed was indeed the most appropriate. This will depend on the objectives of the journey, its implementation, as well as external and unexpected factors, such as traffic and road conditions".[25]

Hence, monitoring poses such questions as:
- are the activities going according to schedule?
- are the outputs reaching the intended beneficiaries?
- how could we improve implementation?

Evaluation is in turn more concerned with this sort of questions:
- have the policy reached its intended goals?
- was the policy a good idea to reach those goals?
- what lessons can be learned for future interventions?

Monitoring and reporting are, thus, core management responsibilities and indispensable tools of policy implementation. The potential of monitoring can be realized only when it is seen as an **integral part of the implementation process**. Conversely, data collection and evaluation are carried out by specialized bodies, the former at the decentralized level, while the latter usually at the central level, and serve different purposes. The three are supervision tasks that are essential for implementing public policies, but they are distinct and specific activities. The collaboration between evaluation facilities, monitoring managers, and collecting agencies can provide large aggregate benefits. But caution is needed, since evaluation demands and data-collection standards can divert monitoring from meeting its managerial needs, with the risk that no tasks will be adequately performed. A synergic approach is best in designing a M&R system: monitoring should be based on data availability and collection feasibility, and should aim at facilitating ongoing and subsequent evaluations.

Monitoring has to be necessarily **tailored to suit the specific requirements and conditions of individual policies**. Monitoring functions differ form one policy to another, depending on the types of goals to be pursued, and the types of activities to be undertaken. Although sound principles and concrete guidelines can be elaborated and recommended to individual policies, there is no universal solution for designing a monitoring system, as it depends on the policy location and characteristics, the social and political context in which the policy is implemented, and the commitment to measuring and reporting the true policy results (see box 3.4).

Box 3.4 – How much monitoring is needed?

Though most countries and agencies recognize the importance of monitoring, there are instances where this is regarded as not being directly and physically productive, and hence a waste of resources. Indeed, monitoring complex policies through a management approach is often regarded as so complicated that it is not worth doing it. This position can be countered by highlighting the essential roles of monitoring in successful implementation and wise selection of future policies, not only projects, programmes and plans. But still, critical views should be taken into account in designing a monitoring system for policies, at least in order to avoid wasting unnecessary resources. Setting up such a system may in fact lead to multiplication of perceived needs and overproduction of administrative tools by monitoring staff, a tendency that must be counteracted.

While the feasibility of data collection affects the cost of monitoring in an unambiguous way, the amount of resources devoted to such activity should, in principle, match the scope and ambitions of the policy itself. As an obvious rule of thumb, where very large amounts of capital are being spent, more attention should be put on how these resources are used. Innovative approaches also require proper monitoring to display their successes and allow spreading the new knowledge acquired. Furthermore, monitoring is more crucial in multidimensional policies, involving several implementing agencies, and when large share of outputs are intangible, the benefits vary widely, and the range of beneficiaries is broad and dispersed. All these circumstances cause monitoring to be more costly, at the same time as it is more needed.

However monitoring, as in general supervising policy implementation, is also a political tool, which might go to the benefit of some parties and the detriment of others. In order to have a sense of how much strength that can be put on monitoring, a simple example is illustrative. Suppose that a government ministry in a country which is short of national public funds, is responsible for the decision to go ahead with a comprehensive change in basin management policy. She will use a costly loan that she had to fight hard to secure form international lenders,. She must also decide whether or not to go ahead with phase two of the policy, or another courageous policy, in five or ten years' time. Should the ministry commit, say 3% of the total cost, to supervise policy implementation and report on its success and failure? The answer is subjective, but anyone can think at some reasons why a ministry in this position might oppose implementing a pervasive monitoring system.[26]

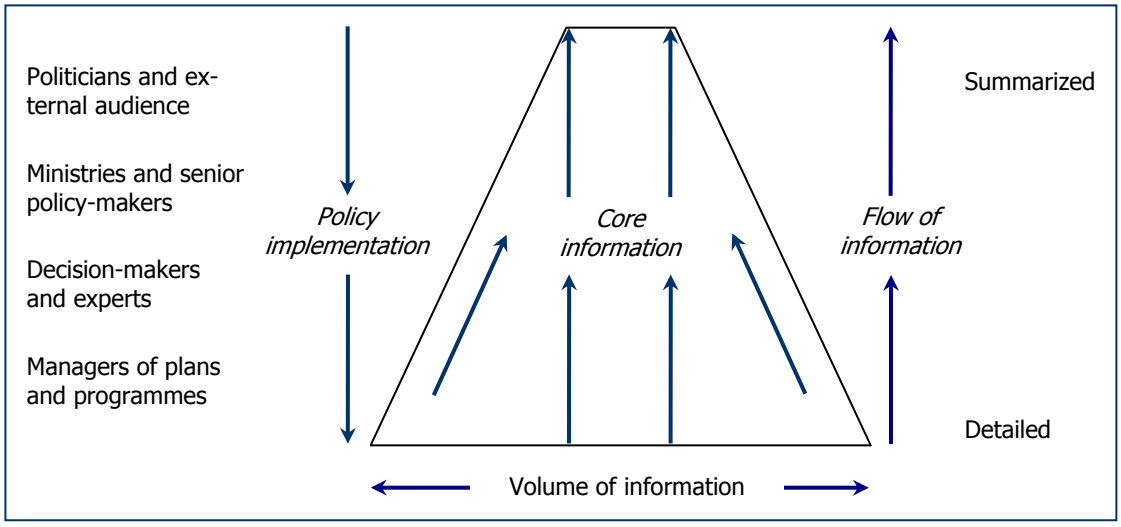
3.2 The multiple uses of policy information

Determining the informational needs and collecting and analyzing the data are the main steps of policy monitoring. In this respect, it is essential to distinguish between the many possible uses of information, keeping in mind the following questions:

- who are the targeted users of information?
- what purpose should the information be collected for?
- what kinds of indicators is best informative for the specific purpose?
- how much level of detail is needed to comply with needs?
- how often should the information be collected?

As long as the purposes and the users of monitoring information move towards actual implementation, both the level of detail and the frequency of collection should increase. A core set of information should, nonetheless, be translated directly form local to global figures (see figure 3.2). Decision-makers would probably be interested in the state of advancement of the various activities, and would prefer to know about that very frequently, if not on a continuous way. Policy formulation and public communication require, instead, synthetic figures that can be easily understood by a non-technical audience, at specific time intervals, say one or five years (see table 3.1).

Figure 3.2 – Stakeholder of policy information and monitoring needs



Source: adapted from EC (2004)

Table 3.1 – Information needs of policy monitoring

Purposes	Description
External visibility and advocacy	Communicate the value of current policy and the progress in meeting goals, spread knowledge, lobby for allocation of resources
Formulation and planning	Provide descriptions of problems and potentials, and establish clear links between proposed interventions and desired results
Implementation and evaluation	Provide a basis for systematic allocation of available resource and verify the internal consistency between overall objectives and proposed actions
Management of resources	Keep track of operational issues with a focus on human, financial and time component as a means for internal accountability

The purpose of collecting information thus changes according to the interests of those who finally use it; monitoring should try to reconcile all those different views (table 3.2). A comprehensive monitoring system should be designed in accordance with such multiple uses, in order to accommodate a wide range of needs. For instance, at the level of the activities undertaken most issues are quantitative in their very nature, relating to inputs, outputs, processes and schedules; programs and strategies are more concerned with efficiency, effectiveness, and participation, generally of a qualitative and synthetic nature. Politics and advocacy play a role at the very high level of policy formulation, so they look for few figures on sector impacts to take overall choices and make broad allocations. The main interests that can drive the design of monitoring information will therefore need different measures of policy performance (box 3.5). Information must be provided at the most appropriate level of sector, geographic and functional disaggregation.

Table 3.2 – Main categories of users and related policy information

Users	Interests
Politicians and external audience	Impacts and participation
Ministries, policy-makers, NGOs, CSOs	Consistency and sustainability
Senior decision-makers and experts	Efficiency and effectiveness
Managers of plans and programmes	Relevance and performance

Box 3.5 – Performance measures of policy implementation

Consistency: logical coherence between subsequent implementation stages and accordance of objectives with facts and needs.

Effectiveness: contribution made by the results of one implementation stage to the achievement of objectives and goals.

Efficiency: reasonableness of costs incurred to convert actions into results, and quality of the results achieved.

Impact: consequence of policy implementation on overall policy goals and relative contribution to their attainment.

Participation: involvement of stakeholders and partners and use of tailored methods to stimulate awareness, highlight needs and incorporate opinions.

Performance: physical, financial and process measurement of implementation and progress in achieving measurable milestones and providing intended benefits.

Relevance: appropriateness of current implementation to problems, needs, priorities and targets.

Sustainability: likelihood of a continuation in the stream of benefits produced by the policy after the period of financial support has ended.

Monitoring requires the simultaneous use of **three types of information**:[27]

- **variables**, observed data derived by using basic statistics or monitoring;
- **indicators**, representations of a system or process by means of a single data or an output value from a combination of a set of data;
- **indexes**, mathematical aggregations of variables or indicators, often across different measurement units, so that the result is dimensionless.

In order to design a comprehensive monitoring system, a combination of the three types of information should form the toolkit of M&R staff. Often, though, variables and indicators are more used then indexes, since require little statistical elaboration. Information must be collected on a continuous basis, from the beginning of the planned period, in order to construct **baseline values**, to the end of the implementation period, in order to verify the attainment of **target values**, in a way to describe dominant changes and processes that occur over time.

In principle, the selected information should satisfy as many information needs as possible. In practice, a number of trade-offs exists between accuracy, reliability, comprehensiveness and cost. Simplification, quantification, communication and systematization should be the underlying principles of explicit choices, made with the active participation of key stakeholders. The needs should be kept to the essentials, and existing information must be investigated and assessed. Information should be progressively reduced to its basic elements, maintaining the crucial meaning for the questions under consideration.

Much of the relevant information will be collected *ad hoc*, by different managers at specified points of time. Other pieces of information can be retrieved from existing sources whenever available. The **sources of data** are:

- **strategy papers**: documents formulating the sector implementation strategy;
- **plans, programs and projects documents**: usually contain a deep analysis of current trends and offer a valid base for depicting a baseline scenario;
- **administrative records**: work plans, budgets, inception, progress and completion reports, discussion notes, minutes, TORs of contracts;
- **descriptive statistics**: existing or collected measures of in-field situation, by means of short visits, regular review meetings, beneficiaries interviews, sample surveys, rapid assessments, in-depth studies;
- **specific assessments**: in depth studies on existing situations and reference conditions, with a view to provide information on the system's functioning and its response to management practices.

One or more sources for any kind of information must be highlighted if existing, or has to be recommended if targeted actions could be feasibly undertaken. Extensive discussions with the users of monitoring should be organized as soon as different options arise. The process should be iterative and requires learning-by-doing and participation. Hence, to the best possible extent, the design of the monitoring system and the selection of relevant information should involve a wide range of stakeholders, including governments, donors and civil society. Once the monitoring system is launched, active participation of all stakeholders is essential.

Administrative and management records are fundamental sources of information and should be an integral part of policy implementation. They tend to be institutionalized, routine activities and therefore do not usually require additional expenses. However, there must be a strong commitment to retaining consistency among reports format across the various stages of implementation. Policies that are supporting the development of institutional capacity may also be specifically aiming at improving the quality of records kept.

Providing information to different actors and for multiple stages during policy implementation entails innumerable practical difficulties. Besides the complications that may arise in collecting accurate and relevant data, even defining what is 'effective' policy implementation is a tough challenge. Not to mention trying to assess the performance of decision-makers in relation to successes or failures. All these aspects call for paying particular attention to selecting the appropriate variables so as to provide critical information and construct meaningful indicators and indices. To this aim, **four methodological needs** deserve further qualification.

The first need is **guaranteeing consistency** between chosen variables and indicators. This in principle requires satisfying three conditions:

- **informative meaning** at each and every level;
- **aggregability** across stage of policy implementation;
- **homogeneity** of results so as to allow benchmarking.

In practice, it is not always possible to satisfy all those needs at the same time, and so specific indicators can complement the use of aggregated indicators to depict the situation at each implementation level, provided that the former can be adequately standardized. As a result, it is necessary to look at the broadest set of measures that can be employed to select those which are both meaningful for each level, and useful for further aggregations.

The second need is **establishing selection criteria** for those variables and indicators that will be actually used and useful (box 3.6). Because of the difficulties of satisfying all those criteria at the same time, and giving the complications of collecting data and the typical scarcity of resources, the selection should keep the relevant variable and indicators to the minimum required to meet the information needs.

Box 3.6 – Criteria for selecting monitoring variables and indicators

Relevance: pertinence with priorities and objectives at each implementation stage.

Usefulness: ability to provide a reasonable picture of what supposed to measure.

Sensitiveness: ability to track the changes in the situation being observed.

Comparability: coherence in the assessment of the same phenomena.

Timeliness: ability to provide timely information with the appropriate scope.

Feasibility: ability to use available or collectable data.

Cost-effectiveness: affordability in terms of time and money respect to usefulness.

Reliability: ability to give unambiguous values and avoid discretionary interpretation.

The third need is **organizing the information** according to relevant typologies. Variables and indicators can be distinguished according to the nature of primary data, the role they play in implementation, and the phenomena being measured (box 3.7). It is sometimes difficult to distinguish between the different typologies of information and to cast them into exact classifications, especially when the role played in policy implementation is concerned. Te role of input, output and outcome variables may overlap many times when devising a monitoring system. A practical solution is to think at information as a continuum, mirroring the logical sequence of the events during the various implementation stages. The input for a particular stage may have been the output, or even outcome of a preceding stage, so the same variable can work at different places according to the aim of the analysis.

Box 3.7 – Typologies of monitoring information

According to the nature of primary data.
- **Quantitative**: numbers that can be ascribed to specific phenomena and can be subject to statistical analysis.
- **Qualitative**: descriptions of stakeholders' views, opinions and observations, presented in either narrative or ordered form.

According to the role played in implementation.
- **Inputs**: human, financial, and administrative resources.
- **Outputs**: immediate consequences of actions taken and resources used.
- **Outcomes**: results obtained in terms of benefits and achievements provided.
- **Impacts**: long-term effects of outcomes on overall policy goals.
- **Context**: status of exogenous factors identified as critical or risky.

According to the phenomena being measured.
- **Physical**: concrete expected and completed realizations of actions taken.
- **Financial**: amounts of money committed and disbursed for realizing activities.
- **Process**: procedures, phases and schedules about the delivery of outputs.

The fourth need is **choosing the type of analysis** that best match the need to inform on specific aspects of policy implementation progress (see box 3.8). Besides, the required information should be arranged in a readable format and a common template.

Box 3.8 – Types of monitoring analyses[28]

Advancement. Ratio between what actually happens and what originally planned. It is the base of monitoring.

Coverage. Ratio between targeted areas of intervention and broader conditions. Used to measure the width and depth of policy implementation.

Trend. Sequence of quantitative variables recorded over different time periods, eventually complemented by other statistics.

Descriptive. Elaborations of quantitative variables using statistical tools. Mostly used are: frequencies, intensities, modalities, averages, variances, variation rates.

Comparison. Simultaneous representation of variables in different locations or points in time, or with matched control variables or counterfactuals (mostly applied in evaluations). Frequently used comparisons are: "before vs. after", "with vs. without", "compliance vs. non-compliance".

3.3 Critical issues and principles of good practice

The first critical issue is understanding the **different types of outputs** that the policy is expected to provide. Two main categories of outputs can be expected:

- **tangible outputs** are those related, for example, to building and maintaining infrastructure, operating plants and facilities, etc.;
- **intangible outputs** are those related, for example, to streamlining regulations, increasing capacity, stimulating participation, raising awareness, etc..

