

# ACP-EU WATER FACILITY ACTIONS IN ACP COUNTRIES

Reference: 9 ACP RPR 50 #20

9<sup>th</sup> European Development Fund



## Development of IWRM performance indicators for African Transboundary Basins management

*Final report*

July 2010



# TABLE OF CONTENTS

<b>ACP-EU WATER FACILITY</b> .....	<b>1</b>
<b>9<sup>TH</sup> EUROPEAN DEVELOPMENT FUND</b> .....	<b>1</b>
<b>TABLE OF CONTENTS</b> .....	<b>2</b>
<b>I BACKGROUND INFORMATION</b> .....	<b>3</b>
I.1 PROJECT TITLE .....	3
I.2 LOCATION .....	3
I.3 AMOUNT REQUESTED FROM THE EUROPEAN COMMISSION .....	3
I.4 SUMMARY .....	3
<b>II SUMMARY OF ACTIVITIES UNDERTAKEN DURING PREVIOUS REPORTING PERIODS</b> .....	<b>5</b>
<b>III SUMMARY OF ACTIVITIES UNDERTAKEN DURING THE REPORTING PERIOD</b> .....	<b>7</b>
III.1 PROGRESS TOWARDS PROJECT OBJECTIVES.....	7
III.2 PROGRESS TOWARDS ORIGINALLY FORESEEN ACTIVITIES .....	8
III.3 LESSONS LEARNT.....	10
III.4 GLOSSARY OF INDICATORS.....	12
III.5 HOW TO COLLECT, ANALYSE AND USE THE INDICATOR DATA.....	17
<b>IV OUTPUTS</b> .....	<b>22</b>
<b>V PERSPECTIVES</b> .....	<b>22</b>
<b>VI ANNEXES</b> .....	<b>23</b>
VI.1 EXTERNAL REVIEW .....	23
VI.2 STUDY ON SUSTAINABILITY.....	24
VI.3 STUDY ON VALORISATION ON THE RESULTS.....	25
VI.4 COST BENEFIT ANALYSIS .....	26
VI.5 LEAFLET .....	27
VI.6 RIVER BASIN MISSION REPORTS: .....	28
VI.7 HANDBOOK FOR THE USE OF IWRM KEY PERFORMANCE INDICATORS .....	29
VI.8 DEFINITION OF TECHNICAL INDICATORS .....	30
VI.9 SCORECARD TECHNICAL INDICATORS – APRIL 2010 .....	31
VI.10 DASHBOARD GOVERNANCE INDICATORS – APRIL 2010.....	32
VI.11 LETTER AND RESULTS ABV– APRIL 2010 .....	33

# I BACKGROUND INFORMATION

## I.1 Project Title

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Development of IWRM performance indicators for African Transboundary Basins management

## I.2 Location

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All African countries

## I.3 Amount requested from the European Commission

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Total eligible cost of the action	Amount requested from the European Commission	% of total eligible cost of action
342,475 < EUR >	256,800 < EUR >	75 %

## I.4 Summary

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<b>Duration of the action</b>	<b>35 months</b>
<b>Objectives of the action</b>	<b>Overall objective(s) :</b> <b>to support the implementation of IWRM principles in Africa</b> <b>to help Transboundary river basin organisations to develop good practices</b> <b>to co-train policy-makers, river basin organization managers and local stakeholders</b> <b>Specific objective :</b> <b>to develop and field-test African-tailored Performance Indicators of Transboundary River / Lakes Basin Organisations</b>
<b>Partner(s)</b>	<b>INTERNATIONAL NETWORK OF BASIN ORGANISATIONS (International)</b> <b>INTERNATIONAL OFFICE FOR WATER (FR)</b> <b>AFRICAN NETWORK OF BASIN ORGANISATIONS (International)</b> <b>ECOLOGIC (DE)</b>
<b>Target group(s)<sup>1</sup></b>	<b>Staff and stakeholders of African Transboundary basin organisations</b>

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<sup>1</sup> "Target groups" are the groups/entities who will be directly positively affected by the project at the Project Purpose level  
*Development of IWRM performance indicators for African Transboundary Basins management* 3/33  
Final report

	<b>Local consultants</b>
<b>Final beneficiaries<sup>2</sup></b>	<b>Populations of African Transboundary Basins</b>
<b>Estimated results</b>	<ul style="list-style-type: none"> <li>❖ <b>Organisation of a long-lasting working group of Transboundary basin organisations, under the leadership of ANBO – this group will work primarily on the development of African-tailored PI, but will then be able to work on other issues of African Transboundary basin expertise.</b></li> <li>❖ <b>Reviewed and field-tested Performance Indicators for African Transboundary basin organisations; this list will comprise all tools to help new basin organisations to implement them. The final list will be the fourth iteration.</b></li> <li>❖ <b>Sustainable PI scheme, operated and maintained by ANBO, under control of African Transboundary basin organisations ; this includes the communication tools (leaflet, package, web site), the revision procedures, a business plan.</b></li> </ul>
<b>Main activities</b>	<p><b>Activity 1 : ANBO and their member-organisations, volunteers to participate in the project (those who want to test the proposed PI scheme), will organise a specific working group (AWG) to adapt the preliminary PI scheme to the African context, in several steps. Partners will provide inputs to the AWG, by collecting basic data, and organising special training events for the AWG members.</b></p> <p><b>Activity 2 : Two pilot implementation of the PI scheme, one after the first review by the AWG, then after the second review, based on the results of the first test ; the first test will be run with the 5 pilot BO, and the second with an enlarged sample (up to 10, on a voluntary base).</b></p> <p><b>Activity 3 : At each step of the project, dissemination will be organised towards ANBO members, stakeholders and donors – a final conference will allow to describe the demonstrated benefits to potential new users, and to share the methodology and tools.</b></p> <p><b>Activity 4 : Following the tests, partners will design, together with the testers, the Sustainability Plan of the scheme ; a Cost-Benefit Analysis will be sub-contracted.</b></p>

<sup>2</sup> “Final beneficiaries” are those who will benefit from the project in the long term at the level of the society or sector at large  
*Development of IWRM performance indicators for African Transboundary Basins management* 4/33  
Final report

## II SUMMARY OF ACTIVITIES UNDERTAKEN DURING PREVIOUS REPORTING PERIODS

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In July 2010, the project has reached all its objectives, in line with original agenda and activities.

