

NEEDS ASSESSMENT AND CONCEPTUAL DESIGN OF THE NILE BASIN DECISION SUPPORT SYSTEM CONSULTANCY

# **NILE BASIN DECISION SUPPORT SYSTEM**

## **FINAL INCEPTION REPORT**

### **ANNEX B: Stakeholder Consultation Plan**

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## 1 Introduction

One of the four objectives of the inception phase of the conceptualisation and design of the Nile Basin Decision Support System is the identification and selection of stakeholders for the decision support system. This annex deals with the selection of stakeholders that need to be consulted during the needs assessment phase for the development of a conceptual design of the Nile Basin Decision Support System Project. As a starting point the political-administrative and hydrologic structures need to be taking into consideration. The political-administrative structure for the Nile Basin is formed by organisation structures at international, national, sub-national and local levels. The river basin, sub-river basins and the sub-river basins within the territory of the riparian states form the hydrologic structure of the Nile river basin.

It is virtually impossible to identify all potential stakeholders for a decision support system of a trans-boundary river basin. It is even more difficult to involve all potential stakeholders in a development process of a decision support system. A central issue for any institutional development process is to develop a balanced distribution of tasks and responsibilities between the relevant levels of administration on the basis of the subsidiarity principle. This principle implicate that decisions are taken at the lowest appropriate management level where planning, implementation and monitoring and evaluation can be combined. Therefore the approach has been followed to identify the stakeholders for important water management decisions at regional, national and sub-national level. In addition, different categories of stakeholders will be developed for different levels of engagement in the development of the basin wide decision support system.

A participatory stakeholders ranking has been conducted during the country assessment studies in all riparian states in the Nile Basin. The resource institutes have been asked to make a ranking of a list of stakeholders on their current and desirable involvement in water management decisions at sub-national, national and trans-boundary level. The results of this ranking have been used to prepare the stakeholders consultation plan for the analytical phase of the conceptualisation and design of the Nile Basin DSS. The consultation plan has been geared towards the specific interests of the categories of stakeholders and of the NBI-WRPMP for different level of engagement of categories of stakeholders in the NBI-DSS development process.

Current thinking about the institutional arrangements for water governance systems is moving toward dialogues and partnerships between the public, private and voluntary sectors of the societies. The conceptualisation of stakeholders in water governance and the applied study tools will be explained in the next chapter. The report will continue with the presentation of the results of the participatory stakeholders ranking that has been conducted in the nine riparian states during the country assessment studies. In combination with the findings of the interviews with resource institutions, these results enable the preparation of a consultation plan tailored to the specific organizational contexts and interests of different categories of stakeholders in the riparian states. This report will end with the presentation of the proposed stakeholders consultation plans at national and sub-regional level and the planning.

## 2 Concept and methodology for stakeholder identification and analyses

Shortage of water and related services and increasing pollution are to a large extent socially and politically induced challenges. This means that they can be addressed by changing water demand and uses through increased awareness and capacities at micro level and water policy reforms at macro level. The water crisis is increasingly about how we, as individuals and organizations, as part of a collective society, govern the access to and control over water resources and their benefits.

Governance systems determine who gets what water, when and how. The representation of various interests in water decision-making and the role of politics are important components in addressing governance dynamics. Water is power, and those who control the flow of water can exercise this power in various ways. However, many people around the world are currently lacking a voice in decision making over water use and the distribution of water supply and sanitation. As opportunities to expand water supplies decrease in many parts of the world, competition over current supplies can easily escalate, creating the need for improved governance.

Water resources still are predominantly managed along administrative boundaries. The major water resources management decisions are taken at national level, also when its concerns trans-boundary rivers and water infrastructures that serves more than one country, sub-national state or province. Commonly the sub-national administrative level in the upstream states has more autonomy than the downstream states. The irrigation management and flood protection functions require more hierarchical structures than for example watershed management. The nature of the political-administrative relations between the national and sub-national states vary widely between the various riparian states and therefore needs to be studied carefully.

Water resources management on hydrological boundaries is not a new phenomenon. It has been in existence since ancient times whenever serious water competition arose or flood control required upstream-downstream institutional arrangements. In recent times water resources are increasingly managed in an integrated manner and along hydrological boundary for dealing in an effective and efficient way with water quality, water allocation and flood control challenges.