Management systems of policies that deliver tangible outputs are generally well understood by the professionals involved in implementation; the related physical tasks and targets are familiar to those possessing these skills, so monitoring is almost automatically built into policy implementation. Policies that mostly deliver intangible outputs are more difficult to monitor, since they involve less defined goals and less precisely specified means of implementation. The achievement of intangible goals requires changes in the behavioural patterns of the beneficiaries concerned. Monitoring the implementation of such policies may prove extremely difficult, since it entails making predictions of whether, in what way, and at what rate such changes will occur. As a policy moves from tangible to intangible outputs, the monitoring task becomes more important, at the same time as it becomes more challenging. The routine of collecting data must be supplemented by a considerable requirement for data relating to the linkages between the policy's expected deliveries and the targeted beneficiaries.

The second critical issue is the **organizational structure** of a M&R system. There is no perfect design and every policy may have its own operational and structural requirements. A coherent monitoring structure will inevitably consist of multiple and interlocked 'check points', each involving a great degree of coordination and institutional development. At the local level, program managers are required to provide the relevant information. Decision-makers should aggregate and elaborate local information in order to depict the advancements of the strategy. Senior policy-makers should carry out global assessments on progress towards policy objectives.

A formal arrangement is needed to collect information in a systematic way. Monitoring must be based of written reports, though it is a good rule to keep them short, simple and straightforward. Moreover, many regular monitoring functions can be decentralized and assigned to specific staff at different implementation stages, provided that triangulation is used to double-check the reliability of different sources. Such monitoring can be complemented with specific activities undertaken by outsiders, which provide a neutral viewpoint to the benefit of objectivity. A 'Central M&R Unit' can be located at the most appropriate level to coordinate the various tasks, to deal effectively with both decision-makers, and senior policy-makers, and balance the informational needs of all stakeholders. The set up of a Central M&R Unit should start early on at the beginning of policy implementation.

The third critical issue is the need for **structured planning**, in the form of pre-existing work plans at all stages of policy implementation, against which performance can be assessed.[29] A plan is required to provide a reference for choosing variables and indicators, and a benchmark for measuring the progress attained. All the major actions that is expected to take should be clearly in the mind of decision-makers and managers from the very outset. This aspect is far more needed as long as implementation stages move from strategic formulation to programmes and projects. The basic principle is being as specific as possible, in order to facilitate quantification of targets. However, this need has to be traded off against the known limitation of the plan as an instrument of policy implementation, and the desire to inject flexibility, and reduce administrative burden and, therefore, costs.

There might be also an opposite tendency, that of understating deliberately the formulation and planning stage, and then asking monitoring staff to provide afterwards the justification for the actions undertaken. This behaviour should be strongly opposed, since it implies the overwhelming burden of retrieving information that was not initially envisaged to collect. This is far more costly than envisaging from the outset what information is required, despite the fact that it may be an attractive solution to urged policy-makers.

The fourth critical issue is the unavoidable **human dimension** of monitoring, which requires involving from the outset the relevant stakeholders.[30] Monitoring is often seen with suspect by managers and decision-makers. The fundamental role of those who implement a policy is to put it into practice, by selecting the means that, according to their best opinions, have the highest possibility of contributing to policy goals. In this context, monitoring can be perceived as the surveillance arm of higher authorities, aimed at measuring the performance of implementers, rather then implementation. Monitoring can be regarded as a way to question strategic choices, and to explore other options. Sometimes there is a clear, albeit unstated, opposition. It might even happen that the implementing agencies do carry out their own monitoring, but in a way that makes it impossible to obtain comparable information about the overall policy implementation.

In this respect, it has to be said that the role of monitoring is not to put policy implementation continuously under question. Nor to force the adoption of particular views, such as those preferred by key stakeholder or the monitoring staff. Monitoring simply provides decision-makers with the information that maximizes their chance of succeeding with the chosen strategy. The best way of overcoming the human dimension of monitoring is establishing a close link between the M&R staff and the decision-makers in charge of policy implementation. In order to maximize acceptance, it is essential that decision-makers understand and appreciate the role of M&R. This is achieved by including them early on in the design and operation of M&R, and by reporting the monitoring results directly to the decision-makers. It is also essential that the data collected are actually relevant to decision-makers and in the right form to be understood by them, who are the primary beneficiaries of monitoring.

In conclusion, effective performance monitoring and reporting during policy implementation should based on a few **key principle of good practice** (see box 3.9).

Box 3.9 – Key principles of good monitoring practice[31]

Clear statement of policy objectives and components, or re-statement in a way that measurable indicators can be defined.

Precise formulation of information needs at the various stages of policy implementation and their relationship with policy results.

A small set of structured indicators covering what ultimately generated by the policy implementation.

Provisions for collecting data and managing records, so that the information is internally consistent, compatible with existing statistics, and available at reasonable cost.

Institutional arrangements for gathering, analysing and reporting indicators, for building capacity, and sustaining monitoring services.

A strategy for reporting, in a way that allows findings to be effectively fed back into decision making.

Chapter 4
Analysis of existing monitoring initiatives

4.1 Overview of water monitoring

Since 1970s, much effort has been devoted at the international level to develop a methodology for monitoring the evolution of global access to water sources and basic sanitation facilities. However, there is no general agreement on the instruments and methodologies that should be used on a global, national and local levels, as well as no unified and harmonised system has been established since now. On the contrary, parallel initiatives are currently being undertaken by many agents.

These initiatives have been recently analysed on the basis of their aptitude to address the four following aspects:[32]

1. *tracking*: assessing progress towards achieving international targets;
2. *advocacy*: stimulating public awareness and political support in order to both increasing global funding and catalysing funds to specific projects;
3. *value added for planning*: enabling national and international development agencies to fine-tune current actions, highlight best practices, formulate future strategies, and target resource allocation;
4. *capacity building*: improving national and international statistics.

A complete listing of current international initiatives is provided in annex 1. For each initiative, a fiche gathers the relevant information that may help monitoring the EUWI. We will not review in the following all those initiatives. Rather, an overview of the most important monitoring activities and the debate surrounding water monitoring, without any ambitions of being exhaustive, is contained in the next section. In what follows, the current monitoring initiatives that can be linked to the EUWI, and can provide it with the relevant data to implement the monitoring model, are analyzed more closely.

4.2 Existing initiatives in the water sector

There is an inevitable tension between, on the one hand the need to provide timely and user-friendly information for global MDGs monitoring and international advocacy, and on the other hand the relevance, accurateness and reliability of what measured, required by the other two aforementioned aspects, as well as by advocacy at the project level. This tension is reflected in the differences between the following global monitoring initiatives.

A. The WHO-UNICEF Joint Monitoring Programme (JMP) is a long-established monitoring initiative that reports directly to the UN Statistics Division, which coordinates the consolidation and analysis of world's data on water and sanitation MDGs. To such purpose, three indicators must be measured, that is the percentage of population with access to: improved drinking water sources, improved sanitation, and secure land tenure. The JMP has the objective of collecting such information for global monitoring. It provides a synthetic measure for tracking aggregate progress. However, the JMP does not collect primary data directly, but rather relies on existing sources, such as assessment questionnaires and national and international household surveys. Most of the information generated is given by the users of services. Then the JMP estimates actual trends on the basis of linear interpolation through the selected most reliable sources/years.

B. The GWP has developed a methodology for monitoring the adoption of IWRM principles in national water plans. It is aimed at assessing the readiness of countries to meet the 2005 WSSD Plan of Implementation target on IWRM Plan preparation. It provides an indicative status report which can be used as a baseline against which progress can be assessed in the future. It also provides an indication of which countries and what aspects require further efforts and therefore where potential financial support from donors/ financiers could be focused.

Similar data are used by those national initiatives aimed at offering public information and encouraging grassroots mobilization.

C. They are meant to provide an update and countdown on country's progress, not necessarily to give specific policy/project recommendations or other analytical findings. UNDP coordinates this effort. National reports often take into account other indicators, reflecting national development priorities, such as regional, ethnic and gender inequality. But apart from population-based sources, as those used by the JMP, national reports can only draw from other donor-supported national planning documents, research institutions and non-governmental organizations.

The aforementioned approaches have a great potentials in stimulating action. But form a monitoring perspective, they suffer the following main weaknesses:

- the surveys are not conducted recurrently and the sampling procedures are not always consistent with each other, particularly in earlier analyses, in so complicating the setting of baseline scenarios against which to compare more recent results;

- sample size and cluster sampling techniques do not allow estimates at sub-national levels and, by their nature, these large-scale initiatives cannot be participatory at the local level;

- the scope of the information collected is very restricted to few aggregated data, whereas many other indicators are relevant for enabling the tracking of actual programmes/projects and for planning future national and international strategies.

It is, therefore, in the domain of global monitoring and advocacy that the previous initiatives are more useful, especially if coupled with the following complementary approaches launched by international organizations and research institutions.

D. Two initiatives for streamlined sampling procedures for population surveys are being launched by the London School of Hygiene and Tropical Medicine, and the latter in cooperation with a coalition of 80 NOGs around the world.

E. Another WHO-UNICEF project, the Global Water Supply and Sanitation Assessment 2000, gives figures on a wider set of indicators, including on the quality of service, on the basis of providers' estimates.

F. The quantified participatory monitoring approach developed by IRC is a flexible system to capture and manage qualitative and quantitative information. It develops monitoring tools to assess the performance of interventions at the local level. Tools include Welfare Assessment, Social Maps, Transect Walk, Pocket Voting, Matrix Scoring, Focus group discussion, Card sorting, Hundred seeds, Scoring with agency staff on institutional indicators.

G. The Methodology for Participatory Approach developed by the Water and Sanitation Program, an international partnership leaded by the World Bank, expands the stakeholders involved in monitoring and uses standardised scoring methods to draw quantitative information from the consultations with communities involved; it is aimed at examining the reasons behind quantitative data and improving the validity of traditional survey data through triangulation of results.

H. The calculation of a Water Poverty Index, based on conventional data sources, whose scores range on a scale of 1 to 100, with the total being generated as weighted sum of five components: ground and surface water availability, adjusted for quality and reliability; access to water sources; a measure of how water is used, including sector shares; a variable that represents human and financial capacity to manage the system; an evaluation of ecological integrity related to water. The sub-components can be identified after consultation with local stakeholders, and applied at a variety of scales; the index allows for international comparative measurement.

I. Still another monitoring programme, developed by WaterAid in three African countries, is based on extensive physical surveys of water access points; by using spatial information on population distribution, a "water point density" is calculated (the number of water points per 1,000 inhabitants) for each small areas of land; this approach has the virtue to provide a baseline scenario to acknowledge and select critical interventions.

Much more work is planned to be done by other monitoring proposals, of which the following also seem appealing.

J. The Task Force on Water and Sanitation of the Millennium Project seeks to develop an assessment methodology that takes into account physical, financial and institutional constraints, laying out what needs to be done and how much it will cost, in so easing formulation of operational strategies.

K. The WSSCC examines the attainment of Vision 21 numerical targets for safe and adequate hygiene, sanitation and water, by monitoring the evolution of a core set of indicators, especially health impact measurements, including the estimation of public awareness of hygiene and the percentage of schools equipped with facilities. For the local level the approach is to limit the choice to indicators that allow an approximation of health impact by measuring the use of services and hygiene behaviours instead of assessing health outcomes directly.

L. The Australian government has undertaken a series of international benchmarking of water utilities, in order to overview companies' performances. In that context it has developed a series of data bases which can be consulted by any regulator in the world. Australia' s Industry Commission has a site on the Internet and all of its data can help any regulator a first comparative look.

M. Also the Water and Sanitation International Benchmarking Network (IBNET), supported by the World Bank, is aimed at promoting a system for benchmarking utilities, facilitating the compilation and sharing of performance data. It is envisaged to expand and consolidate a sustainable network of institutions and a website within which to make available the main data and a Start-Up Kit for setting up a national benchmarking system.

N. The African Water Utility Partnership (WUP) Assessment developed a list of 15 indicators that measure the performance of water utilities related to institutional capacity and sustainability; lessons from 21 water utilities that participated in the assessment revealed difficulties in collecting data and maintaining adequate records.

All the aforementioned initiatives are tools useful to define national priorities and evaluate results, either in a specific sub-sector, or for specific purposes. However, they do not allow for tracking the implementation of the overall water policies actually undertaken to reaching national and international objectives.

Only few methodologies are aimed at monitoring the evolution and implementation of actual water and sanitation interventions, although limited to development assistance. Among the various, the following emerges as a best practice.

O. The European Commission Service for external aid (AIDCO) applies a monitoring system consistent with the project cycle logic. It is based on field visits aimed at reporting on progress by meeting and interviewing the stakeholders involved, with priority given to primary beneficiaries. Monitoring templates are standardized and final monitoring reports are short and speedily disseminated. To date, 16 projects in the water sector have been monitored in ACP countries, showing possible improvements in project design, speed of decision-making, vulnerability to financial disbursements, and overall policy or commitment. The reports are available on a database accessible only by EC officials. It is reasonable to assume that many other donor agencies carry out such monitoring practice, although not always systematically.

From the analysis conducted above, it is evident that there is no comprehensive methodology for monitoring overall water policies. Only is this way it would be possible to precisely track the evolution of what represents the very implementation of water policies. This would produce useful information for decision-making, in that the results could be employed for adjusting current interventions and planning future ones according to the lessons learned and the best practices of each sector of intervention.

Chapter 5
The framework of water policy monitoring

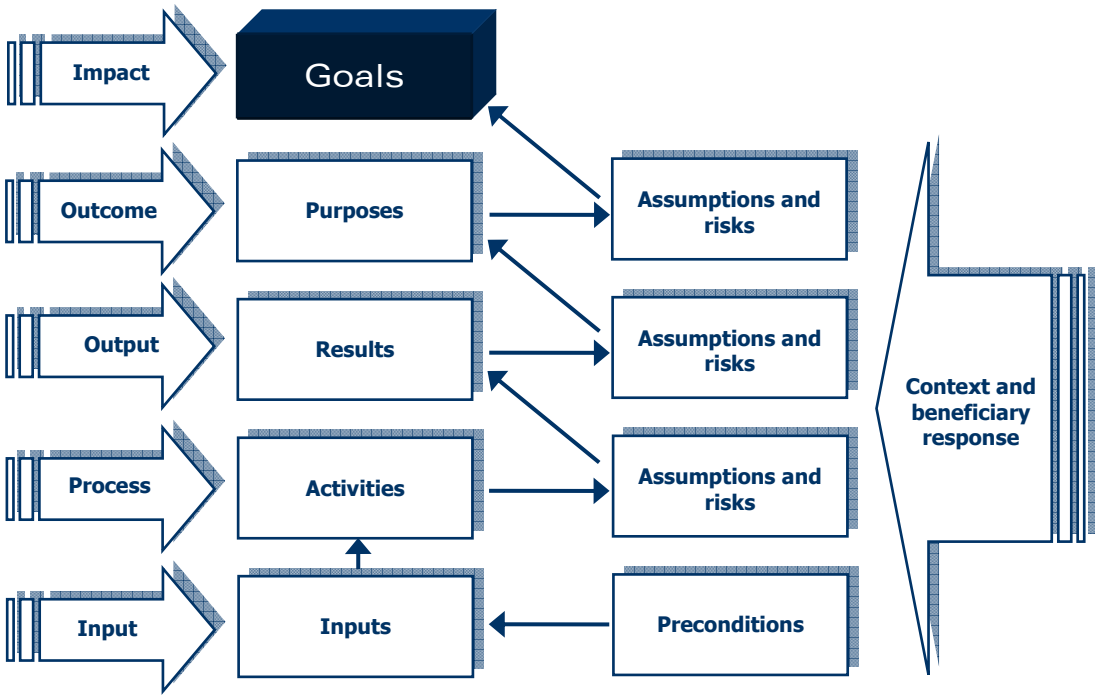
5.1 The theoretical dimensions of policy-making

In order to define a water policy in its articulations, it is necessary to highlight the links between the various levels of formulating and implementing a series of related actions. The need to reduce the real-world complexities in order to analyze them with formal tools requires grouping the multiple dimensions of policy implementation into logical categories. The Logical Framework (LogFrame) approach is chosen to linearize the various dimensions of policy implementation into a tractable model.