### Summary of initial period (September 2007 – August 2008)

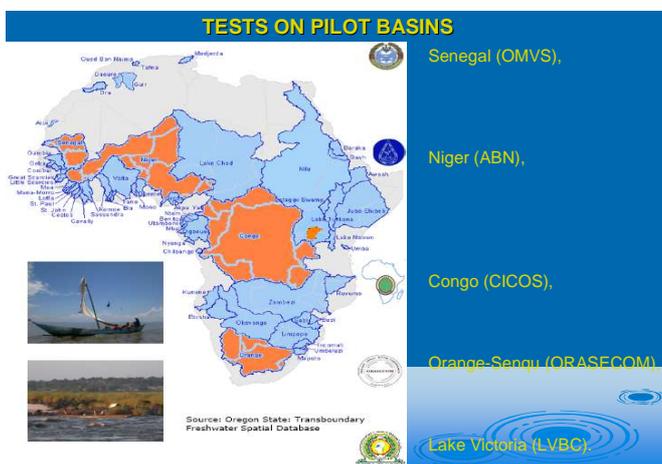
A **preparatory phase** was carried out internally between project partners in order to detail actions to be implemented. A preliminary review of key performance indicators (KPI) for IWRM was undertaken and related documentation prepared. In parallel, from the very beginning of the project (September 2007), INBO, ANBO and IOWater (Project Coordination) identified and mobilised a first group of basin organisations which would participate to the first testing phase of performance indicators. Thus, volunteer African transboundary basin organisations joined project partners and formed a specific Adaptation Working group (AWG) in order to adapt the KPI scheme to the African context.

A **training workshop** was prepared and organised in **Ouagadougou** (Burkina Faso) in **November 2007**. The main objectives of this kick-off event were:

- To provide background project information to involved basin organisations;
- To organise a first training session on Performance Indicators for Basin organisations, including:
  - Information on Performance Indicators : Concepts, historical background, purposes;
  - Experience feedback on use Performance Indicators for IWRM, in Africa and elsewhere;
- To propose and discuss on a preliminary list of Performance indicators to be used during the field-testing phases of the project;
- To exchange and agree on main activities and tasks to be performed during the first year of project implementation.

An iterative process with Project technical partners and basin organisations then allowed consolidating the set of performance indicators, finalised in April 2008. The full initial documentation included a background paper on performance indicators, four excel files for performance indicators assessment and fill-in process and a document on practical definition of technical indicators. This information had been released both in French and English languages for use in pilot basins.

**From April to August 2008**, some missions have taken place to Senegal (OMVS) and Niger (ABN), two pilot basin organisations, jointly with local service contracts.



**Fig 1. Five initial pilot river basins**

## Summary of 2<sup>nd</sup> period - September 2008 to September 2009

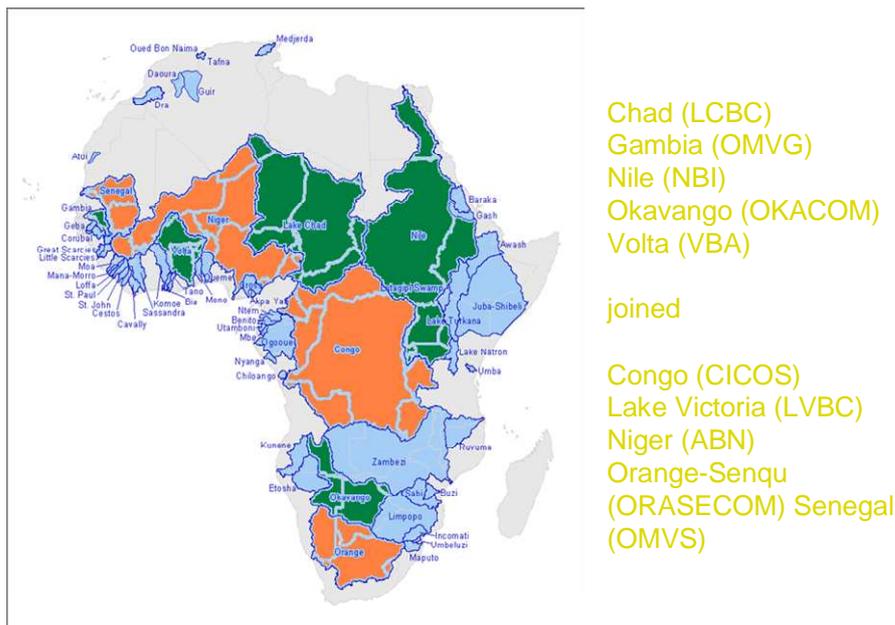
a. **New missions of technical assistance** have been led to various countries and RBOs, jointly with local workshops in order to support the pilot basins in the testing exercise of indicators, namely Congo (CICOS), Orange-Senqu (ORASECOM), Lake Victoria (LVBC) RBOs and Senegal (OMVS).

b. **A second workshop**<sup>3</sup> was organised in **Kinshasa** (Democratic Republic of Congo), from 17 to 18 of **October 2008**, in order to exchange on preliminary results achieved within the 5 pilot River Basins Organization and to go on with training activities. Adjustments, addition and selection of a future list of indicators have been reached. Intermediary lessons learnt from the exercise were also presented. Finally this **workshop** allowed drawing next steps of project implementation and the involvement of new RBOs within the next phases.

c. The period from **December 2008 to February 2009** allowed to going on testing the indicators set more deeply within the basins.

d. **A third Workshop**<sup>4</sup> was organised in **Istanbul** (Turkey) on 19<sup>th</sup> of **March 2009**, jointly with 5<sup>th</sup> World Water Forum. Project coordination was there very satisfied with a broad participation in the event: 22 participants, from 7 main Transboundary African Basins, including new partners and an interesting ownership shown by initial pilot basins.