For an institution operating on administrative boundaries, not coinciding with the boundaries of the river basin or its tributaries, it is difficult to conduct water allocation and priority setting or to carry out flood control measures. Therefore national states increasingly involve in regional collaboration initiatives that have the objective of enhancing regional collaboration at river basin level. In some riparian states river basin authorities are piloted that have integrated water resources management as their mandate in the territories of the sub-national states located in a sub-river basin.

The complexity of the physical river, the exchange of ground and surface water and vice versa and the continuous interaction between environmental elements has a physical imperative. To be effective water resource planning should consider all these interactions. The fact that different elements of the water resources management function are implemented by different sectors and through different disciplines is a complicating factor.

Water resources planning should consider and prioritise all relevant societal water uses in their spatial distribution. A fine-tuning between consumptive uses (domestic, industrial and agricultural water supply) and non-consumptive uses (power supply, fishery, recreation, nature conservation) is crucial in complex river basin systems like the Nile Basin.

**Table 2.1 Classification system of stakeholders**

<b>Water users</b>	<b>Stakeholders</b>	<b>Interested parties</b>
<ul style="list-style-type: none"> <li>-Individuals</li> <li>-Groups of individuals</li> <li>-Water Users Associations</li> <li>-Government as water user</li> <li>-Companies</li> <li>-Etc</li> </ul>	<ul style="list-style-type: none"> <li>-Water users</li> <li>-Potential water users</li> <li>-Government in water resource management function</li> <li>-Public-private sector partnerships</li> <li>-Etc.</li> </ul>	<ul style="list-style-type: none"> <li>-Stakeholders</li> <li>-Experts</li> <li>-Universities</li> <li>-Scientists</li> <li>-Consultants</li> <li>-Politicians</li> <li>-NGOs</li> <li>-Etc</li> </ul>

Source: IHE 2001:21

Under the term 'stakeholders participation' is generally understood '*a person or group with a direct interest, involvement or investment in an initiative, project or enterprise*'. There are theoretical discussions about what is a 'stake' in water management? What is considered under direct stakeholders to water, like water users or people with no access to safe water, or indirect stakeholders like government officials in a water resource management function? Commonly different classification systems are applied. One commonly used system makes a distinction between stakeholders from the public, private and voluntary sectors. Another system distinguishes between water users, stakeholders and interested parties.

Traditionally the institutional designs of projects in the water sector are dominated by a public sector orientation. As the limitations of the public sector in management capacities and fiscal constraints became clear, more attention was paid on mobilizing investment resources from the private sector. At the same time, pressing social and environmental effects and impacts of large scale water sector projects resulted in the formation of non-governmental organisations that attracted substantial funding for facilitating participatory approaches and mitigating measures. The involvement of beneficiaries in achieving project objectives (participation) also became a common feature in the design of development project, which resulted in the formation of water users and community-based organizations in the water sector. The term 'voluntary sector' is widely used for non-governmental, community and professional organizations that facilitate participatory processes among the intended beneficiaries of development projects (World Bank 1995:6).

For the identification of potential stakeholders in a basin-wide Decision Support System the focus was laid on the national and sub-national level during the country assessment studies. The NBI-DSS specialists and the local consultants selected the national resource institutes for a decision support system, which were visited during the country assessments. Appendix 1 shows the ranking matrix that has been prepared for the country assessment in Sudan. A country specific ranking matrix was prepared before the interviews with the resource institutes, which covered public, private and voluntary sector organizations that are active in the water sector at national, sub-national and/or trans-boundary level.

During the interviews the potential involvements of different departments or other organizations were explored. For example, the representatives of the Ministry of Finance or NGOs were asked which department or NGOs had the strongest connection with structured decision making in the water sector. The resource institutes were asked to add stakeholders to the list that they considered important for investment or allocation decisions in the water sector.

Selected resource institutes conducted a ranking of the list of stakeholders on the basis of six criteria. The first two criteria covered the current (1) and desirable (2) involvement in important water decisions at national level. The third and fourth criteria covered the current (3) and desirable (4) involvement in important water decisions at sub-national level (state or sub-river basin level). The fifth criteria concerned the current engagement in trans-boundary water initiatives and the six criteria the impact of their water related decisions on trans-boundary water

management issues. Towards the end of the interviews the ranking list was explained and the representative of water related resource institutes were asked to make a ranking<sup>1</sup>. The stakeholders had to be given a ranking between 1 and 5 for each of the six criteria. It was explained that the ranking of the resource institutes would be used to make a selection of the major stakeholders that have to be involved in the development process of a decision support system for the Nile Basin.