The LogFrame is a well-known management tool that serves purposes of planning and monitoring in the project cycle management. A LogFrame follows a structure where the objectives of an intervention are hierarchically structured (see figure 5.1). A log frame would commence with defining an overarching goal. Many different interventions may be required to attain the goal, each with a unique and clearly defined purpose. Achieving this purpose requires interventions to accomplish outputs, through a particular set of activities. The starting point is the definition of a real-world situation to be attained – the expected outcome. Actions are then designed around the interventions needed to attain the outcome. [33] The hierarchy of objectives (necessary conditions) plus the assumptions and risks (sufficient conditions) together give a clear idea of the logic of the intervention. Risks refer to exogenous factors that may underpin the achievement of expected outcome, while assumptions refer to the beneficiary response to what delivered to them. If the phase immediately before is accomplished, and if the assumptions and risks at each phase materialize as expected, then the overall goals will be attained.

The development of a monitoring system begins with investigating what is required to know at each level of implementation (see figure 5.1). Monitoring indicators are also structured in a hierarchical order, since not all information is relevant at every level of implementation and some phenomena may be out of control of previous phases.

Figure 5.1 – Hierarchy of objectives and monitoring indicators



Source: adapted from EC (2004)

The simple LogFrame depicted above may be further enriched to account for the complexities of today's development interventions. In the reality, we assist to the existence of various arrays of interventions, on a sector or geographic basis, that originate from an overall policy framework, and deploy into concrete undertakings. Henceforth, the following terminology will be adopted.[34]

- **Policy** is a proposed course of action to be undertaken by public authorities within a certain context to reach a specified set of goals.
- **Strategy** is what should be done to realize the policy goals in a specific sector on the basis of current and future possibilities, usually leading to a sector plan.
- **Programme** is a sector-specific axis of intervention, endowed with financial resources and a timeframe.
- **Project or action** is a sequence of interrelated concrete undertakings aimed at reaching a specific purpose, such as an investment, but also the creation of an agency, the enactment of a law, the definition of a regulation.

Implementation can be articulated along various policy implementation levels, or functional stages.[35] From a theoretic point of view, the following hierarchy of levels can be distinguished in a **national policy model**.[36]

1. **Agenda setting** (definition of overall goals)
   Expression of political support, definition of societal objectives
2. **Sector planning** (formulation of sector strategy)
   Specification of sector priorities and frameworks
3. **Sector programs** (identification of problems, constraints and opportunities)
   Provision of frameworks in which projects can be identified and prepared
4. **Realization of activities** (execution of projects and actions)
   Actual sequence of concrete undertakings

However, monitoring the implementation of complex policies requires a further step. A way of linking these interventions must be found. The logic of 'interlocking' or **nested objectives** is frequently used to see how the objectives of a policy, a strategy, and specific programme and projects should be linked. According to this concept, the overall objective of a policy is specified in a purpose and result, which in turn are the overall objective and purpose of a programme, and so forth (see table 5.1).

Table 5.1 – The logic of nested objectives

Policy	Strategy	Program	Project
Overall objective			
Purpose	Overall objective		
Results	Purpose	Overall objective	
	Results	Purpose	Overall objective
		Results	Purpose
			Results

Source: adapted from EC (2004)

Each phase of the policy should have specific objectives and produce results that can be measured, assessed and communicated in different ways. At the national level, policy phases are usually carried out by governments, sector ministries and local administrative bodies. Information needs should be satisfied by national and sector-specific units, which would provide data collected at different times and aggregated at different levels, whose significance is related to the corresponding policy level.

A complication arises in that the aforementioned levels of policy implementation are usually unlinked with each other. A dispersed planning process in individual departments or agencies hinders the ability to develop a comprehensive vision in most sectors. This problem may be further worsened by the capacity constraint faced by local governments, that hampers whatever progress can be made in this regard. Government institutions are often loosely interconnected, without the discipline of transparent resource management systems. Agencies may lack sufficient administrative and organizational structure, including internal incentives, to support a consistent planning process.[37]

In this regard, two aspects are critical to implementing successfully a performance monitoring system:

- **information must be derived in a consistent way** from all levels, at different time frames and for the need of various stakeholders;
- **monitoring should focus on results**, hence on improvements in sector performance, not just on completion of activities.

The conceptual framework depicted in this handbook will both analyse ex-ante consistency and allow performing effective ongoing monitoring. While monitoring the final impacts of a policy is useful, at the moment a 'missing middle' is present – i.e. the lack of a clearly specified chain of causation between implementation levels and their intended and achieved outcomes – which is reflected in the lack of consistent indicators. Hence, it is in itself a valuable monitoring purpose that of focusing on the process through which the policy stages are planned and implemented.

5.2 A model of global water policy-making

A fundamental reason points to the need of analysing water policies of donors and international organizations, alongside national water policies: development assistance usually plays a major role in framing national approaches in developing countries, the water sector being not an exemption. Hence, on the basis of the national policy model, we translate the same reasoning to the issues pertaining to international water policy-making. Addressing worldwide water concerns can be viewed as a complex set of tasks that require the concerted action of national and international political and administrative levels, partnership arrangements with civil society, and the private sector. Ideally, each actor can be viewed as responsible for carrying out particular phases of the implementation process. Consultations and coordination generate partnerships and create common frameworks for action. As long as the need for accuracy, tailoring and targeting of planning and executing activities becomes more stringent, the responsibility for detailing much broader frameworks is passed onto lower levels, such as regional, national and local players and networks.

The following **model of global water policy-making** can characterize how the international community has embarked a concerted action to tackle the far-reaching water challenges.

1. **Global agenda setting** (cross-issue/cross-country)

   Statements and commitments that define overall objectives of the international community and the strategic choices of society in several related sectors. This is the phase at which the international community meets and states that it will be taking concerted actions to tackle a set of related global concerns. The most important outcomes are documents such as: the Millennium Declaration, the Monterrey Declaration, Agenda 21, the Johannesburg PoA.

2. **Sector strategies** (cross-country)

   Sector policies of donors and international organizations, expressed in terms of targets and timeframes. This phase outlines how a donor, an international organization, or a group of them intend to put the global goals into practice through specific sector approaches. Such strategies are: the European Union Water Initiative (EUWI), the World Bank's Water Supply and Sanitation Strategy and the Water Resources Strategy, sector strategies of UN Agencies, Regional Development Banks, bilateral Donors.

3. Thematic, regional, country strategies (country-specific)

Strategies of donors and international organizations, broadly defined in terms of targets and timeframes, characterised for being country-specific and/or thematic. These are multi-sector development plans, country frameworks, regional strategies. Among the many there are: the objectives of the EC's Regional and Country Strategy Papers (RSPs and CSPs), WB's Comprehensive Development Frameworks (CDFs), the Poverty Reduction Strategy Papers (PRSPs), UN's Development Assistance Frameworks (UNDAFs), UN's Common Country Assessments (CCAs).

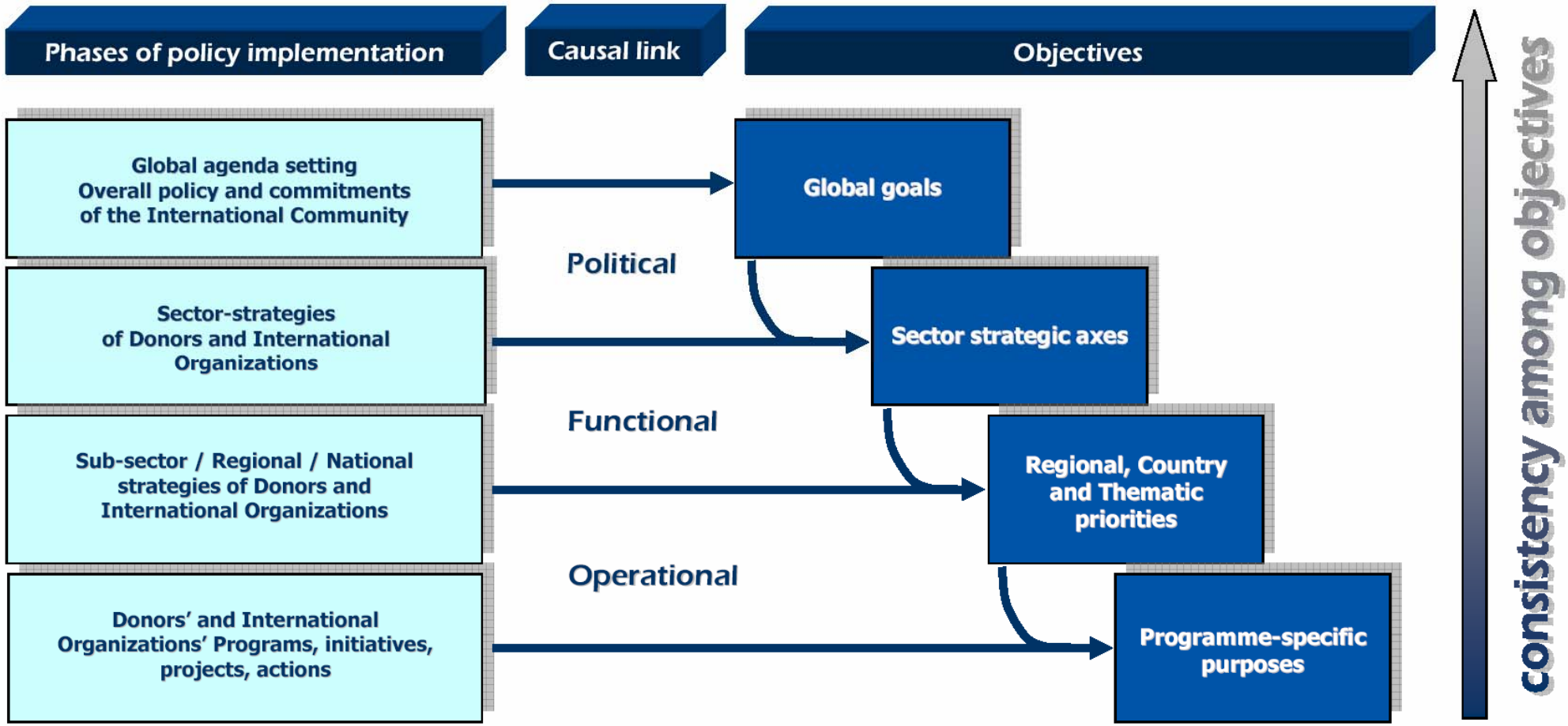
4. Development programs (issue- and country-specific)

Initiatives defined in terms of specific sub-sector objectives, targets, timeframes, resources, implementation arrangements, targeted individuals or countries. They are the instruments through which overall guide-lines are put effectively into practice. Such programmes may also include operational guidelines for the execution of projects and actions. Examples are: the EDF budget lines, the ACP-EU WF, donors' dedicated chapters of aid budget.

Each phase of the implementation process is connected to those at the immediately lower levels (figure 5.2). The global goals in a sense dominate in a political way the sector strategies. The country-specific level of policy implementation is linked to the sector strategies by a functional relationship, while the programs are linked to country strategies by an operational link. At the highest levels, the causal link between formulation and implementation of global goals is rather loose; as far as implementation moves down to a country and within it to single priorities, objectives of specific programs become more closely linked with the strategic sector axes.

First, policy monitoring should focus on the ex-ante consistency between policy objectives arranged in a logical hierarchy

Figure 5.2 – A schematic representation of global water policy-making



The desired outcomes established at each policy level should then be related to both global goals and specific targets. At each level of the policy, different outcomes are of primary concerns. These outcomes can be measured by several arrays of indicators, each array related to one single policy level, but consistent with each other. Figure 5.3 shows these relationships.

Second, policy monitoring should accurately tracks the evolution over time of significant indicators towards the desired outcomes and impacts

Broadly speaking, the information needs at specific policy implementation phases can be summarized as follows.

1. Global agenda setting

Global impact on poverty, inequality, mortality, access to basic services, and all other MDGs, on donors spending, etc.

2. Sector-strategies

Global, regional and national impacts of the sector targets and the sector implementation, changes in foreign financial flows to the developing world in the sector, etc.

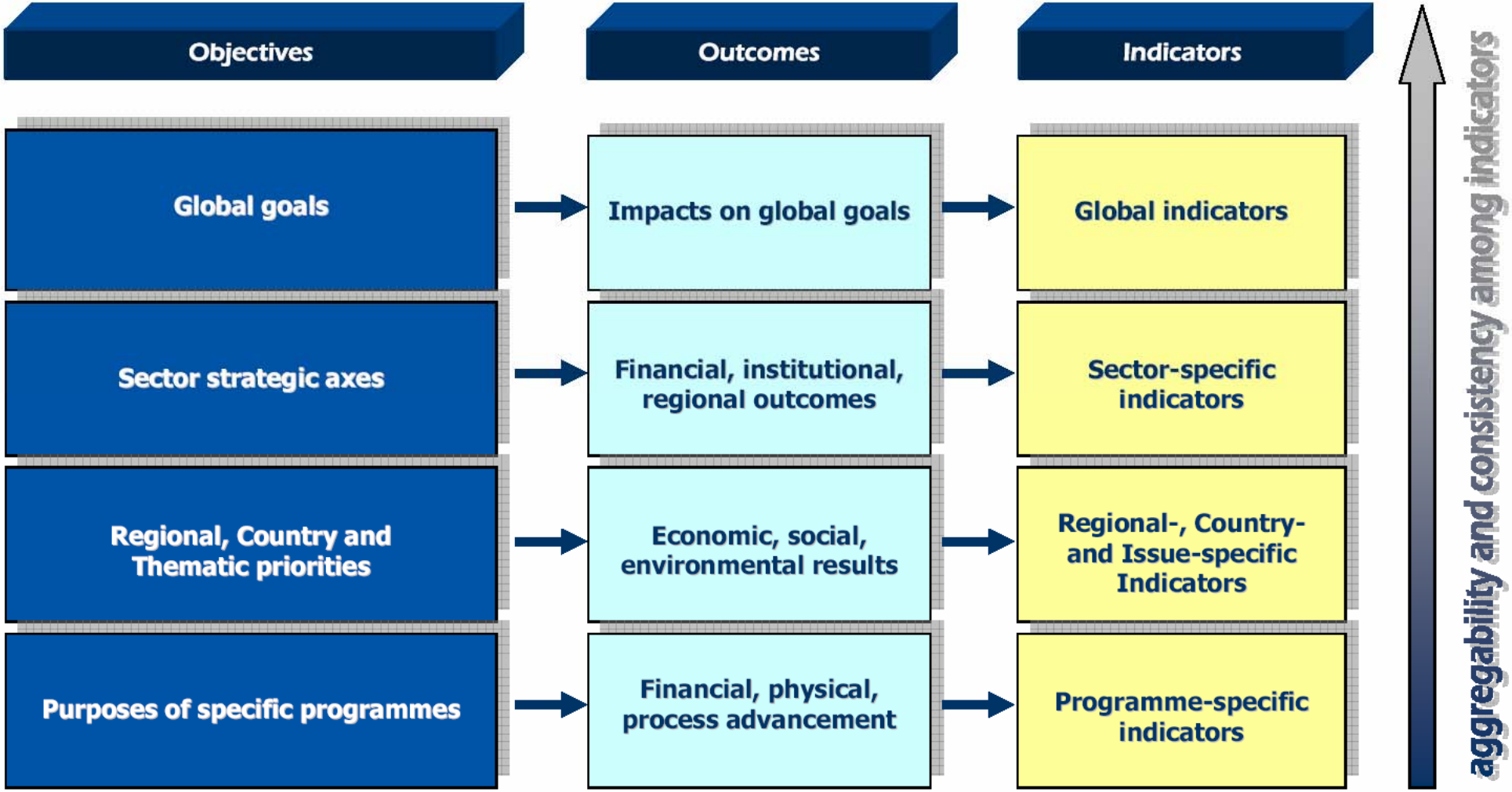
3. Regional, country and issue strategies

Relevant sector outcomes and impacts at the regional and national levels, increase in financial spending.

4. Programmes

Local economic, social and institutional outcomes, financial allocations, sustainability, leverage of national, international and private resources.