### TESTS ON PILOT BASINS



Selected **pilot basins are widely spread on the continent**, presenting various significant water management issues, diverse legal and institutional frameworks, distinct social, economical and geographical contexts.

e. In line with Istanbul Workshop outputs, **from April to June 2009**, an in-depth review of existing document and elaboration of new ones has been realized, till a real **“Handbook for the Use of IWRM Key Performance Indicators in African Transboundary Basins”**.

f. **From July to September 2009**, the RBOs developed ownership and filled new sets.

<sup>3</sup> See Workshop minutes presented in Annexe 2 for more information

<sup>4</sup> See Istanbul Workshop minutes presented in Annexe 2

### III SUMMARY OF ACTIVITIES UNDERTAKEN DURING THE REPORTING PERIOD

#### III.1 Progress towards project objectives

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**Overall objectives :**

- to support the implementation of IWRM principles in Africa;
- to help Transboundary river basin organisations to develop good practices;
- to co-train policy-makers, river basin organization managers and local stakeholders.

**Specific objective :** to develop and field-test African-tailored Performance Indicators of Transboundary River / Lakes Basin Organisations

The overall objectives, core of project design, have being tackled with all along the project implementation phases. Moreover, some specific interesting outcomes can be pointed out.

The whole report is about this process of developing and field-testing KPI within African RBOs:

- Development of the indicators themselves (beginning of the project);
- 1<sup>st</sup> Workshop: Training and interactive workshop in Ouagadougou (November 2007)
- Finalising of the indicators sets (October 2007 to April 2008)
- 1<sup>st</sup> testing in 5 pilot basins (April to October 2008)
- 2<sup>nd</sup> Workshop : Feedback in Kinshasa (October 2008)
- Adapting indicators sets (end of 2008 to February 2009);
- 3<sup>rd</sup> Workshop in Istanbul : balance of first phase and beginning of second phase (March 2009);
- Developing products, based on 3<sup>rd</sup> Workshop recommendations (April to June 2009);
- 2<sup>nd</sup> testing of newly defined indicators on a broader sample of River Basins (June to October 2009)
- Final Conference in Dakar : last adaptation of Indicators sets ; communication; involvement of other stakeholders and donors.

The goal of the Key Performance Indicators project was to elaborate a common set of indicators, both for **Governance** and **Technical** Aspects. This set could then be adapted, few by few, by each River Basin Organisation, to its own context and priorities. All meetings that have been realised allowed to train stakeholders, mainly RBO managers, and to create awareness among them. **Ownership** has been promoted during the whole project.

### III.2 Progress towards originally foreseen activities

The foreseen activities were indicated as follows within the project proposal:

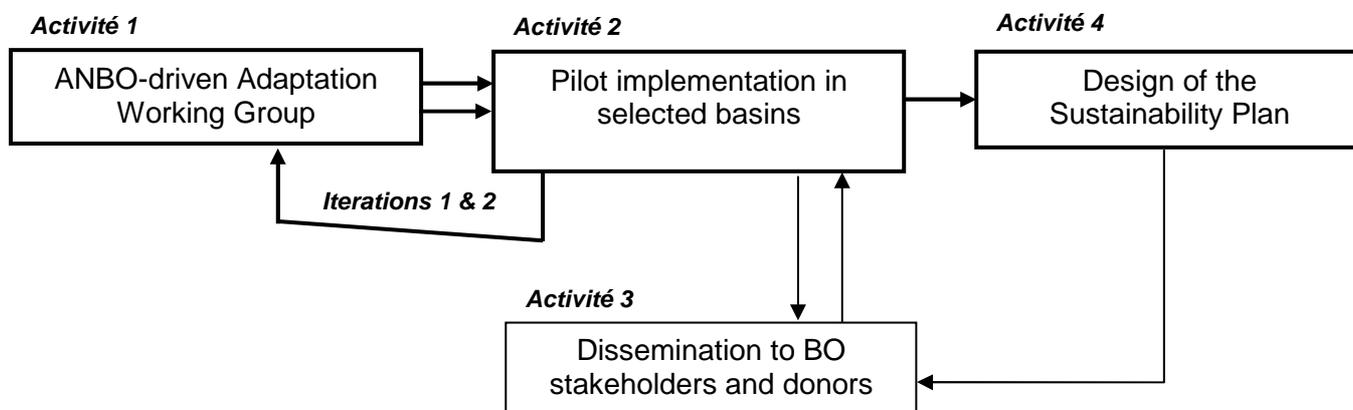


Table 1: Status and achievements per activity

Activity:	Definition as in the proposal	Status	Main achievements :
Activity 1	<i>ANBO and their member-organisations, volunteers to participate in the project will organise a specific working group (AWG) to adapt the preliminary PI scheme to the African context, in several steps. Partners will provide inputs to the AWG, by collecting basic data, and organising special training events for the AWG members.</i>	Realised	Achieved during first period.
Activity 2	<i>Two pilot implementation of the PI scheme, one after the first review by the AWG, then after the second review, based on the results of the first test ; the first test will be run with the 5 pilot BO, and the second with an enlarged sample (up to 10, on a voluntary base).</i>	Realised, including a Third round of testing	<ul style="list-style-type: none"> <li>○ Interim workshop and training session on “tests within the 5 pilot basins” - October 2008</li> <li>○ First review on October 2008, completed till March 2009</li> <li>○ Selection of 5 new basins for second phase - March 2009</li> <li>○ Second pilot implementation of PI scheme from July 2009 to the date</li> <li>○ Third testing implementation from March 2010 to the date</li> </ul>

Activity 3	<b><i>At each step of the project, dissemination will be organised towards ANBO members, stakeholders and donors.</i></b>	Realised	<ul style="list-style-type: none"> <li>○ <b>A dedicated project website was elaborated</b> –<i>November 2007 till the date</i></li> <li>○ <b>Information given within INBO and ANBO newsletters or events</b> <i>October 2007 to the date</i></li> <li>○ <b>Specific event within WWF in Istanbul</b> - <i>March 2009</i></li> <li>○ <b>Specific intervention within Euro-China Session in Istanbul, on this KPI experience</b> – <i>March 2009</i></li> <li>○ <b>Final Conference in Dakar, communication</b> - <i>January 2010</i> <ul style="list-style-type: none"> <li>○ <b>Posters and folders</b></li> </ul> </li> </ul>
Activity 4	<b><i>Following the tests, partners will design, together with the testers, the Sustainability Plan of the scheme ; a Cost-Benefit Analysis will be sub-contracted.</i></b>	Realised	<b>Corresponding studies subcontracted and realised</b>

### **III.3 Lessons learnt**

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Last period has allowed to still improve the design of the indicators and to adapt corresponding Handbook. The purpose of this Handbook is to assist technical experts and representatives of basin organisations in their use of the Governance and Technical Indicators developed and applied in the context of the KPI project.

This Handbook is designed to be used in conjunction with the indicators provided in the accompanying Scorecards (Excel spreadsheets). It provides information on the role of the indicators, a glossary of the governance and technical indicators. The Handbook also proposes instructions on how to gather and analyse indicator data and how to provide reports on the indicators, as well as how to use them for communication with stakeholders.

The aim of the handbook is to ensure that a stakeholder who is informed but not necessarily fluent in IWRM or indicator concepts will understand how the performance indicators developed in this project are used, the implications of their use for transboundary IWRM, and the process of developing the indicators within this project.

The development of the handbook thus follows the recommendation of the participants of the project workshop held on occasion of the 5th World Water Forum in Istanbul in March 2009. Here, a strong demand for more clarifying information was voiced in order to provide for more transparency and reproducibility of the indicator selection process.

On the basis of the handbook, main outcomes and raising issues from various exchanges that occurred up to the end of the reporting period are presented hereafter.

#### **III.3.a Indicators organisation**

Two groups of indicators are designed for basin organisations that manage lakes, rivers or groundwater resources which cross international boundaries. The 20 Governance Indicators assess how basin organisations are organised, in relation to the main lines of the IWRM (political aspects, legal, institutional and organisational framework, finance mechanisms, participation, programming and information and communication systems); the technical indicators (15) assess programme outputs and qualify the progress of the “situation on the field”. They therefore enable an assessment of the degree of knowledge about and management of water resources, uses and basin users. The range of indicators is always context dependent and needs to be interpreted according to the basin's unique institutional arrangements (agreements, funding, functions, purpose), hydrological conditions, stage of economic development and capacity of the organisation's staff. All indicators can be applied broadly at the whole of basin scale, but some of the indicators will also operate at the sub-basin level. Both groups of indicators are presented in Excel spreadsheets to allow for easy scoring. The Governance Indicators comprise a Scorecard and a Dashboard, which shows summary results. The Technical Indicator Scorecards serve the purpose of systematically collating the respective indicator value.

### III.3.b A note on variables, indicators, indexes and their use

Indicators are one step in a process of providing information to assist water resources planning, development and management, as shown in Figure 1 below. These steps represent different stages of information collection, analysis and presentation. One way of thinking about the three items is as follows:

“Indicators take variables and condense them into manageable information sets, which are then further condensed by indices. These can be translated into policy-oriented information.”

(Source: Lorenz (1999) et UNECE (2003), Chapitre 3, p.34).

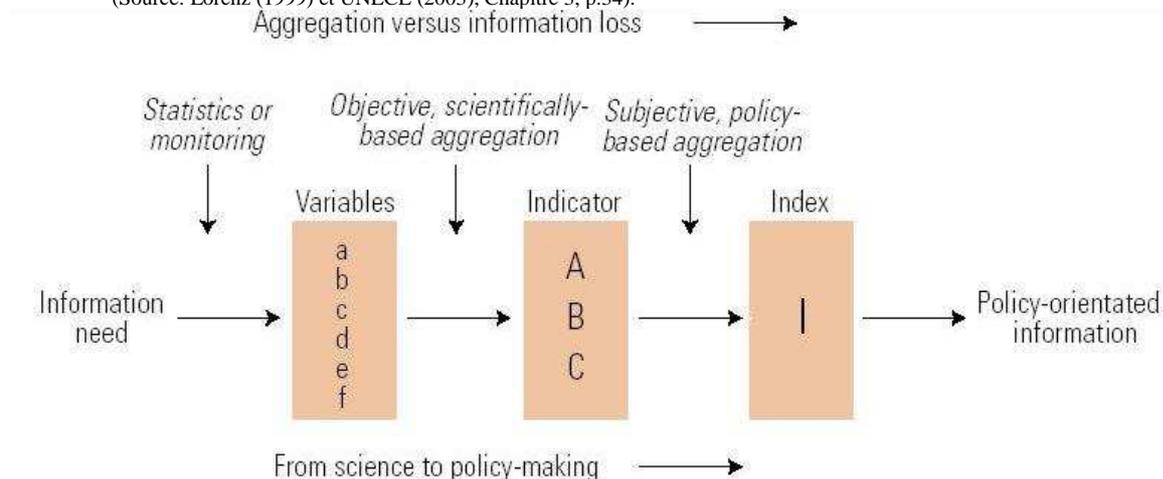


Figure 1. Translation of an information need into policy-oriented information using variables, indicators and indices.

Thus, indicators can be used to advise water policy. In the case of this project, indicators advise on how effective IWRM implementation is. This allows the staff and stakeholders of basin organisations to answer questions like: ‘How well are we doing’, ‘what have we achieved’ and ‘where do we need to improve’.

An expert in the domain, Lorenz clearly defines the difference between a *variable*, an *indicator* and an *index* - see Table 1.

**Table 1 – Terms and definitions of variable, indicator and index**

A **variable** is an observed datum derived by using basic statistics or monitoring, such as amount of rainfall or runoff, or number of diarrhoeal cases. Indicators are derived when the basic variables or observed data are aggregated using objective and scientific methods; for example mathematical aggregation of evaporation and transpiration data provide an indicator on evapotranspiration. When such core indicators are lumped together we get an index, for example, the aridity index of an area, which can be constructed by aggregating different indicators on water availability and use.

An **indicator**, comprising a single data (a variable) or an output value from a set of data (aggregation of variables), describes a system or process such **that** it has significance beyond the face value of its components. It aims to communicate information on the system or process. The dominant criterion behind an indicator’s specification is scientific knowledge and judgment.