Figure 5.3 – A schematic representation of global policy monitoring



5.3 The chains of global water policies

Actual implementation of the global policy-making in the water sector has been seen to vary according to the degree of objectives' looseness and their geographical span. In theory, the following logic of descending objectives can be supposed to give consistency to a virtual **global water policy**.

1. **Global goals** are the MDGs and water-related international targets, but also the Monterrey goals and timeframe for increasing ODA in the water sector
2. **Sector-specific objectives** are the objectives of donors' and international agencies' and water strategies
3. **Regional, country and sub-sector objectives**, such as those that can be found in the water chapters of RSPs, CSPs, PRSPs
4. **Programme-specific purposes**, in countries or basins, as implemented by donors and international organizations, or on their behalf

However, many complications arise in the arena of development assistance in the water sector. Tasks are spread across innumerable phases, usually driven by individual objectives. With a growing number of implementing agencies, at the national and international levels, including the civil society and the private sector, leadership tends to lack and responsibilities to overlap, generating coordination problems. As long as the phases of global political commitments are translated into specific implementation strategies, the number of players increases, and coordination problems worsen.

Besides, different planning techniques and administrative practices of donors and international organizations stress the capacity of beneficiary countries in the allocation of both foreign and domestic resources. This is shown by the large number of different instruments set up by agencies, donors and countries, each participating with some resources to several initiatives, programmes, trust funds, regional and national strategic frameworks. No approach, neither national nor international, has acquired definitive prominence relative to the others, since none of the actors is in charge of coordinating the establishment of priorities and the planning and allocation of financial resources, as often happens in more advanced countries.

Indeed some practices have arisen under a few frameworks conceived by international agencies and leading donors, such as the various CSPs, RSPs, CDFs, PRSPs. Those tools may be not conflicting with each other, but can be seen as generating different **implementation chains** of the global water policy that cannot be gathered into a single analytical framework. At the moment, depending on what chain is chosen for the analysis, the implementation phases of water policy-making in developing countries are constrained by several operational guidelines at the intermediate levels that may allow for dissimilar approaches to tackle the same set of problems. Furthermore, international sector-frameworks, that logically precede existing regional and country strategies, have in some cases been only recently established, so that no ex-ante consistency is expected *a priori* in the sector.

Two practical implications limit the scope of undertaking performance monitoring of water policies of donors and international organizations. The first implication is that the aggregate results of individual implementation chains in terms of progress towards global water goals may be very small. This reduces the scope for designing impact indicators. The second implication is that causal-effect relationships tend to be very weak, as long as such macro phenomena are taken as final results of programs and projects in the field. This implies that the way of organizing information according to the logic of nested objectives cannot be fully applied as it is. As a result, a tailored tool should be designed to group the tasks carried out by all actors into an implementation model of a single water policy of a donor or an international organization.

An original approach is adopted in this handbook, which allows linking the objectives of several initiatives at various levels of implementation, that are functionally linked to a particular policy. The procedure involves three steps. First, a preliminary test of consistency is carried out among the individual objectives of the implementation levels, in order to highlight key cause-effect relationships. Second, key performance indicators are derived, according to the most expected impacts of the lower implementation phases, in the light of those of higher phases, with which they are functionally linked. Third, qualitative indicators may be employed to capture beneficiary response to policy implementation.

5.4 Monitoring consistency and performance

The procedure for setting up a monitoring system for the implementation of complex water policies involves the following two tasks:

- **highlighting the policy consistency**, all along its implementation chain, so as to identify the expected cause-effect relationships;
- **building a set of quantitative indicators**, which measure the performance of the policy along the highlighted cause-effect relationships;
- **building a set of qualitative indicators**, which give a measure of beneficiaries' perceptions about the policy.

Monitoring policy consistency

Monitoring consistency between subsequent policy stages is an exercise that should be systematically carried out *ex-ante* during policy design, in order to give a sense of how much the proposed initiatives fit the higher policy goals and strategic guidelines. It helps designing an implementation strategy that is consistent with the objectives to which they are functionally related. In fact, once a strategy is designed and put in place, it irremediably determines the approach followed by all the subsequent implementation stages. For this reason, it is important that consistency is always checked before policy implementation begins, in order to avoid establishing a set of sub-objectives and purposes that cause the following actions to diverge from the overarching policy goals. Moreover, as explained below, the consistency analysis is also an essential precondition to identifying performance indicators that can be related to specific policy objectives.

Monitoring ex-ante consistency requires several steps.

The first step involves mapping the expected cause-effect relationships between the various levels of policy implementation. This can be done by constructing one **consistency matrix** per each pair of subsequent implementation levels. Rows and columns in the matrix will contain the specific objectives at each level.

The second step is filling the cells with a synthetic measure of the reasonable expected likelihood that the objectives of the lower phase will contribute to reaching those of the higher phase. A qualitative assessment would suffice, which may be quantified according to simple scoring rules. The sum of the scores across rows and columns, related to the maximum attainable score, indicates the main phenomena that policy implementation will address, and the main cause-effect links expected throughout implementation.

An example of a consistency matrix between the goals of a hypothetical water policy, and the objectives of a related implementation strategy, is shown in figure 5.2. The matrix is filled with hypothetical consistency scores, as depicted in table 5.3.

Table 5.2 – An example of consistency matrix in the water sector

1st Policy Level / 2nd Policy Level	Goals of the policy			
	Expand access to services	**Prioritize the poor**	**Arrest over-exploitation**	**Score** (assigned / maximum)
Objectives of the strategy				
Increase public spending	***	*	/	**4/9**
Investing in rural areas	**	***	/	**5/9**
Reduce agriculture water consumption	/	/	***	**3/9**
Score (assigned / maximum)	5/9	4/9	3/9	12/27

Table 5.3 – Proposed scores to assess policy consistency

Symbol	Meaning	Score
***	Very consistent	3
**	Moderately consistent	2
*	Scarcely consistent	1
/	No sensible expected impact	0

The last step of consistency analysis involves calculating for each matrix, i.e. for each couple of implementation phases, an **Index of Policy Consistency (IPC)**. The IPC is defined as the percentage ratio between the overall score of each phase, and the maximum score that phase could have attained, should each and every objective be designed as the best response to all objectives of the higher implementation level. In the case of the hypothetical water policy previously reported, the consistency of the strategy compared to the policy goals is 75% (see box 5.1).

Box 5.1 – Calculating the Index of Policy Consistency

Calling:
- **revealed consistency** the squared root of the total score achieved through the matrix
- **maximum consistency** the squared root of the maximum attainable total score (=No. rows*No. columns*3)

The IPC is equal to: **Revealed Consistency / Max Consistency *100**.[38]

Hence, for the consistency matrix between the water policy and its implementation strategy depicted in table 5.2, we have the following results:

Strategy -> Policy
- score assigned = 12
- maximum score = 27

IPC = (√12 / √ 27) * 100 = **67%**

From the consistency analysis depicted so far one can draw the following information about policy implementation:

- the **cells displaying higher scores** indicate which are the cause-effect link that the following level should mostly exploit to maximize its impacts;
- the **scores by rows** indicate what are the intervention axes that are mainly pursued by policy implementation;
- the **scores by columns** gives a sense of which policy objectives are the most expected impacts of the following implementation phase;
- The **Index of Policy Consistency** aims at capturing the overall degree of consistency between the implementation strategy and the policy goals.

The four pieces of information have different uses. The most consistent cells and the scores by rows will guide the construction of performance indicators. This aspect is explored more in depth in the next sub-section. The scores by column and the IPC are, instead, useful as an *ex-ante* check of the policy consistency.

The *ex-ante* consistency analysis can be regarded by decision-makers as a help in designing implementation strategies that are consistent with overarching policy goals. In particular, the scores by columns in the consistency matrix of table 5.2 indicate that expanding access to services is the policy goal which is most pursued by the chosen implementation strategy, followed by the goal of prioritizing the poor. Hence, we would expect that policy implementation will mainly lead to more impacts in those two goals, respect to the third one. If these are the desired expected impacts, the consistency analysis has the virtue of validating the chosen approach. If this is not the case, the consistency analysis helps refining the strategy in the light of the most desired impacts.

However, attaining high IPC scores should not be regarded as a value in itself, but rather in comparison with other similar initiatives. The fundamental question to be answered is not how much consistency an individual strategy displays in its uniqueness respect to the overarching policy goals. Rather, it should be asked what are the reasons why some initiatives with similar outputs have stronger consistency than others, and what are the corrective measures, if any, that can be eventually introduced to strengthen the consistency of the initiatives that display fewer links with the broad policy goals.

A **set on nested consistency matrices** can be built in this way across phases and locations of policy implementation, in order to analyze the consistency of the whole implementation chain. The objectives of each phase are thus assessed in terms of their consistency with those of the phase immediately upper. The scores of the consistency analysis would be best assigned by the various stakeholders and partners of the implementing agencies, rather then by the managers themselves. This is because external partners can give a less biased, and sometimes more informed opinion about the real needs of a particular country or region. Moreover, in such a way the sense of ownership of the entire initiative by the beneficiaries and the other stakeholders would be strengthened.

Monitoring policy performance

The consistency analysis can help the construction of performance indicators, by discovering the underlying intervention logic of the proposed or ongoing initiatives. The cells which display higher scores highlight the main cause-effect relationships that are expected to be exploited by policy implementation. In turn, the overall scores by rows indicate what are the intervention axes that are mainly pursued by policy implementation. This information indicates what phenomena are worth measuring, and allow disregarding those effects that are weak or not immediately relevant. This allows monitoring to focus on designing **outcome and impact indicators** that are immediately relevant and useful, particularly while defining the expected results, which are usually the most difficult aspects to disentangle.

In the specific example of the hypothetical water policy and its related strategy depicted in table 5.2, one can infer by comparing the two set of objectives the following propositions. Increasing the available resources would help expanding the service, but prioritizing the poor requires investing in rural areas. Moreover, although investment could be needed to arrest overexploitation, a shift in agriculture consumption patterns would best achieve this overall goal. It turns out that, in the specific example, monitoring will best inform on policy implementation if it focuses on the cause-effect links, outcomes and impacts depicted in table 5.4.

Table 5.4 – Performance indicators derived from consistency analysis

Cause-effect linkage	Expected outcomes	Expected impacts
Increasing investment helps expanding access to service	Increased share of public investment	Higher share of population with access to service
Investing in rural areas helps prioritizing the poor	Reduced rural-urban differential in public spending	Less rural-urban differential in access to service
Shifting agriculture consumption patterns helps preventing overexploitation	Reduced share of agriculture demand of water	Less withdrawals as % of renewable resources

In principle, a least one outcome and one impact indicators should be designed for each couple of objectives that display a certain degree of consistency, since there is a cause-effect link surrounding the choice of those particular objec-

tives. Depending on the resource availability, a threshold could be fixed, for example only those cells with a score equal to o higher than 2 highlight a cause-effect link that is worth measuring. In practice, most time a set of one outcome and one impact indicator for each objective of the lower phase, as depicted in the previous table, will be more feasible and the information provided will suffice for many uses. Note that, in order to economize on monitoring resources, those cause-effect links that are weak or less relevant would not be measured.

Outcome and impact indicators are usually assessed against counterfactuals or pertinent control groups.[39] However, monitoring activities end once outcome and impact indicators are designed and measured. It is not in the domain of monitoring to derive from those indicators any value judgment about the relative contribution of that policy to overarching goals. This is the specific role of evaluation, which will adopt proper techniques to disentangle the impacts of a policy from those of other policies, or from the effects that would have materialized in any case.

As regards **input, process and output indicators**, it is virtually impossible to give general guidelines on designing these indicators, since they are related to the very nature of the initiatives being implemented. A careful analysis of the planned activities is essential in this respect. Still, in the context of complex policies, some suggestions could be the following:

- inputs of a certain level can be considered both the total resources employed at that level, and the sum of the resources employed at all the lower levels;
- processes of a level can be considered the implementation stage of a lower phase that is functionally driven by that level;
- outputs can be considered the fact that a lower level has come to its natural completion and is expected to start exhibiting its effects.

Employed inputs and attained outputs are usually **benchmarked against what initially planned**. In this context, two sets of indicators can be distinguished:

- **common indicators**, derived from aggregation of the same variables across the levels of policy implementation;
- **specific indicators**, regarding either phenomena that cannot be aggregated, or aspects that are relevant information at a one level but not at the others.

As regards **context indicators**, they are mainly related to the exogenous risks. In particular, context indicators should highlight the evolution of critical phenomena that are considered as risky to policy implementation. In turn, **beneficiary response indicators** measure how far beneficiaries are assuming the anticipated behaviours that would maximize expected outcomes. Some of those indicators can be quantitative, but many can be also constructed with qualitative scoring.

Monitoring beneficiaries response

A look at the beneficiaries responses to the various policy outputs is required to produce evidence on aspects that are not under the control of decision-makers. Consultations and surveys may discover how much a policy is valued by the direct beneficiaries. This may highlight either problems in policy focus, which would require a modification of the expected outcomes, or a problem in 'marketing' the initiative, which would require a communication strategy to support policy implementation. When data are not readily available, beneficiaries perceptions are also a means of triangulating past information, in the view of forecasting the likely progress of key indicators.

The views of the beneficiaries can be incorporated in a monitoring system in several ways. They vary according to the technique for data collection, with costs commensurate with the rigorousness of the survey. Qualitative indicators of beneficiary reaction should try to answer the following questions:

- how much beneficiaries knows about the policy?
- what proportion of the potential beneficiaries has access to policy inputs whose use is supposed to be stimulated by the policy?
- how well are policy objectives understood by targeted beneficiaries?
- what proportion of those who understood policy objectives regarded them as potentially helpful?
- how intense is the use of delivered outputs?
- what proportion of the beneficiaries who adopted outputs continued practices promoted after support ends?

Qualitative indicators may be quantified through the use of a scalar index that ranks the degree of satisfaction according to a given range of values (see box 5.2). Note that the proportions are not always derived from the same population, as the beneficiaries may vary according to the width and depth of policy implementation.

Box 5.2 – The choice of values for qualitative indicators

Although there are many ways of involving stakeholders and beneficiaries in monitoring activities,[40] at top policy levels this involvement should be limited to providing few quantifiable opinions. Filling questionnaires is a time-consuming activity for top officers, and broad questions may leave room for political considerations to form the final opinion.

Ranking preferences according to a degree of values is an effective way of collecting quickly and cheaply the beneficiaries' opinions. Usual ranges vary from 1 to 4 or 5. One might prefer to use the former, since it draws a straight line between success (values 3 and 4) and failure (values 1 and 2). The middle values in wider rages may not be so informative as the previous reasoning.

Following the European Commission guidelines for external monitoring of development aid,[41] the following ordered range of values may be adopted:

0: not satisfactory
1: almost satisfactory
2: quite satisfactory
3: very satisfactory

Part 2

Applied monitoring model

Chapter 6
A model for monitoring the EUWI

6.1 The EUWI as a complex water sector policy

Recall from chapter 2 that the logic behind the EUWI is that great benefits will accrue to developing countries as a result of improved coordination and harmonisation of EU efforts and an increased focus on true needs, identified as a result of policy dialogues involving all major stakeholders. Actions arising out of the EUWI aim to be fully integrated in the sustainable development strategies of partner countries, supported and reflected in Country Strategy Papers and similar planning documents prepared by EU donors and by the Commission, as well as in national programming cycles of development aid, such as Poverty Reduction Strategies. By harmonising the support to poverty-oriented management of water supply and sanitation in partner countries, partner countries and EU donors should reduce overlap and other inefficiencies and enhance the impact of their actions.

An extensive list of expected outcomes derives from the five EUWI objectives. The 2005 strategic review has set them in relations to the five EUWI objectives (see table 6.1). Of special importance are: stronger political focus on water; launch of multistakeholders approaches in beneficiary countries; better cooperation of donors' in-field activities; accelerated implementation of IWRM strategies; strengthened regional cooperation; support to transboundary basin organizations; creation of financial instruments; additional finance leveraged. On the basis of the strategic articulation of EUWI policy goals, actual implementation is demanded to the WGs, and through them to one EU donor for each major activity.

Expected outcomes of the EUWI are thus the result of complex cause-effect links, involving many different actions, undertaken by several actors of several scale and nature, that mainly entail the production of intangible benefits, and aim at producing very long-term impacts. This makes it virtually impossible to disentangling a specific contribution of the EUWI towards reaching specific global goals, and makes the work of the monitoring staff extremely difficult.

Table 6.1 - EUWI objectives and targeted outcomes[42]

OBJECTIVES	OUTCOMES
The reinforcement of political commitment towards action and innovation oriented partnership	• Raised awareness of water and sanitation among senior decision-makers in EU and in partner countries • Strengthened focus on water and sanitation in PRSPs, national investment plans, and similar planning documents • Accelerated implementation of national IWRM plans
The promotion of improved water governance, capacity building and awareness	• More frequent multistakeholder approaches to water management • Strengthened institutional capacity for water governance • Enhanced co-operation at partner country level between EU and specialised programmes, such as GWP, WSP and WUP
Improved efficiency and effectiveness of water management through multi-stakeholder dialogue and co-ordination	• EU support for water better harmonised and aligned with partner country priorities • Gradual shift from support to stand-alone projects to sector wide approaches • Additional support mobilised for water-related S & T development
Strengthened cooperation through promoting river basin approaches in national and transboundary waters	• Increasing number of TBOs supported by EU • Strengthened regional and sub-regional cooperation on water • More S & T projects focusing on transboundary water management • Better integration of ecological, economic and social dimensions, if applicable beyond specific basins
Identification of additional financial resources and mechanisms to ensure sustainable financing	• Creation of the ACP-EU Water Facility • Additional finance generated from EU sources, including non-ODA and other innovative funding sources • Continued priority for water under the 10th EDF • More research programmes in partner countries include water

The policy model developed in the previous chapter can be used to analyse the main cause-effect relationships within the EUWI. A monitoring model takes into account the organizational structure of a policy and the linkages between the activities undertaken at the various levels. Monitoring the EUWI performance involves analysing in depth the most important cause-effect links that surround the policy implementation. This should be done for each and every activity through which the EUWI deploys its effects, so as to drive the elaboration of performance indicators. The first step is thus grouping the single activities in fewer typologies. This allows disentangling the EUWI implementation process into basic units of analysis.

Notwithstanding, it is not so far from the reality that the main innovative instruments put in place by the EUWI, which are expected to make a real difference in beneficiary countries, are the **policy dialogues** and the **policy processes**. We can refer to a policy dialogue or process as to whatever set of related tasks that EUWI staff perform in a given geographical reference unit, being it a country or a river basin, in order to reach a specified EUWI objectives. The policy dialogue should be interpreted in a broad way, including not only formal processes launched through a layered structure, but also groups of related activities, undertaken in a given location under a recognized leadership of one EU donor, which aim to reach the same broad goal.

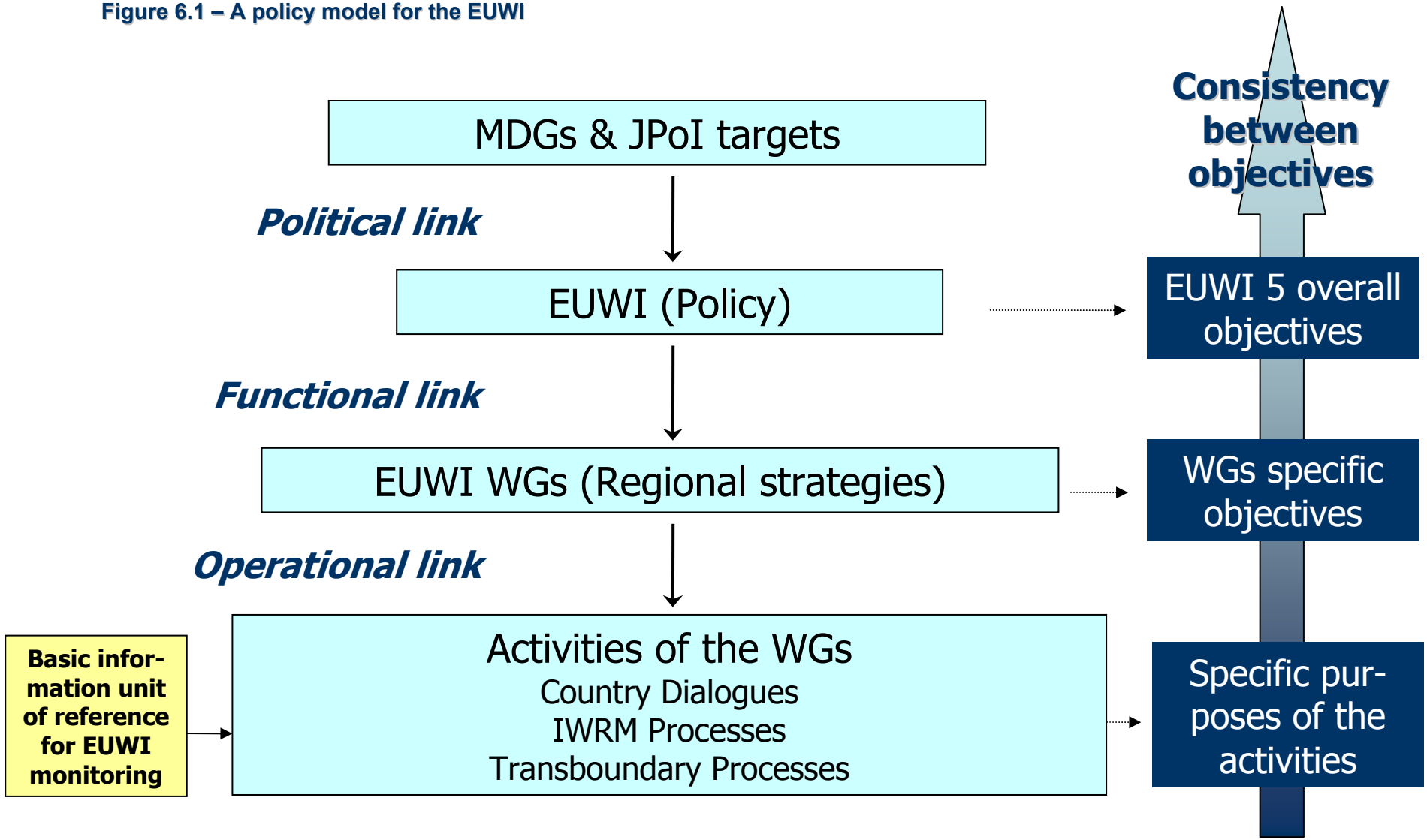
We take the policy dialogue as the **basic reference unit** for monitoring, dividing them it into the three following categories, according to their broad goal:

- **Country Dialogues**, mainly concerned with investment strategies;
- **IWRM Processes**, aimed at improving management of internal water sources;
- **Transboundary Processes**, which focus on managing shared basins.

This classification, albeit partial, helps in keeping the monitoring model tractable, and in focusing on the overall results of the EUWI. Otherwise, the focus of monitoring would shift too much on inputs, outputs and processes, without achieving good measures of the progress towards expected outcomes and impacts. As a result, in what follows the analysis will concentrate mainly on Regional WGs. The activities of cross-cutting WGs will not, however, be disregarded. They will appear at the EUWI level in which they are seen as most appropriate to give meaningful information on EUWI implementation.

Figure 6.1 highlights the policy model for the EUWI, from individual activities to global goals, on which to base the design of the monitoring system. Policy consistency is expected to hold throughout the implementation chain, from the purposes of the activities, through the specific objectives of the WGs, up to the five EUWI objectives and then to MDGs and JPoI targets.

Figure 6.1 – A policy model for the EUWI



Turning to the set up of a monitoring model for the EUWI, recall from chapter 5 that the procedure of setting up a monitoring system for the implementation of complex water policies involves carrying out the following three tasks:

- highlighting the policy consistency;
- building a set of quantitative indicators;
- building a set of qualitative indicators.

Hence, in the next sections, the three tasks are carried out in turn, in order to derive specific criteria for monitoring the EUWI. The scores applied in the consistency analysis have been given only to provide an example of the kind of monitoring that should be performed ex-ante. We have tried to replicate the exercise depicted in chapter 5, with what is reasonable to be expected in terms of EUWI impacts, in order to model the surrounding logic of the interventions carried out by the EUWI and its WGs.

On the basis of our conclusions about the logic of the EUWI and the logic of the Africa WG, we have been able to isolate the main phenomena that are useful and worthwhile to monitor, across the whole implementation chain of the EUWI. This in turn allows deriving some tentative performance indicators that would suit the information needs of the EUWI management and stakeholders, as well as the external audience.

We have also calculated the score by columns and the Index of Policy Consistency for the EUWI and the Africa WG, so as to provide an illustration of how an ex-ante consistency analysis would look like if it was to be used in policy design. However, it is not in the spirit of the present handbook to perform an ex-ante consistency analysis. This exercise should be done, as said, *before* policy implementation, and by involving the relevant stakeholders and letting them express their opinion on policy consistency. Hence, the purpose of calculating the scores by columns and the IPCs is only illustrative, and by no means should not be taken as definitive.

6.2 Measuring the consistency of the EUWI

The consistency approach outlined in chapter 5 can be applied to sketch the main causal-effect links between the policy and the strategic phases of the EUWI.

In particular:

1. the objectives of the EUWI are assessed in terms of their aptitude to attain the MDGs and the main goal of the JPoI, i.e. expanding access to services and implementing IWRM strategies;
2. the objectives of the Regional WGs are assessed in terms of their aptitude to attain the objectives of the EUWI.

The two corresponding consistency matrices have been drafted in Table 6.2 and Table 6.3 respectively, each one nested into the other, so as to derive logical criteria from upper to lower levels of the policy process. Each phase is assessed against the phase immediately upper, by means of a system of qualitative scoring. For simplicity, only one regional example is taken, that of the African WG.

The consistency matrix of the EUWI towards the MDGs (Table 6.2) suggests that reinforcing political commitment and initiating multistakeholder dialogues are the key ways in which the EUWI envisages to attain MDGs. Improving water management practices and strengthening regional cooperation are the way in which the EUWI contributes the JPoI goal of implementing IWRM strategies. As a result, we conclude that at this stage performance indicators should focus on:

- commitment: ability to increase political will and prioritization of the sector;
- capacity building: ability to create a favourable environment for launching cooperation processes for scientific and technological (S&T) advancement of institutions and stakeholders;
- coordination: ability to stimulate harmonised actions and participated interventions by donors, local authorities and other stakeholders;
- complementarity: ability to stimulate financial involvement of donors, local authorities and other stakeholders, and to leverage additional funds.

Table 6.2 – Consistency Matrix between the EUWI and the global goals

1st Policy Level / 2nd Policy Level	MDGs: Halve the proportion of people without sustainable access to safe drinking water and sanitation	IWRM: Integrate principles of sustainable development and reverse losses of environmental resources	Total score
Objectives of the EUWI			
1. Reinforcement of political commitment towards action and innovation oriented partnership	***	*	4/6
2. Promotion of improved water governance, capacity building and awareness	*	***	4/6
3. Improved efficiency and effectiveness of water management through multi-stakeholder dialogue and coordination	**	**	4/6
4. Strengthened cooperation through promoting river basin approaches in national and transboundary waters	/	***	3/6
5. Identification of additional financial resources and mechanisms to ensure sustainable financing	***	/	3/6
Total score	**9/15**	**9/15**	**18/30**
Index of Policy Consistency = (√ 18 / √ 30) * 100 = 77 %			

The consistency matrix for the Africa WG (Table 6.3) reveals that more political commitment and additional financing will be achieved mainly by prioritizing the poor in infrastructure investment, and by enhancing the financial possibilities that arise for a specific country. Improving coordination and cooperation are crucial aims that will be pursued through national processes. Better governance arrangements and regional cooperation will be mainly achieved through national and transboundary policy processes. As a result, we conclude that at this stage performance indicators should focus on:

- prioritization of the sector
- intensified regional cooperation
- improved water governance arrangements
- strengthen institutions
- increased financing in the sector
- coordination of sector interventions

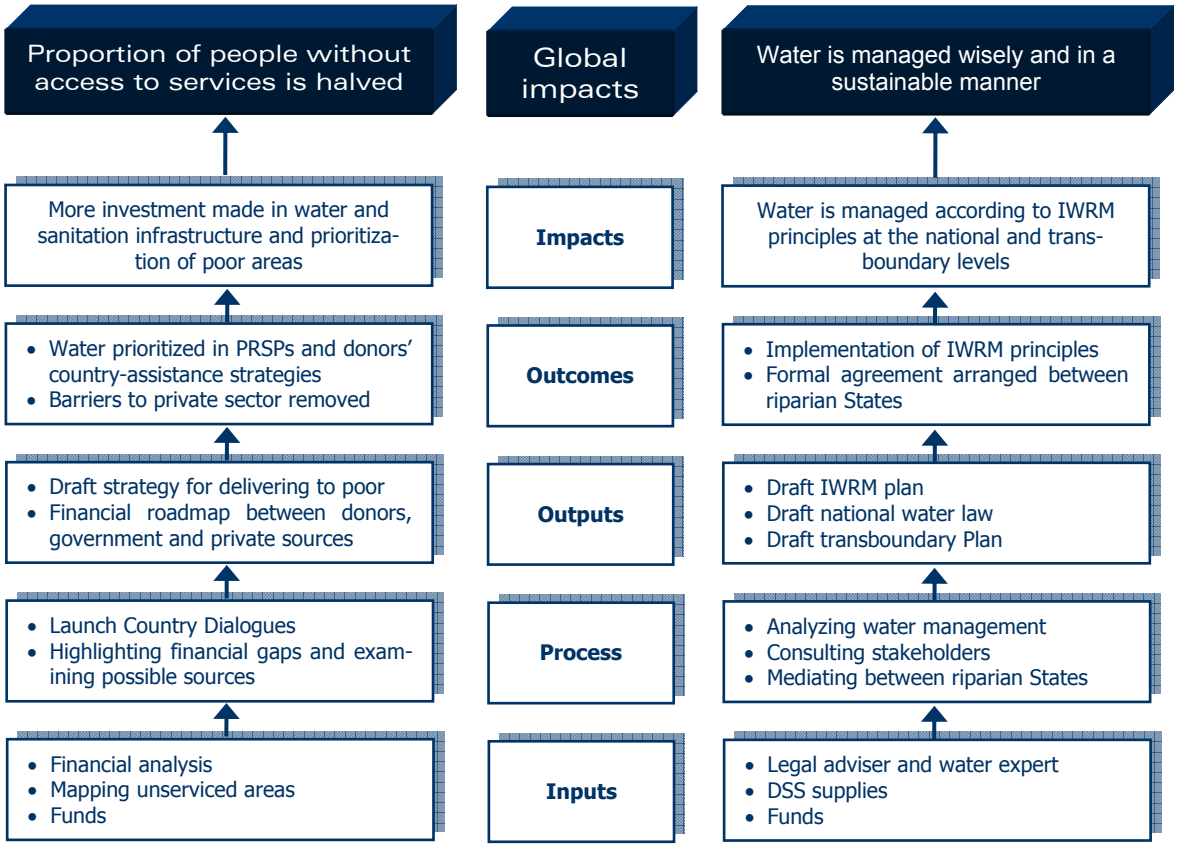
Table 6.3 – Consistency Matrix between the WG Africa and the EUWI

2nd Policy Level / 3rd Policy Level	Objectives of the EUWI					
	1. Reinforce political commitment to action	2. Promote better water governance arrangements	3. Improve co-ordination and co-operation in interventions	4. Encourage regional and sub-regional co-operation	5. Catalyse additional funding	Score
Programmatic objectives of the Africa-EU Partnership 2004-2005 Work Programme						
1. Increase prioritisation for investment for the poor	***	*	*	/	***	**8/15**
2. Initiate process to support transboundary water resources management	/	***	***	***	/	**9/15**
3. Initiate national processes for implementing IWRM strategy	**	***	***	*	/	**9/15**
4. Strengthen underlying institutions and build capacity	*	**	*	*	*	**6/15**
5. Enhance funding for supply, management and development	***	*	*	/	***	**8/15**
6. Improve coordination between the actors involved	***	**	***	***	/	**11/15**
Total score	**12/18**	**12/18**	**12/18**	**8/18**	**7/18**	**51/90**
Index of Policy Consistency = (√ 51 / √ 90) * 100 = 75 %						

6.3 Measuring the performance of the EUWI

The consistency analysis conducted in the previous section has revealed the broad framework within which to start constructing some possible performance indicators for the EUWI and its WGs. A modelled intervention logic of the EUWI activities along the two main sector axes, water supply and sanitation and water resources management, is in turn useful to devising indicators for the lowest EUWI level (see Figure 6.2). The provision of financial, technical and physical inputs by the WGs leads to the launching of policy dialogues and processes. These in turns help partner countries to devise an investment strategy or a IWRM plan, which allow prioritizing water and implementing sound management principles, in order to increase sector investment and manage water wisely.