An **index** is a mathematical aggregation of variables or indicators, often across different measurement units so that the result is dimensionless. An index aims to provide compact and targeted information for management and policy development. The problem of combining the individual components is overcome by scaling and weighting processes, which will reflect societal preferences.

The aggregation of variables into an indicator may be likened to combining the annual withdrawal of surface and groundwater into the total annual withdrawal. An index combines for example, the withdrawal with the availability of water to indicate water stress. The emphasis in an index is not on scientific justification, but on responding to the societal needs.

Source: (United Nations Economic Commission for Europe (UN-ECE) 2003) p. 33.

Further work would be needed to develop a whole ‘IWRM index’ but it would most likely have little meaning. Practitioners in basin organisations want details on the outcomes of specific management practices.

Part assessment tool and part communication tool, indicators must be able to reflect specific results obtained, and flexible enough to take into account local realities. Their precision is therefore shown not in terms of quantity, but in terms of indicator quality.

In the Scorecards for the Governance Indicators (Excel spreadsheets), themes can be broken down into several indicators. For example, in the Political Processes theme there are two indicators: 'political connection' and 'benefit sharing'- see section 2.1 below. The themes are like indices of specific areas of governance and give an overall impression of how well that theme is going. They also allow some broad comparison of efforts between themes and between basin organisations. One must, however, be careful to not overstate these comparisons, as they depend on the methods used for reporting the indicator values. This issue is taken up further in Section 3 below.

### **III.4 Glossary of Indicators**

This section provides meanings of each Governance and Technical Indicator.

#### **III.4.a Governance Indicators**

The 20 Governance Indicators are grouped into seven themes:

- **Theme 1: Political process**

This theme enables an assessment of the quality of states' commitment and their involvement in the basin organisation's structures. Initially, "policy connection" is achieved through the gradual construction of a state policy that makes water resources a priority issue. The process then continues with the state connecting at international level by involving itself in the basin organisation's governance and operations. A sure indication of whether this political process has been successful is when the benefits gained from the use of resources are fairly shared out.

<b>ID #</b>	<b>Indicator</b>	<b>GLOSSARY - Meaning of each indicator</b>
G1	Political connection	State policy involved in the governance and running of the basin organisation body
G2	Benefit sharing	Benefit sharing mechanism exists to share water resources equally between basin countries

- **Theme 2: Financial mechanisms**

Financial mechanisms and sources are indispensable to the long life of the basin organisation. By assessing these variables, it is possible to measure the organisation's capacity to assure sustainable, coherent and coordinated funding that is focused on the structure itself and on seeing through its objectives.

<b>ID #</b>	<b>Indicator</b>	<b>GLOSSARY - Meaning of each indicator</b>
G3	Ongoing financing	Financing for basin management exists and is ongoing despite changes in the administration of each basin country
G4	Financing consistent with targets	Genuine mobilisation of funding for developing basin management in line with budget programmed in 10-year Management Plan
G5	Efficiency	Ratio established between the RBO running costs and the funding mobilised for putting the Management Plan into effect in the basin
G6	Application of user-payer and polluter-payer principles	Contributions from water users in the basin to be employed for operational activities and/or investments in the basin
G7	Donor coordination	Coordination between donor organisations exists to ensure programs and projects are linked

- **Theme 3: Representation and participation**

These indicators refer to a range of issues regarding representation. Firstly, the balance across the different riparians within the river basin is studied. Secondly, do specific mechanisms exist to guarantee stakeholder participation in decision-making?

ID #	Indicator	GLOSSARY - Meaning of each indicator
G8	Representativeness	Balance of political representation (in decision-making bodies) and technical representation (in the executive) in RBO member countries
G9	Water user participation	Mechanisms exist which allow water users at the lowest level to participate in the decisions of basin organisations (involving women and impoverished populations)

- **Theme 4: Legal system**

To support sustained transboundary cooperation, states need to set up an ad hoc legal system that creates an enabling environment for water management. Laws establish the basin organisation's attributions and degree of authority. A key issue is to measure the conformity and mutual coherence of all of the national laws vis a vis laws with regional scope. The legal system's influence is appraised using these two indicators at regional and national level.

ID #	Indicator	GLOSSARY - Meaning of each indicator
G10	Legislation at basin organisation level	Legal framework exists relating to the basin organisation's mandate, structure, financial base & regional water management, adapted to IWRM requirements
G11	Conformity between national and regional legislation	National laws on water are mutually conform to basin organisation texts

- **Theme 5: Planning**

There are a number of variables that influence the quality of water resources planning. By definition, the planning process involves implementing a strategy devised over the long term and which takes into account the objectives and directions of a basin management plan. Possessing a planning document is not, however, enough in itself. It is also necessary to assess the implementation of key stages in order to obtain a clear vision of how its objectives are achieved. The indicator on decision-making processes for infrastructures also brings up issues of conformity, durability, transparency and benefit sharing.

ID #	Indicator	GLOSSARY - Meaning of each indicator
G12	Planning process	There is a planning process with clearly defined objectives, mutually beneficial goals and development priorities, all stated in a long-term integrated basin management plan
G13	Plan implementation	Implementation of the key stages of the basin management plan
G14	Decision-making process for infrastructures	Decision-making process on investment is clearly set out for large infrastructures with a transboundary impact, including international recommendations for transparency, sharing of profits and sustainability (reduction of poverty and social and environmental constraints)

- **Theme 6: Functional Coordination**

The coordination of activities represents a sensitive stage in the management plan's implementation. Operationalisation depends on the basin organisation's capacity to coordinate

the activities of stakeholders in their various roles and responsibilities. This implies setting up structures to facilitate coordination between national and regional levels. To avoid fragmentation and lack of understanding within these different intervening bodies, it is important to use the appropriate coordination tools (based on participation). In addition, setting up a general reporting system improves communication on results achieved.

ID #	Indicator	GLOSSARY - Meaning of each indicator
G15	National / regional interface	Concept and operation of national focal point.
G16	Coordination tools	Technical tools for participation and joint action plans are in place for managing water between basin countries in a transparent manner (i.e. water allocation, coordinated management of constructions, etc.)
G17	Overarching reporting mechanism	Mechanism whereby basin organisations report to government administrators on the results achieved through implementing policies

- **Theme 7: Information and communication system**

The aim of these indicators is to structure information management. This involves setting up an appropriate information and communication system for gathering strategic information. Management and information protocols are useful for establishing a framework for shared and standardised information. The notions of information and communication are vital to basin organisations' aspirations and constitute decision-making aids for planning water resources and coordinating activities.

ID #	Indicator	GLOSSARY - Meaning of each indicator
G18	Information management system	Shared information system (including geographical, characterisation, environmental, etc. aspects) to aid decision-making
G19	Information management protocol	Protocol specifying the types of information needed, their presentation and ways of exchanging information using the RBO's information management system
G20	Communication	Basin organisation's external and internal communication procedures

#### III.4.b Technical indicators

In the following section we present an outline of the technical indicators proposed for use in the context of the project. The technical indicators are structured in four categories representing the major risks encountered at a river basin level.

- Risk of excessive exploitation of water resources: addressing quantitative aspects of water management at a basin scale,
- Risk of deterioration of water resources: addressing qualitative aspects of basin management,
- Risk of deterioration in populations' living conditions: addressing socio-economic and livelihood aspects at the basin scale,
- Risk of deterioration of the environment, which takes into consideration, other environmental factors besides.

The following section details the meaning of the Technical Indicators proposed.

<b>A. Risk of excessive exploitation of water resources</b>
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<b>A.1. Increase the safety of the water supply to users.</b>		
<b>ID #</b>	<b>Indicator name</b>	<b>GLOSSARY - Meaning of each indicator</b>
T1 T2	Regulated volumes compared to input flows	This indicator denotes the volume contained in dams in comparison to the received input flows The indicator is based on two sub-indicators: • T1: volume regulated by all dams • T2: volume regulated by all shared large dams. Unit: Percentage
<i>A.1.1 Assure and optimise water requirements for irrigation</i>		
T3	Proportion of agricultural land irrigated	The surface area of irrigated zones expressed as a percentage of the total surface of agricultural land. Unit: Percentage
T4	Physical efficiency of distribution and transport networks	Assesses stakeholder achievements in saving water. The main objective is to stabilise demand for water and diminish loss and wastage during transport. This involves the relationship between the volume of water actually distributed to plots of land and the total volume of water allotted to irrigation ahead of networks.
<i>A.1.2 Monitor resource development</i>		
T5	Number of gauging stations for hydrological monitoring of the basin	Number of stations for measuring developments in the quantity of water resources in the basin.
T6	Number of piezometric monitoring points	Number of piezometers placed around the basin for monitoring variations in ground waters.
<i>A.1.3 Anticipate the risk of human conflict</i>		
T7	Number of points with conflict of use linked to water availability (ground and surface waters)	Basin organisation draws up inventory of different conflicts of use linked to water availability. Listed using an assessment grid or a score card. (Final goal: to anticipate and prevent conflict)

<b>ID #</b>	<b>Indicator name</b>	<b>GLOSSARY - Meaning of each indicator</b>
<b>B. Risk of deterioration of water resources</b>		
<b>B.1 Monitor water quality</b>		
T8	Number of gauging stations for hydrological monitoring of the basin	Setting up gauging stations for monitoring water quality to assure balanced and sufficient water coverage of the hydrographic network in order to ascertain the impact of human activity and obtain a reference frame for development operations or restoration of the watercourse.
T9	Number of points with conflict of use linked to deterioration of water quality.	Basin organisation draws up inventory of different conflicts of use linked to water quality. Listed using an assessment grid or a score card. Final goal: to anticipate and prevent conflict

<b>ID #</b>	<b>Indicator name</b>	<b>GLOSSARY - Meaning of each indicator</b>
<b>C. Risk of deterioration in populations' living conditions in the basin.</b>		
<b>C.1. Improve sanitation</b>		

ID #	Indicator name	GLOSSARY - Meaning of each indicator
<i>C.1.1 Halve, by 2015, the population of the river basin without access to sanitation (public, semi-public, private)</i>		
T10	Coverage rate of river basin's population with access to basic sanitation	This indicator measures the proportion of the total population, i.e. rural and urban, with access to improved sanitation. Unit: Percentage
T11	Proportion of wastewater collected and processed by public sanitation systems	This indicator measures the proportion of wastewater produced in urban areas that is both collected in a public network (from households, public bodies, industry) and treated sufficiently that it may be discharged into the natural environment without having an impact on human health or ecosystems. Unit: Percentage.
<b>C.2 Improve access to water supply</b>		
<i>C.2.1 Halve, by 2015, the population of the river basin deprived of regular access to drinking water.</i>		
T12	Proportion of the population with sustainable access to an improved water source	Access to an improved water source means having easier access to drinking water. Access must also protect drinking water sources from any outside contamination. Unit: Percentage
<b>C.3 Anticipate natural risks</b>		
<i>C.3.1 Anticipate the risk of uncontrolled flooding</i>		
T13	Number of sites at high risk	Basin organisation regulations must define rules for ascertaining the characteristics of high-risk sites and take the necessary measures to reduce risks

ID #	Indicator name	GLOSSARY - Meaning of each indicator
<b>D. Risk of deterioration of the environment</b>		
<b>D.1 Protection of species and aquatic environments</b>		
T14	Number of nodal points fixing a minimum flow for aquatic environments	This indicator measures the number of significant nodal point on the main waterway, at which flow is maintained to guarantee the life, circulation and reproduction of species inhabiting the waters.
<b>D.2 Protection of wetlands</b>		
T15	Surface area of wetlands	This indicator measures the total surface area of wetlands in the river basin, including the surface area of those national sites included in the RAMSAR Convention's list. Unit: Square kilometres.

Moreover, some indicators may be added in order to represent specific basin contexts and priorities. For instance, these could follow additional categories suggested by RBOs

Land degradation	Approximate area of land degraded Unit: Square kilometers.
Invasive species	Risk to endemic species (numbers/area)
Water for navigation	Assessment of water guaranteed for navigation
Proportion of municipal wastewater treated on site	Measures the proportion of wastewater produced by municipalities that receives sufficient autonomous treatment to allow it to be discharged into the environment without having any impact on human health or ecosystems. Unit: Percentage.