Figure 6.2 – Illustrative logic model of EUWI interventions



The broad framework depicted so far can be consistently used to develop three arrays of performance indicators, one array for each implementation phase of the EUWI. Figure 6.2 shows how each step of the EUWI implementation, and each result deriving from this policy, is considered in terms of what performance monitoring indicators can be used for EUWI activities. Limiting to this step only would miss indicators that capture aggregated phenomena regarding the overall EUWI. Still, the interest resides in structuring a system that may be able to capture global trends as well as local particularities, without loosing vertical and horizontal consistency in the process. In this sense, some indicators can still be specific to each phase, since they are mainly useful to managers of single activities, or to WG leaders, to assess results at that particular level. Other indicators will be aggregated across the policy process on a regional and then global basis.

Some potential **quantitative indicators** are summarized in table 6.4, table 6.5, and table 6.6, respectively for the level of the policy dialogues and processes, the level of the EUWI WGs, and the level of the overall EUWI. Conversely, the **qualitative indicators** should fit the very needs of policy implementers, hence they are not derived in this handbook, though some criteria for designing them are discussed at the end of this chapter. The **sources of information** for constructing quantitative indicators are instead discussed in the following chapter.

An attempt has been made to suggest one quantitative indicator per each major cause-effect relationship drawn from the consistency analysis. Three criteria have guided our proposal. First, consistency and aggregability among indicators has been sought throughout policy implementation, so as to facilitate the calculations and the understanding of relevant phenomena. Second, the need to guarantee operational ease has induced us to simplify the construction of indicators in terms of required statistical techniques. Third, priority has been given to indicators whose data are available or can be feasibly collected.

It is important to remark that **the proposed indicators are not the only available measures of EUWI performance**. Especially in trying to detect the outcomes and impacts, many indicators could be drawn from those already existing, and innumerable could be created ad hoc for the EUWI. In this field, creativity and imagination of each and every stakeholder could bring about very valuable insights.

Level of the EUWI activities

Some potential indicators for the Country Dialogues and IWRM and Transboundary Processes are provided in Table 6.4. The fundamental monitoring questions at this level concern how much resources the WGs have employed in each activity, what progress have these activities made so far, what they have been delivering to beneficiaries, what they will likely produce in terms of long-term results, which are the context indicators that should be kept under control to reduce risks.

Inputs

Inputs at the level of the activities are mainly financial and human resources. Financial resources are all the costs incurred in managing the activity, including paying consultants and experts, travelling, organizing a meeting, etc. Human resources should be attached a quantifiable value, in terms of unit salary of all the staff employed in managing the activity, times the number of days devoted to the activity. The relevant data are the resources actually disbursed.

A further input can be highlighted for the Country Dialogues: there could be additional efforts by the EUWI in informing and advising a strategy for increasing / streamlining potential financial sources for investment in a country. This is clearly an additional input to the Regional WG, which can make a difference in driving the dialogue towards its intended outputs.

Process

The procedural advancement of the activities can be measured by phasing each policy process and then assessing compliance between planned and achieved phases. We understand that the sequential step process which was initially envisaged by the EUWI WGs has been abandoned, since it has been found both inaccurate and misleading.

Table 6.4 – Some potential indicators for the level of EUWI activities

Activities	Indicators					
	Input	**Process**	**Output**	**Outcome**	**Impact**	**Context**
Country Dialogue	Resources of CD Financing WG has been involved	Current advancement of CD process (in %)	Draft national financing strategy WSS S&T cooperation processes supported MoU with international organization or specialized program	Volume and share of government budget to water sector Volume and share of aid to water sector Volume of private investment in water sector	Investment Gap Rural-urban differential in total sector spending Share of aid given as budget aid	Rate of growth of GDP per capita Government fiscal balance Change of political leadership
IWRM Process	Resources of IWRM process	Current advancement of IWRM process (in %)	Draft National IWRM strategy IWRM S&T cooperation processes supported	Country has IWRM strategy in place No. of water users associations in the country	Relative Water Stress Index Physical efficiency	Per capita national freshwater resources
Transboundary Process	Resources of transboundary process	Current advancement of transboundary process (in %)	Draft Transboundary strategy drafted Transboundary S&T cooperation processes supported	Treaty / cooperation agreement signed Basin water allocation patterns	Formal basin mechanism in place Relative Water Stress Index at basin level	Per capita basin freshwater resources

Hence, we recommend using a "building blocks" approach, consisting of separated but necessary elements of an EUWI activity, which should be periodically checked for accomplishment and should be as comprehensive as possible, including both pre-activity undertakings, and post activity follow-up. The building blocks may differ between WGs and among the activities of the WGs, but should be designed so as to give a percentage score to the total advancement of an activity.

Outputs

The very aim of the policy processes supported by the EUWI is to lay the foundations for further action by donors, governments and other stakeholders. The output on which to base this further action is usually some documental material, such as a report, a set of guidelines, a draft road map, containing: an analysis of the current situation; a list of major problems, opportunities and constraints; a strategy for overcoming the problems by maximizing existing or potential opportunities; a set of actions to be concretely undertaken by all partners.

We take this documental material as the main output of the policy dialogues and processes. Accordingly, for the Country Dialogues the main output would be a Draft National Financial Strategy; for the IWRM Processes the output would be a Draft IWRM National Plan; for the Transboundary Processes, the output would be a transboundary action plan. Note that both the content of the output and the terminology may vary, but it is the substance that is interesting: whatever the name is, a formal end of the contribution of the EUWI must be highlighted, beyond which the possibility to make a difference is reduced because most of the job is expected to be done by others.

Another output of the policy processes that is useful to look at are the S&T cooperation processes under preparation. Some WGs are putting a strong emphasis on capacity building and technological advancement, besides the other policy processes. As a result, we keep the cooperation processes supported as further outputs of the general country activity, and take it distinct from the documental output and specific to the three sub-sectors. This sphere is confined to creating the enabling environment for virtues cycles to materialize.

Finally, the Country Dialogues may lead to the adoption of a formal operational framework, such as a Memorandum of Understanding (MoU), with non-EU international organizations and specialized programmes, such as the Water and Sanitation Programme of the World Bank. We recommend to keep track of those agreements at this stage, in order to aggregate this information across countries.

Outcomes

Outcomes are real-world situations that have been directly induced through the activities undertaken by the WGs. Recall the logic of the EUWI presented in the previous sections: outcomes should mainly refer to changes occurred in the behaviour of the EUWI partners and stakeholders. Hence, the main outcomes of the WGs' activities are:

- prioritization of the sector
- intensified regional cooperation
- improved water governance arrangements
- strengthen institutions
- increased financing in the sector
- coordination of sector interventions

According to such logic, we will focus on few key indicators that may show the changes in the behavioural patterns. For the Country Dialogues, concerned with investment and access to the service by the poor, the volume of resources disbursed by the government and donors will indicate the aggregate spending effort in the sector, while the share of total budget of governments and donors will indicate the degree to which such actors are prioritizing the sector. The volume of local and foreign private resources invested in the sector will give an idea of the non-governmental sources leveraged by the policy process approach.

As regards IWRM Processes, the behaviour that is sought is that the country's government endorses an IWRM national strategy as the main tool for better governance arrangement. We accordingly point to the need of knowing as outcome

of IWRM Processes whether the country has effectively an IWRM strategy in place or not. Such indicator may be further disaggregated according to the stage of development of the IWRM national strategy (see sources of information). Besides, a true holistic approach as required by IWRM principles would be reflected in the fact that more intermediate water governance arrangements will arise between single users and governmental authorities. We therefore suggest to monitor the behaviours of the users, by controlling the number of associations that will progressively register.

As regards Transboundary Processes, the expected situation is that riparian states act in a coordinated way to tackle common issues such as streamlining intra-basin allocations, reduce pollutants and emissions, etc. In order to do so, they should 'stick' to a piece of paper in which reciprocal rights and obligations are written down and subject to the regime of international public law. We call these treaties or agreements and propose to look as relevant outcome at if riparian states have reached this stage, again with the warning the is the substance, not the form, that matters. A control variable can be the pattern of water sharing between riparian territories, intra-basin water transfers, or the like.

Impacts

Impacts are longer term results that the policy dialogues will contribute to, though they depend on a large number of factors that are outside the control of EUWI staff. They are intermediate objectives to reaching the EUWI overall objectives, so should refer to both local effects and broad targets. Impacts should always be compared with counterfactual situations, in order to distinguish the relative contribution of the EUWI activities.

The main objective of Country Dialogues is to overcome the mismatch between what is to be financed and what is actually invested in the sector. We thus propose to measure the investment gap, that is the ratio between the realized investment in the country's water supply and sanitation sector, and the estimates of the financial requirements to reach MDGs targets.[43]

An important expected impact of the WGs' activities is prioritizing the poor among those who receive new access. Most of the poor are located in rural areas, which is also where access is confined to a very small proportion of the population. We therefore propose to measure the priority given to the poor by monitoring the differential between rural and urban spending patterns in the water sector.[44] This value may be the sum of all sources, but the main targets are national governments and donors. Finally, increased coordination is a cross-cutting theme of WGs' intervention. At the activity level, this means trying to affect the behaviour of donors and governments in planning the resources allocation into the sector. We recommend using the share of aid given in support to national budget, as opposed to project aid, in order to measure this coordination effect.

As regards IWRM Processes, the expected impact is an improved governance of water, in a way that is compatible with human needs and environmental constraints. Monitoring should thus focus on the end-product of such improved governance, that is how the physical and human spheres interact. We suggest using the Relative Water Stress Index, which is easy to calculate and has been used by the last World Water Development Report to depict the world's areas in which there is an unsustainable pressure of human activities on the environment.[45]

We also suggest paying attention to whether the IWRM Processes has contribute to a more rational planning of investment and maintenance of physical infrastructure of the country concerned. The general conditions of water infrastructure can be measured by the calculating the Physical Efficiency of water management, which is the ratio between the water actually distributed and the water abstracted from the sources, the difference being leakages. This will give an appreciation of how the country is managing both the physical resource and the infrastructure.

As regards Transboundary Processes, the expected outcome of WGs activities is a stronger form of cooperation between riparian states. This is usually done by creating a supranational agency or a similar formal mechanism, in charge of tackling transboundary issues, such as a basin commission. We suggest recording the creation of such agencies as the main impact of the Transboundary Processes. However, results of intra-basin cooperation may accrue also without a formal commission being in place. Conversely, the mere existence of an agency does not nec-

essarily mean that transboundary issues will be faced in a cooperative way. This is why we recommend the use of a complementary indicator, which is the Relative Water Stress Index calculated at the basin level. This will show a longer-term impact of the WGs' activities, impact that in turn is the expected outcome of the cooperation mechanism put in place.

Context

At this level, context indicators are aimed at capturing the evolution of exogenous factors that may affect expected outcomes and impacts but are outside the direct control of both the EUWI management and the beneficiaries themselves. At the level of the activities, we refrain form monitoring the response of beneficiaries to delivered outputs, which would imply counting the participants at the policy dialogues and processes. These are, in fact, evolutionary in their very nature, so stakeholders may change with time and issues under analysis, in so making it impossible or overwhelmingly difficult to derive meaningful information form that variable. We instead focus on exogenous changes that may incur in the assisted country or basin.

As regards Country Dialogues, the country's rate of growth of GDP per-capita may be a useful test to assess the national capacity to afford the investment planned in the roadmaps. Changes in this variable may sensibly affect the distribution of national priorities. A complementary and perhaps more refined indicator is the fiscal balance of the central government. This indicator will capture both the total potential resources of a country, and the capacity of the public sector to collect revenues and rationalize spending. A worsening fiscal position may in fact indicate that the government is giving priority to current expenses, rather than gross capital formation, and this will require a political action from the EUWI to reverse the trend.

Besides, a change in the country's political leadership can itself slow down the design and implementation of a financial road map or similar planning instruments. Politicians are known for having the temptation to revert previous policies to gain internal support or lessen that of the political counterpart. If changes in government leadership are duly recorded, this may turn to be a relevant piece of infor-

mation when comparing several Country Dialogues and trying to explain the reasons for relative success or failures.

As regards IWRM Processes, exogenous factors influencing the process may be the uncontrollable evolutions of the natural environment, which may put a government under pressure and impede the adoption of sound management principles. We suggest looking at this possibility by registering the per-capita physical availability of total renewable water resources. This indicator may highlight any water shortages or sensible changes in the natural environment, that may require a deviation form the planned schedule of IWRM implementation.

As regards Transboundary Processes, it would pay keeping an eye on the patterns of water resources availability. A temporarily or permanent reduction of the physical availability of water may put under pressure the cooperation mechanism (treaty, agency, and so on). This can lead to disagreements and disputes between riparian states, which are striving internally over the allocation of a scarcer resource (a smaller 'pie'), and in the end can provoke the destruction or de-legitimation of the cooperation mechanism. We therefore recommend monitoring per-capita freshwater resources availability also at the basin scale, in order to follow the pattern of physical water availability in the basin.

Level of the EUWI Working Groups

Some potential indicators for the EUWI Working Groups are provided in Table 6.5. Recall from the consistency analysis that the WGs aim at achieving the following outcomes:

- prioritization of the sector
- intensified regional cooperation
- improved water governance arrangements
- strengthen institutions
- increased financing in the sector
- coordination of sector interventions

These outcomes are expected to be achieved by means of the activities put in place concretely by the WGs, that is to say the policy dialogues and processes. Plus, capacity building and institutional strengthening are cross-cutting issues. On this basis, a reasoned choice can be made on the indicators that are useful to collect.

Inputs, processes and outputs

The delivery channels of the EUWI WGs are the activities undertaken in specific locations. As a result, the indicators of inputs, process and outputs are mainly derived from aggregating the corresponding indicators at the level of the activities.

In particular, the inputs of the WGs are the cost of running all the policy processes, plus the remaining minor activities, plus the financial and human (quantified) resources disbursed to run WG's coordination job. As usual, these costs include paying consultants and experts, travelling, organizing a meeting, etc..

Process indicators signal that an activity has been initiated in schedule with what envisaged in the work plan. This will help highlighting critical specific situations that may offset the WG's collective effort. Therefore, we suggest to confront the number of policy and cooperation processes under actual preparation, against what was initially envisaged in the work plan. This information is readily available to a WG leader. Useful complementary process indicators which are specific to the WG level are: the share of policy dialogues in which additional effort will be devoted to advising a specific national financing strategy, intended to catch the width of the effort to enhance funds; and the share of WGs meetings held in beneficiary countries, intended to measure the effort to improve coordination in the field by organizing meeting with top-level decision-makers.

As regards outputs, the number of policy dialogues and cooperation processes that have been actually facilitated during the relevant timeframe, the number of country-specific reports on financing issues, and the MoUs with international organizations and programs, are the key products delivered by the EUWI and should then be recorded and possibly compared to what envisaged in the work plan.

Outcomes

The expected outcomes of the EUWI Regional WGs can be though of as being intermediate to reaching those of the overall EUWI, but limited to the regional scale. Recall from the consistency analysis that the EUWI expected outcomes are:

- commitment: ability to increase political will and prioritization of the sector;
- capacity building: ability to launch cooperation processes for scientific and technological (S&T) advancement;
- coordination: ability to stimulate harmonised actions;
- complementarity: ability to stimulate finance and leverage additional funds.