### **III.5 How to Collect, Analyse and Use the Indicator Data**

This section provides information on how to collect data on each indicator, how to analyse the data once collected, and how to use the indicator data in a basin organisation's reporting mechanisms.

#### **III.5.a Data collection on Governance Indicators – using the scorecards**

- **Who completes the scorecards?**

Senior staff of transboundary basin organisations in Africa are the primary users of the indicators developed in this project and should therefore complete them.

It is desirable to do this as objectively as possible, and one way to do this initially is to discuss the response to each indicator using a small group of senior staff of the basin organisation – say 2-5. The time taken to do this will vary, but a one-day workshop is a preferable time frame.

Self-assessment by basin managers rather than external evaluators has the advantage of creating:

- greater ownership of the tool and an awareness of its relevance;
- intimate knowledge of the basin and the basin organisation strengths and weaknesses ;
- knowledge of the resources available to remedy faults and build on successes.

However, it has the following disadvantages linked to:

- difficulty of seeing the 'bigger picture' of national and state agendas in natural resources management;
- difficulty of representing all stakeholder interests;
- potential competitive spirit between basin organisations that could detract from an objective approach.

Ultimately and ideally, four groups could score the indicators:

- The senior staff of the basin organisation (as above) - the scorecard can be used internally as a quality assessment and performance-monitoring tool. It provides the basin organisation with assessments of progress made that it can compare with its organisational objectives. It also provides a 'road map' for implementing IWRM;
- National authorities of the member countries to whom the basin organisation reports and with whom they work - the scorecard can be used externally to provide outside interests with a mechanism to review the basin organisation's progress from the perspective of a stakeholder;
- Civil society and water users in the basin; the scorecard can be used externally to provide outside interests with a mechanism to review the basin organisation's progress; and
- Donor responses funding water projects and/or supporting the basin organisation itself.

These responses should not be combined, rather compared and contrasted to provide a four-way view of effectiveness of the basin organisation. Thus the scorecards provide a four-way performance evaluation approach which adds value to internal performance reviews undertaken solely by the basin organisation and give a broader perspective of achievements in IWRM.

- **How often do you report?**

The reporting system outlined here can be used every two years to provide ongoing updates of improvement in governance and to identify the necessary corrections. This period will allow changes to become apparent; any shorter would be wasteful.

- **Giving a score:**

The objective is to be able to measure as precisely as possible the progression of the indicators in the governance process. The determination of the results is therefore done via two inter-dependent approaches:

- Effectiveness assessment: Progression of activities, performance of initiatives;
- Identification of evidence: justification of results and progress achieved.

The templates attached, in the form of Excel spreadsheets, are designed for you to record responses.

**a. Assessing “effectiveness”**

Effectiveness refers to the usefulness, the efficacy of those actions, and to their results. If an action is effective, it means it caused something to happen, it produced a result.

Each theme includes a number of indicators organised on a graduated scale in the range of 0 (very little) to 5 (very much). The results obtained for each indicator are then aggregated to form theme totals. The themes are then displayed on a Dashboard (expressed as % achievement) in a second Excel spreadsheet, accessed on a tab at the bottom of the screen in each Excel file. Here is an example of how to answer:

ID #	Indicator	GLOSSARY – Meaning of each indicator	Effectiveness (assessment)	Evidence (Identification)
G2	Benefit sharing	Benefit sharing mechanism exists to share water resources equally between basin countries	4	A

If interesting results exist relating to benefit sharing, then the score will be progressively higher depending on whether the basin organisation has:

- launched a study on the issue (e.g. score 1) ;
- obtained political consensus on the subject (e.g. score 2) ;
- benefit sharing already exists in a shared dam for example (score 4 or even 5).

**b. Identifying “evidence”**

Evidence is a way of showing progress made on the theme in question. It might correspond to:

- Approved Terms of Reference;
- Consultant contract for a study under way;
- A decision note from the Council of Ministers;

- A law under ratification;
- etc.

Proof calls for an identification and not an assessment approach. Attaching too much importance to the proof would be contrary to the strategic approach that underlies the general principles of IWRM. Consequently, this item needs to be qualified using a letter from the list supplied at the bottom of tab 1 on the Excel spreadsheet (several sources can be mentioned). In the absence of any evidence whatsoever, the indicator score will be nullified.

**Sources of information used to score each indicator (you can use more than one):**

#	Type
a	PROJECT REPORT
b	MINUTES OF MEETING
c	LAW
d	FINANCIAL ACCOUNT
e	GUIDELINE
f	PERSONAL OBSERVATION
g	PLANNING DOCUMENTS
h	QUALITY ASSURANCE PLAN
i	REPORTING MECHANISM
j	OTHER

**III.5.b How to analyse the scores on Governance Indicators**

The scorecards should be analysed for meaningful use by basin organisations. The overall score for each theme is generated by the Dashboard. Depending on this score, it might for example be appropriate to:

- Urgently attend to the issue and rapidly mobilise funds;
- Seek stronger political mobilisation;
- Look for more funding in the basin and international aid;
- Develop major projects;
- Develop short-term objectives (< 3 years) and start immediate actions within a general action programme;
- Focus on ownership building with key shareholders;
- Encourage staff motivation and improve human resource policies;
- Undertake a review assessment of the action programme to ensure feedback on successes and failures;
- Focus efforts on low-score areas;
- When appropriate, celebrate successes and reward staff without losing sight of encouragements needed.

The results allow the user to compare their performance against best practice IWRM for basin management. They reveal successes and where further efforts are needed.

- **Discussion of results**

There are no hard and fast rules about the scores basin organisations achieve in using these scorecards - they are indicative only. They need to be used cautiously because of the relatively small number of people scoring each item.

It is difficult to use a simple comparison of basin management experiences as a means of providing a performance indicator template suitable everywhere, even within one country! Conditions are dynamic over time and space in basins. There are differences in mandates, funding levels, capacity of organisations, the basin's physical features, levels of economic development, institutional arrangements and natural resources management programmes. These influence how performance indicators can be applied. Highly developed water institutions and wealthy economies have more capacity to develop basin organisation, than those with less capacity, and have quite different mandates with respect to sustainable development.

So caution is needed when using the performance indicators in the Scorecards. However, the principles and functions are based on best practices as they are currently known and, to that end, the results of applying the indicators can be done with some confidence.

### **III.5.c Data collection on Technical Indicators**

Data collection for the Technical Indicators is somewhat different due to their nature and also because there are concrete, objective methods to apply.

As a consequence, there is considerably less focus on self-assessment, but rather on the exercise of collecting the necessary data and calculating the respective indicators.

- **Who completes the data sheets?**

At first, monitoring and technical staff at river basin level is responsible for deriving the indicators. At the same time, they should be cross-checked with senior management of the RBO as well as key stakeholders, as they sometimes hold their own data sheets.

- **Completing the data sheets**

Methods for deriving indicators are described in detail in the data sheets for each indicator, provided as an annex to this document. Values should be determined with the data available at the river basin organisation. Data should be collated in the Scoresheets also provided in the Annex.

- **How often do you report?**

Experience has shown that in some cases sufficient data are not available to fill in the indicators. In this case, a short assessment should be undertaken as to which data could be made available within a reasonable timeframe and at reasonable costs. A yearly analysis can be imagined on these indicators.

### **III.5.d How to analyse the scores on Technical Indicators**

The technical indicators describe the main determinants of a river basin, in terms of managing the major risks to environment as well as livelihoods. While at this stage it might be too early, eventually the Technical Indicators could serve as efficiency checks, especially if collected over a longer period of time.

In addition, the indicators could be used as benchmarks in order to better map progress made over the years.

There is also the possibility of linking the Governance and the Technical Indicators as they reflect different instances of the policy cycle. This would eventually allow for efficiency assessments at the basin level. This information could then be used to communicate to a wide range of stakeholders. At the same time, it needs to be taken into consideration, that there is no direct causality between Governance at the RBO level and the characteristics represented by the Technical Indicators. Rather transboundary water governance only represents one of the defining factors.

### **III.5.e Application of Results to Basin Organisation Reporting Mechanisms**

- **Administrative Structures**

A structure (permanent Executive Secretary) that has internal human and material resources possesses the keys to correctly managing the indicators. The workshops used in this project identified this factor as critical to using the performance indicators. Senior staff of basin organisations needs to recognise the time commitment required to use the performance indicators – one way to do this is to schedule their use in the reporting mechanisms.

- **Reporting Mechanisms**

Every basin organisation has a form of reporting: be it to those who fund the organisation, to the basin stakeholders, or to its users.

The four-way reporting process outlined in Section 3.1 (reporting to (i) basin organisation, (ii) national authorities of member states (iii) civil society and users and (iv) donors) can also be used as the method to report to these four groups. This can add value to purely internal performance reviews and can give a broader perspective of achievements in IWRM.

Lastly, the scorecards should be used to draw up a 'road-map' of the types of functions for effective basin management. Repeated use by trained users will improve the consistency and reliability of the system.

- **Accounting for Investments in Basin Management**

Basin organisations are increasingly being asked by their donors to report on the results of donor investments - 'investment accounting'. These are complimentary economic analyses of basin management. It is recommended that these investment accounts be backed on to the Governance and Technical Indicators to reveal the true economic, environmental and social benefits and dis-benefits of river basin management investments.

## IV OUTPUTS

Thanks to the project and to the deepness of ownership that has been reached, performance indicators are now considered as a good mean to achieve improvements in IWRM and governance within involved River Basin Organisations. Indeed, ownership has been the main concern of the project. The adaptation of the tools has been done involving African stakeholders themselves, through the Adaptation Working Group and during the participatory process implemented at local level to fill the “achievement rating” of the PI.

Thus, current PI are seen by the stakeholders as a key tool, supporting decision making and policy definition. They are not seen as a ‘one-shot’ tool, but rather as a long-term monitoring and orientation tool, which draws on the cumulative effect of the learning process associated with its use and its structure.

The procedure used during the project allowed developing an African expertise on IWRM, as BO managers were deeply involved in Indicators definition and assessment processes. Moreover, various basins started in depth discussion with other levels, particularly national level of RBO member States.

The Logical Framework, that had been designed, proved to be realistic.

<i>Without action</i>	<i>With action</i>
Every BO try to develop their own philosophy about IWRM implementation	An Africa-adapted and shared list of Performance Indicators lead to a common approach
Stakeholders have no means to monitor the local process	Publicly available PI make the process transparent
Stakeholders have a poor capacity to be involved in the public participation with their word	They know what are the key-points and the milestones of the process ; they identify the knowledge they need
No consolidated African expertise is visible	The competencies of African BOs and consultancies are highlighted and validated
IWRM will take decades to be implemented in Africa	IWRM principles are widely applied within the 10 following years

## V PERSPECTIVES

The project reached a Sustainable PI scheme, under control of African Transboundary basin organisations, including communication tools (leaflet, package, web site).

Staff and stakeholders of Transboundary BO now have real capacities. PI scheme is helpful to BO management to work closely with their funding environment (the governments of their members states, the Development agencies, the donors institutions), in order to secure sustainable development projects. On a long-term perspective, confidence and trust are developed between all parties involved in water management at basin scale, thanks to the transparency that this PI scheme implies.

## **VI ANNEXES**

### ***VI.1 External review***

## ***VI.2 Study on Sustainability***

### ***VI.3 Study on valorisation on the results.***

## **VI.4 Cost benefit analysis**

## **VI.5 Leaflet**

**VI.6 River Basin Mission reports:**

- LCBC
- OMVS
- OMVG

## ***VI.7 Handbook for the use of IWRM Key Performance Indicators***

## **VI.8 Definition of Technical Indicators**

## ***VI.9 Scorecard Technical Indicators – April 2010***

## ***VI.10 Dashboard Governance Indicators – April 2010***

***VI.11 Letter and results ABV– April 2010***