Hence, the expected outcomes of the WGs are their own objectives, in the light of the higher policy objectives of the EUWI. Increasing prioritization to the poor, coupled with reinforcing commitment, requires verifying if the Poverty Reduction Strategy Papers (PRSPs), or similar nation-wide poverty reduction documents, contain a strong emphasis on water supply and sanitation. This will show the commitment to poverty-reducing water interventions of government and donors alike. Counting the number of PRSPs that have shifted their focus towards water, will be a measure of the success of the WGs to put water on top of the development agenda of the region.[46]

As regards the transboundary issues, the objective of improving water governance arrangements, in the light of the goal of stimulating cooperation, requires counting the number of new transboundary cooperation mechanisms implanted in assisted countries. This again, compared at the regional level by controlling for exogenous risk factors, will provide ground for reasoning about successes and failures.

It is also straightforward to count the number of assisted countries with an IWRM strategy in place, as a outcome indicator of the national IWRM objective. Such indicator may be further disaggregated according to the stage of development of the IWRM national strategy, in so allowing comparison among different countries.

The expected outcome of strengthening institutions, in the view of reinforcing capacity, may be indeed extremely difficult to define. Capacity is a broad concept that involves many different aspects, in so making it virtually impossible to find

a reasonable success measure. We suggest to employ a straightforward pass/fail test that, though is only partial, is at the same time simple to do. The indicator is the share of the countries in the region that in the current year have updated the information on physical water resources on the FAO's AQUASTAT database. This will a twofold kind of information: the ability of the country to produce such data; and the ability of national institutions to report these data at the international level.

There are three reasons for proposing such indicator. First, we believe in the power of information for stimulating better governmental action and improved sector performance. Second, this information can be easily retrieved by consulting the on-line database, which is open to the general public. FAO AQUASTAT is the most credited international source of data on physical water conditions. Third, its data can be complemented by those available at the country level, which should be constantly sought after by the leaders of the processes. In the case the data retrieved from national sources are not available in the FAO database or are more recent, the EUWI should urge the competent body to update FAO's information. This would be in itself a great contribution to institutional strengthening in the country.

The objective of enhancing funding, together with the overall goal of pursuing complementarity, requires tracking the volume of both water aid and private resources that are invested into the various countries of the region. Water aid can be easily collected from the OECD-CRS database, which is publicly available. The World Bank is being putting a great effort in managing the PPI database, a collection of records on private investment projects, and related committed amounts, in developing countries across the world.

Finally, improving coordination and stimulating concerted actions require donors and governments to act cooperatively to tackle the key sector priorities, without wasting energies and resources in fixing companion objectives and particularistic activities. This in turn would reflect a change in the donor-beneficiary relationship that could sensibly benefit coordination and harmonization in the water sector. This is why we suggest to use one of the indicators developed by the OECD-DAC Task Team on Harmonisation & Alignment in donor-beneficiary relationships.[47] In particular, Indicator 7 is suggested at this level, which assesses in a qualitative way whether conditionality is streamlined in the water sector, summarized in a score from 0 to 3.

Table 6.5 – Some potential indicators for the level of Working Groups (case: Africa Region)

Objectives of Africa WG	Indicators					
	Input	Process	Output	Outcomes	Impacts	Beneficiary response
Increase prioritisation for investment for the poor	Total resources of policy dialogues and processes + Resources of coordinating activities of the WG	No. of CD under preparation (as % of planned)	No. of CD facilitated (as % of planned)	No. of PRSPs with water prioritized	Rural / urban differential in access	No. of EU donors represented in WG meetings No. of beneficiary countries represented in WG meetings No. of international organizations represented in WG meetings No. of NGOs represented in WG meetings
Initiate programme to support transboundary water resources management		No. of Transboundary processes under preparation (as % of planned)	No. of Transboundary processes facilitated (as % of planned)	No. of transboundary agreements signed	No. of basins with formal agency in place	
Initiate national processes for IWRM		No. of IWRM processes under preparation (as % of planned)	No. of IWRM processes facilitated (as % of planned)	No. of countries with IWRM strategy in place	No. of countries whose Relative Water Stress Index is < 0.4	
Strengthen underlying institutions and build capacity		No. of cooperation processes under preparation (as % of planned)	No. of cooperation processes facilitated (as % of planned)	No. of countries that have updated AQUASTAT database	No. of countries with water accounting systems in place	
Enhance funding for supply, management and development		Number of CDs where additional effort will be devoted to advising on national financing strategies (as % of total)	No. of country-specific reports on financing issues	Volume of water aid to the region by country Volume of private investment to the region by country	Regional investment gap by country	
Improve coordination between the actors involved		No. of meetings held in beneficiary countries (as % of total)	No. of MoUs with international organizations and programs	No. of countries with conditionality streamlined (OECD-DAC Indicator 7)	No. of countries with alignment with sector programmes (OECD-DAC Indicator 8)	

Impacts

Impacts are said to be long term results that are often very far from being directly influenced by the outputs of the EUWI activities. Still, it may be in the interest of the WG leaders to know if *relative* conditions have changed in the whole region. In fact, what is a high goal for a single activity in its own, may be an attainable impact on the regional scale, when the realization of only one of those impacts can be said to show a good signal about the success of the regional approach. As usual, impacts should be compared with counterfactual situations, in order to distinguish the relative contribution of the EUWI WGs.

As regards prioritization to the poor, we acknowledge that WG leaders may have less leverage on countries' representative, than the EUWI leaders of the corresponding policy process. The budget allocation criteria followed by each country would be a misleading information about what a WG leader can do. She can push the leaders of the policy process to work hard for budget allocation, but the impact she is more interested in realizing is access to services by the poor, not budget allocation. As a result, we recommend monitoring the situation by country of the rural-urban differential in actual *access* to the water and sanitation services, as an overall measure of WG's long term impact. By definition, impacts may require time to materialize; but comparing in a five-year time what happened in the countries assisted by the EUWI, as compared to those unassisted, may give a sense of the overall distribution of progresses in the region, which is also due to the contribution of the EUWI WGs. Conversely, a persistent stagnation of the rural-urban differential, even in those countries which are assisted by the WG, may be an evidence, after controlling for country-specific effects induced by exogenous risks highlighted at the level of the activities, that much work is still to be done.

The impact of the support provided to transboundary activities can be best assessed by the number of basins that have a formal coordination mechanism in place. The impacts at the regional level of national IWRM Processes may be detected by highlighting those countries whose Relative Water Stress Index is less than 0.4, the threshold used in the UN World Water Development Report.

Measuring the EUWI impacts on countries' capacity follows the same reasoning employed for outcome indicators. Hence, the focus here is on the capacity to produce information on the sector. The difference lays in the level of sophistication of countries' statistical capacity. We suggest to adopt as indicator the number of countries that adopt Integrated Environmental and Economic Accounting techniques to collect, organize and store data on water resources availability and use. The accounting criteria should follow what has been developed so far by the UN Statistics Division.[48]

As regards the objective of enhancing funding for investment in water supply and sanitation, a reasonable impact to target is the average investment gap in the region. This indicator may be easily recalculated on the basis of the data provided at the level of the single activities.

Finally, the improved coordination between the actors involved can be effectively tested by analysing how countries in the region progress with respect to another indicator developed by the OECD-DAC Task Team on Harmonisation & Alignment. Indicator 8 looks in a composite way at how much sector programmes are supported. For each major sector, including water, the indicator provides with a score from 0 to 3 on the following aspects:

- Are sector systems in place?
  - Are government leading in sector? (0-3)
  - Is there a clear sector policy? (0-3)
  - Are sector MTEF (Medium-term expenditure framework) established? (0-3)
  - Is there sector coordination? (0-3)
  - Are there sector monitoring system in place? (0-3)
  - Are systems being harmonised? (0-3)

- Are donor supporting them?
  - Are donors aligning? (0-3)
  - Are donors' funds integrated in sector MTEF (Medium-term expenditure framework)? (0-3)
  - Do donors use government monitoring system? (0-3)

Beneficiary response

At the regional level, the opposite considerations respect to the level of activities hold. In this case, political commitment and stakeholder involvement can make the real difference on the ground, by triggering the virtuous cycles that are expected at the WG level in order to attain higher objectives. This is why we recommend monitoring beneficiary response, in terms of the involvement of EU donors, local governments, non-EU international organization, and global civil society organization. We strongly recommend keeping organized records of the stakeholders represented at the WG meetings.

Sending a representative to an international meeting is an evidence of strong commitment by the institution. Conversely, weak involvement may be a signal that important stakeholders do not perceive the potential benefits of the EUWI WG, to the detriment of the EUWI effectiveness itself, and in turn to the support given to the Initiative. However, depending on the absent stakeholders, the data may also imply that an institution has not the resources to take part to those meetings. The cause and remedies of weak participation will therefore change substantially: a poor country or a smaller NGO would require resources to travel; if their involvement is valuable to the WG, ad hoc measures can be taken to allow those stakeholders to participate at the meetings. Where there is a reasonable suspect that budget constraint is not the relevant problem, strengthening the marketing strategy of the WG's activities would be the most appropriate measure.

Level of the EUWI

Some potential indicators for the EUWI level are reported in table 6.6. At this level, aggregate results should take prominence, the expected phenomena may take a long term to materialize, and top administrative levels are involved. As before for the case of the WGs, main input, process and outcome indicators aggregate alongside implementation levels. There are nonetheless some peculiarities designed to respond to specific information needs at this level. Outcome and impacts are either the same of the WGs, but reported at the global level, or specific indicators for the overall EUWI, mainly related to finance.

Inputs, processes and outputs

The total operational resources used up for running the EUWI are the inputs to look at. These are defined as the sum of the total cost of WG activities, the cost incurred for the coordination of all the WGs, and the financial and human (quantified) resources disbursed to run the Steering Group, the Multistakeholder Forum, the Secretariat and the CIS.

The process indicators of the EUWI are the number of all EUWI activities actually initiated, for which this value has been recorded. That is, the Country Dialogues, the IWRM Processes, the Transboundary Processes, and the Cooperation under preparation. The number of Country Dialogues in which specific contributions have been made for advising the development of national financing strategies, is also a good supplementary process indicator. Besides, it is also recommended to keep records of the international conferences and official meetings to which the EUWI has made a specific contribution, in terms of organizing sessions, parallel events, stands, etc. This figure can then be related to the number of relevant events occurring worldwide on water issues, so as to capture the width of EUWI presence on the international tables.

The output indicators for the EUWI are the same as those at the WG level, that is the number of processes effectively supported (Country Dialogue, IWRM, Transboundary, and Cooperation), country-specific financing documents written, and agreements with international organizations and programs reached. One would also suggest adding at this level the number of websites created by WGs or the EUWI itself, without including the CIS, which has a purely internal use. The CIS will matter afterwards, under the indicators of beneficiary response.

A final, fundamental, output of the EUWI as a whole is the volume of resources disbursed by the ACP-EU Water Facility (WF). The Facility itself is considered a by-product of the EUWI, so its mere existence should be considered as an output of the EUWI. We are more prone to look at the WF as a separated, though related, initiative, that emanates from the Commission, rather than the EUWI. For the same reason, we do not believe that the resources *committed* under the Facility would be a good indicator of EUWI performance, since this decision is taken in a

separated place and is loosely affected by the EUWI statements. Instead we suggest using the volume of *disbursed* resources, since this amount will better reveal the effort of the entire EUWI staff to create project opportunities and to orient the decisions of the European Commission Services, towards the need of timely action.

Outcomes

The expected outcomes at the EUWI level are basically derived from the five main EUWI objectives, operationalized in terms of the outcomes attained by its WGs, plus some specific indicators.

The main outcome indicator for the first objective of reinforcing commitment and prioritizing the poor is the number of countries that have actually prioritized water in their PRSPs. The same considerations made on the validity of this indicators at the WG level, also hold at the EUWI level. Indicators refer to the whole sample of assisted countries in the various regions, compared to the non-assisted countries. We believe it important to assess also how much the EUWI is being achieving in urging EU donors to prioritize the poorest countries in their allocation decisions in the water sector. This is indeed a very expected result of the EUWI, since the initiative is well placed to lobby member states to devote to water a larger share of development assistance budgets. It would be a sensible change in induced behaviours. The share of total water aid that goes to Africa is a good measure of this outcome.

The proposed indicator for the capacity building and institutional strengthening objective is the same as that of the WGs level, that is the number of countries that report timely to FAO AQUASTAT database. The same considerations made at the WGs level hold at the EUWI level. We would also add at this level a measure of the effort of the EUWI in prioritizing water research in developing countries. The value and share of research projects that goes to researches about water issues in developing countries, out of total research projects funded by the various EC Framework Programs, could be the relevant indicator.

Table 6.6 – Some potential indicators for the overall level of the EUWI

EUWI objectives	Indicators					
	Inputs	**Process**	**Outputs**	**Outcomes**	**Impacts**	**Beneficiary response**
Stronger political commitment and priority to the poor	Total resources of running the EUWI = Total resources of WG activities and coordination + SG resources + MSF resources + Secretariat resources + CIS resources	No. of int. conferences / official meetings participated (as % of major events)	No. of MoU with international organizations and programs	No. of PRSPs with water prioritized Share of EU water aid to Africa	Rural/urban differential in access	No. of EU donors sitting at SG meetings No. of NGOs sitting at SG meetings No. of beneficiary countries and regional organizations represented by Ministries or Presidents at MSF meetings Access of beneficiary countries representatives to CIS
Capacity building and awareness		No. of cooperation processes under preparation (as % of planned)	No. of cooperation processes facilitated (as % of planned) No. of websites created (except CIS)	Share of FP water projects in developing countries No. of countries that updated AQUASTAT	No. of countries with water accounting systems in place	
Multi-stakeholder dialogue and coordination		No. of CD under preparation (as % of planned)	No. of CD facilitated (as % of planned)	No. of countries with conditionality streamlined (OECD-DAC Indicator 7)	No. of countries with alignment with sector programmes (OECD-DAC Ind. 8)	
River basin approaches in national and transboundary waters		No. of IWRM processes under preparation (as % of planned) No. of Transboundary processes under preparation (as % of planned)	No. of IWRM processes facilitated (as % of planned) No. of Transboundary processes facilitated (as % of planned)	No. of countries with IWRM strategy in place No. of new transboundary agreements	Countries whose Relative Water Stress Index is < 0.4 No. basin with formal agency in place	
More financial resources and new mechanisms		Number of CDs where additional effort will be devoted to advising on national financing strategies (as % of total)	No. of country-specific reports on financing issues Volume of resources disbursed by ACP-EU WF	Volume and share of EU water aid in total EU aid	Global investment Gap Leverage of the ACP-EU WF	

The expected outcome of multi-stakeholder dialogues and coordination is an improved relationship between donors and beneficiary countries in delivering aid projects. Coherently, we take as for the WGs level, the Indicator 7 of those developed by the OECD-DAC Task Team on Harmonisation & Alignment. Comparison between all developing countries would indicate where progress has been made.

The number of countries with IWRM strategy in place, and the number of formal transboundary agreements signed, is taken as relevant indicator of the fourth EUWI objective, concerned with these issues. This is consistently derived from the previous levels.

Finally, an important test for assessing the EUWI outcomes on donors' and the Commission's spending behaviours is measuring the volume and share of total EU development aid that is allocated to the water sector.

Impacts

Natural candidates for assessing EUWI overall impacts are the final real-world situations that the EUWI is aiming to reach. Hence, the worldwide rural-urban differential in access to water supply and sanitation, could be a good indicator for the first EUWI objective.

For the same reasons given at the level of the WGs, the number of assisted countries with integrated environmental-economic accounting techniques in place, can be an appropriate indicator for the overall capacity-building effect of the EUWI.

Similarly, the number of assisted countries that 'score high' in the OEDC-DAC Harmonization and Alignment Indicator 8, may be a good measure for the third EUWI objective, concerned with coordination of sector interventions. These indicators should be benchmarked between assisted and unassisted countries, in order to infer an 'EUWI effect'.

Consistently with the level of the WGs, the number of countries whose Relative Water Stress Index is less than 0.4, and the number of basins with formal co-

operation mechanisms in place, are the relevant indicators for objective four of the EUWI, which seeks to promote basin approached at the national and regional levels.

Finally, the global investment gap, derived as before by aggregating regional information, could assess the success of the EUWI in bringing more financial resources into the sector. A complementary indicator could be the 'Leverage effect' of the ACP-EU WF, i.e. the ratio between the total value of projects committed under the Facility, and the resources committed by the European Commission only.

Beneficiary response

At the level of the overall EUWI, the beneficiary response and the stakeholder participation to the political and decisional activities are critical success factors. We therefore suggest to record the participants to both the EUWI Steering Group meetings, and the EUWI Multi-Stakeholder Forum meetings, in order to capture two phenomena: EU member states and NGOs sitting at SG meetings would indicate political commitment by donors and the development community; the number of beneficiary countries and regional organizations represented at the level of Ministry and Presidents at MSF meetings, would instead indicate commitment on the partners' side and response to the key political messages of the EUWI.

A useful complementary indicator of beneficiary response to the EUWI would be the frequency of their access and the degree of use of the EUWI communication and information system (EUWI CIS), the web platform created to facilitate sharing between EUWI partners.

Qualitative indicators

Qualitative indicators can be used at the EUWI and the WG levels to triangulate quantitative information and provide, under reasonable assumptions, a sense of what can be the values of quantitative data, once they will be released. The intent

of this handbook is not to provide a blueprint approach to qualitative indicators. Rather, some criteria are provided to guide their design by EUWI staff.

Qualitative indicators for a EUWI WG should ask key stakeholders an opinion on the expected performance of implementation. These indicators would be mainly targeted to respond to very specific regional or national circumstances, and to highlight key bottlenecks that derive from beneficiary response to delivered outputs. Qualitative indicators can be also applied at the overall EUWI level, in which case their target should be more focused on the overall perception about the EUWI, than on tackling specific implementation problems. Perceptions about EUWI performance at such global level may be confused and inform very little, not to mention the high possibility of politicization.

Hence, qualitative indicators for the level of the WGs should focus on the expected outputs and outcomes. Some possible questions to be asked to WGs stakeholders are:

- what proportion of the potential beneficiaries has access to WG inputs whose use is supposed to be stimulated by the policy?
- how intense is the use of WG delivered outputs?
- what proportion of the beneficiaries who adopted WG outputs continued practices promoted after support ends?

Qualitative indicators for the overall EUWI should mainly capture how much the Initiative's objective, instruments and perspectives are known by key stakeholders.

- how much beneficiaries knows about the EUWI?
- how well are EUWI objectives understood by targeted beneficiaries?
- what proportion of those who understood EUWI objectives regarded them as potentially helpful?

Chapter 7
Guidelines for implementation

7.1 Maximizing the use of existing information

Turning to analysing the specific sources of information for implementing the EUWI monitoring model, much of the data will come from recording operations and processes at the activities and the Working Groups' levels. The WGs of the EUWI already take some records of their activities, though some insights could be provided on how to streamline the way of recording and organizing information. The next section will address this issue in more detail.

As regards information on investment needs for reaching MDGs targets, this can be usually found in national or UN studies or roadmaps prepared. They should be available for most countries. PRSPs and similar national poverty-reduction strategies and plan may also contain useful data. Spending patterns of the European Commission's development cooperation should be easily available to EUWI staff. Major disaggregations can be made to track where, when and how EC water aid flows to developing countries. Budget allocations of EU donors, in terms of geographical orientation and sub-sector of intervention, are available on a country basis by the DAC CRS aid activities database, which is publicly accessible. It contains a very detailed disaggregation of all aid flows, including the EC, but there is a time-lag or almost two years before getting the definitive data. Similarly, the World Bank's PPI database contains a vast collection of private infrastructure projects in developing countries, with related committed investment.

The most credited information on physical conditions of water resources is the FAO's AQUASTAT database. Though, it may contain obsolete data, as old as the end of nineties, due to the inability of developing countries' agencies to transmit the information. As the case of information on partner countries' national budget allocations, we are aware that much of these data lack and should be produced ad hoc. In particular, information at the basin scale is very scarce, in so making impossible the very foundations on any transboundary agreement.

Nonetheless, this is an area of intervention in which every euro spent will have a great value in terms of possibility to improve sector performance. We strongly advocate for the implementation of medium-term budget expenditure frameworks and integrated water accounting systems in developing countries. If anything deserves support in the form of cooperation processes for scientific and technological (S&T) advancement, this is reinforcing the knowledge base on which policy and strategic decisions are taken.

The lack of information is also strong as regards water governance indicators. At the moment, the only way of getting knowledge about how a country manages its water sector is the Baseline Survey of the Global Water Partnership, that classify the countries according to three stages of development of a IWRM national strategy. An attempt is being made of developing a more rigorous approach to measuring IWRM developments, though it is at the very beginning stages. We are confident that such information is being targeted at the moment and will give interesting results in the near future, in terms of finest partitioning of IWRM developments.

7.2 Suggested organizational structure

Implementing such a structured monitoring system as that presented in the present handbook requires a strict cooperation between the various EUWI levels, between the EUWI and the beneficiary countries and regional and international organizations, and within the Commission Services.

An ideal division of tasks would be the following.

- **Steering Group**
  - supervise the implementation of the system;
  - analyze findings and evaluate recommendations from monitors;
  - revise the strategy on the basis of any incurred changes;
  - recommend Working Groups to revise their strategy or work plan;

  - disseminate the results of monitoring.
- **Working Groups**
  - record implementation of activities (inputs, processes and outputs)
  - collect information on sector performance in the assisted countries
  - construct the indicators according to the methodology
  - transmit periodically the data to the Secretariat

- **Secretariat**
  - receive information by the WGs and check they quality
  - analyse data and provide recommendations
  - report to the SG

As regards the **time-frame for monitoring and reporting**, input, process, output and risk data should be continuously recorded by the WGs and transmitted yearly to the Secretariat. Conversely, outcomes usually materialize after a certain period of policy operation and are much more costly to measure. They can be also affected by other variations in the economy that can emphasize or destroy the effects of the activities undertaken and the outputs delivered. Therefore, we recommend measuring outcomes on a larger time span, say every three years, in order to give the effects sufficient time to come up.

Impacts also require time to materialize, even more than outcomes, and are extremely costly to measure. Moreover, a substantial time lag will be often required before monitoring agencies and stations collect materially the data and elaborate them before release. Thus, we recommend impact monitoring to be performed in an even larger time frame, for instance every five years.

As regards qualitative opinions about the beneficiary response to the EUWI, straightforward web-base questionnaires, run through the CIS platform, may allow partners and stakeholders to express their views in a simple and automatic way. The CIS is already endowed with such a facility for collecting partners' views, a tool that can be fully exploited by WGs' leaders to strengthen the adherence of the activities with the perceived needs and priorities.

Two final observations may be formulated. First, it may seem at first sight that of immediate concern of WGs' leader are only the input, process and output indicators of their activities, which they should regularly register. The collection of these data should indeed begin as soon as possible, in order to avoid relying on ex-post common knowledge or WG leaders' awareness of the relevant facts. But also the outcome, impact and risk indicators requires early attention. The Working Group's leaders should keep in mind that in a ten-year time it will be essential to get an appreciation of the value added of the EUWI. A successful experience is most probably able to promote the adoption of similar approach around the world, and again within the EU development cooperation. Hence, the Working Groups should act now to collect the relevant information, single out the sources of data, and organize data collection. This is key to depicting a baseline scenario, against which to assess future progress.

Second, a remark should be made on the work program of the EUWI WGs. As asserted in section 2.3, one of the critical issues for successful monitoring is structured planning, in the form of pre-existing work plans at all stages of policy implementation, against which performance can be assessed. The basic principle is being as more specific as possible, in order to facilitate quantification of targets. However, this need has to be traded off against the known limitation of the plan as an instrument of policy implementation, and the desire to reduce administrative burden and, therefore, costs.

We propose to revise slightly the format of the EUWI WGs' work program. The top side of table 7.1 reports the actual format of the work programs of the WGs, as recommended by the Steering Group. It can be noted that very little information can be drawn on the activities that will be realized. In particular, the expected outcomes and impacts of the planned activities are not shown. As a result, there is a huge gap between the purposes of the activities and the associated five EUWI objectives. This does not help structuring the logic of the interventions, and does not help monitoring in devising indicators.

We proposed a streamlined format of the work plan, that retains the basic structure of the original format, but improves in terms of logical articulation of the intervention and quantity of information produced. First, the schedule for the activi-

ties should be formulated in a very precise way, referring to a process indicators of the type suggested in section 5.3 of this handbook. For example, a common mistake is to phrase the activity in the following way: "further advancing the Country Dialogue". An alternative way of saying so, that will facilitate keeping track of the process, would be "advancing Country Dialogue X from step 1 to step 2", and so on for each and every Country Dialogue.

We suggest to record at this stage the planned inputs and outputs, so as to strengthen the means-end coherence of activity formulations, and to ease the record of activities data during monitoring.

We also recommend trying to formulate an expected outcome from each and every activity. This will further strengthen subsequent implementation, by stating clearly which are the induced behaviours that are intended to stimulate.

Finally, we see a closer link between the purposes of the activities and the objectives of the Working Groups, instead of the five EUWI general objectives. Following the approach taken in the present handbook, it should be evident that the cause-effect relationships work from the activity level to the Working Group level, and only afterwards, through the aggregate results of the regional level, they translate into EUWI overall effects.

Table 7.1 – Actual and proposed work plans of the EUWI Working Groups

Actual Work Plan for 2006

Activities	Targets/purpose per activity	Duration/completion date	EUWI objective no.

Proposed Work Plan from 2007 onwards

Scheduled activities	Duration / completion date	Inputs (type/number/€)	Outputs	Targets/purpose per activity	Expected outcomes	Expected Impacts
Precise tasks to accomplish, expressed in terms of process indicators	From (year/month) to (year month)	Personnel Goods and services Travels Etc.	Tangible (i.e. Road Map, Draft Plan, etc.) Intangible (i.e. increased awareness, stronger political will, etc.)	Expected benefits to the target group(s), largely under project management's control	A real world situation that is expected to attain	The broad sector impact to which the activity contributes (generally, one or more WG's objectives)

Conclusions

Developing a methodology for monitoring complex water policies is a tough task that requires careful analysis of the intrinsic logic of cause-effects relationships that govern the choice of an implementation strategy. The present handbook has made a path-breaking step in applying a logical monitoring framework to such dispersed activities as those emanating from a sector policy. New monitoring tools have been introduced, and traditional instruments have been revised to suit the need of building a consistent monitoring model across levels and phases of policy implementation.

The model developed has been applied to a contemporary international water policy, the EU Water Initiative, which posed major complications during the attempts to derive indicators of performance, given its special nature and the particular effects it is expected to produce. Yet, we believe that the effort has largely paid itself back, since a tailored monitoring methodology is now ready to be applied. This methodology links in a consistent way the objectives and results of the various actors that implement the EUWI, in so giving an overall picture of policy performance, without disregarding single regional and national effects that may be extremely useful for policy monitoring.

It is essential in this respect to endorse the present handbook at the highest levels and to disseminate it among policy-makers and managers, in order to ensure that all those concerned share the proposed approach, interiorize the methodology and apply it systematically, from policy design to implementation, to monitoring. In particular, the consistency analysis should be always carried out at the design stage, *before* policy implementation begins, in order to give a sense of how much the proposed initiatives fit the higher policy goals. It would help conceiving an implementation strategy that is consistent with the objectives to which they are functionally related. The consistency analysis could be also replicated once in a while, so as to verify that the implementation strategy is in line with the changed circumstances. Moreover, the consistency analysis is an essential precondition to identifying performance indicators that can be related to specific policy objectives.

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Notes

[1] See UNESCO (2006), p. 30-31.

[2] See UNCED (1992).

[3] See UNDESA (1992) §18.40-G

[4] UN (2002), Chapter 4.

[5] The Camdessus Panel of Experts is a 20-member World Panel on Financing Global Water Infrastructure, formed in 2001 as a joint initiative of several international agencies with responsibility for water. See Winpenny (2003).

[6] See for example Third World Water Forum (2003).

[7] Winpenny (2003), p. 35, emphasis added.

[8] The CSD has tackled the monitoring issue in several of its April meetings in New York, especially on CSD 6 (1998), CSD12 (2004), and CSD13 (2004).

[9] See Rogers, Hall (2003).

[10] See Anderson (1998).

[11] UNESCO (2006), p. 52.

[12] UNESCO (2006), p. 58.

[13] Winpenny, *ibid.*, emphasis added.

[14] Of this opinion, also Kusek, Rist, White (2004).

[15] Partzsch (2005).

[16] EUWI (2005a)

[17] See Annex for List of partners and membership criteria

[18] General Directions

[19] European Investment Bank

[20] 3 from NGOs and 3 from public and private water operators

[21] Eastern Europe, Caucasus and Central Asia

[22] Southern Mediterranean and Balkan Countries

[23] This definition is based on that provided in Casley, Kumar (1987), p. 2.

[24] See Laffont, Martimort (2002), Jost (1991), and McCubbins, Noll, Weingast, (1987).

[25] See Murphy, Marchant (1988).

[26] Story drawn and adapted from Smith (2001)

[27] UNESCO (2003).

[28] Based on Casley, Kumar (1988).

[29] See Mosse, Sontheimer (1996).

[30] World Bank (1996).

[31] Adapted from World Bank (1996).

[32] IRC-SHDC (2004).

[33] UNDESA (2003).

[34] There are indeed numerous definitions on the various initiatives that could be put in place to implement a policy. In particular, the concept of 'plan' is used interchangeably with that of 'strategy'. We prefer to use the latter to identify that particular policy level, since the concept of plan is too broad to be immediately operational, and may indeed be drafted for realizing all phases of policy implementation. Yet, we only aim at providing definitions that are easily understandable and that can be adaptive to various and changing circumstances. Hence, the provided definitions have not the intention to be considered as definitive.

[35] More formal techniques than that presented in this handbook are indeed available since recent years. One of those is 'theory-based evaluation', which allows in-depth understanding of the workings of a program or activity (its theoretical foundations). It works by mapping out the determining or causal factors judged important for success; on the basis of how they can interact, it can be decided which steps should be monitored. This allows for critical factors to be identified and reasonable proxies to be monitored. Though this technique may help focusing on desired and unintended side-effects, and thus facilitates focusing monitoring on key impacts, it is overly complex if the scale of activity is large, and may generate disagreement among stakeholders about which determining factors they judge important. See OED (2004). Hence, this handbook focuses on direct cause-effect relationships among policy objectives and policy implementation.

[36] Adapted from Yepes (2004) and EC (2004).

[37] Kusek, Rist, White (2004).

[38] The square root reduces the variability of the index and skews its values towards the higher part of the distribution.

[39] This in turn implies constructing and analyzing a sample of potential beneficiaries which do not in fact receive assistance, with the purpose of comparing their performance against that of assisted beneficiaries.

[40] See Shordt (2000).

[41] European Commission (2001).

[42] EUWI (2005b).

[43] Formally, the investment gap is: GAP = 1 – (actual investment / required investment).

[44] We are indebted to Andrew Cotton from WELL for raising this point at the 5th Meeting of the Monitoring and Reporting Working Group of the EUWI, held at the Water Week in Stockholm, on August 2005.

[45] The Relative Water Stress Index is the ratio of total water use (sum of domestic, industrial and agricultural demand or DIA) to renewable water supply (Q), which is the available local runoff (precipitation less evaporation) as delivered through streams, rivers and shallow groundwater.

[46] We are aware that obtaining this information may require time and a certain degree of judgment in performing desk analysis of the relevant documentation. But it should not be so difficult to discern whether or not water and sanitation is key in the poverty-reduction approach of a given country. This has been done by a number of studies and may well be contracted to a university, whenever a substantial change occur to the PRSP process in the country.

[47] OECD (2004).

[48] UNSD (2006).