The absolute average ranking for the desirable involvement in national and transboundary water decisions would be used for the selection of the stakeholders. The development of a decision support system is a long-term process that needs to take into consideration the institutional reform processes that have been or soon will be launched in the riparian countries. Therefore the ranking of desirable involvements in important water management decisions was considered more relevant than the ranking on current involvements. In addition, all stakeholders consider transboundary water management the mandate of the public sector at national level. Therefore the involvements in the national decision making processes is considered more important than in the sub-national processes.

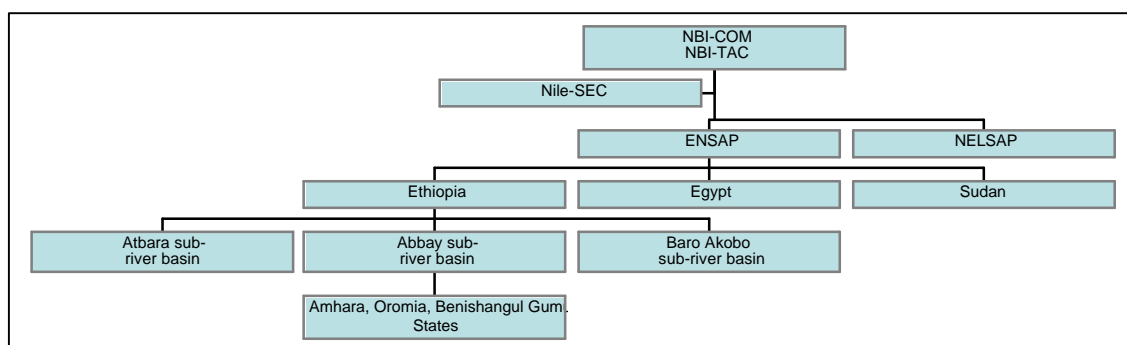
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<sup>1</sup> Resource institutes like the Statistical, Mapping or Meteorological Agencies were excluded from the ranking effort since they are considered as relative outsiders to the water sector.

### 3 Stakeholders, partners, and interested parties in the development of a Nile Basin-wide DSS

Within the context of integrated water resources management we are dealing with governance functions that are covered by the public administration. Currently decentralization processes have been initiated in many of the riparian countries that have as objective to transfer operational tasks durably or for an indicated period of time from the centre of authority to other departments, agencies or administrative levels applying the subsidiarity principle. National level public organizations increasingly concentrate on the government function. The driving forces behind decentralization are effectiveness and efficiency of the measures and interventions, and to create transparency and enhance local responsibilities. The principle of subsidiarity aims at putting decision making in the hands of people who are best informed, interested and capable of making fundamental decisions in a timely.

**Figure 3.1 Emerging Administrative structures for regional cooperation in WRM**



On the other hand governments are increasing collaborating at regional level to deal in an effective way with the water resources management challenges. The institutional development process of integrated water resources management in the Nile Basin foresees the development of four administrative levels. Figure 3.1 shows the administrative levels that are currently being developed in the Nile Basin: regional, sub-regional, national and sub-national level. The development of a Decision Support System needs to take the institutional reform processes into account and anticipate emerging new demands. On the one hand the institutional reform processes concerning the organization of the public administration for integrated water resources management. On the other hand, it concerns the development of consultative and participatory processes in the water governance system at national and sub-national level. Table 3.1 summarizes the institutional reform processes in the riparian countries of the Nile Basin, which have been presented in the situation assessment report.

In some riparian countries water sector reforms have been implemented in which the water ministry concentrates on the development of policies, strategies and legislation (constitutional function) and the organizational and operational functions are delegated to lower management level, or to a semi-public authority. Tanzania, Kenya and Ethiopia have piloted administrative reform processes and the other riparian countries are piloting participatory processes in the water sector.



The national levels form the central administrative level in water resources management in the Nile Basin. The Ministers of Water Resources are the central authority and the ministerial configurations for the water sector differ slightly between the riparian states. In some riparian states all water related governance tasks are the mandate of one water ministry and in some other riparian states the water governance tasks are shared between two or more ministries.

**Table 3.1 Institutional reform processes in the riparian state of the Nile Basin**

Riparian countries	National Water Administration	Decentralization	Consultation platforms	River basin organizations	Water users organizations
Burundi	Different ministries	Under discussion	National level	Under discussion	Under discussion
DC Congo	Different ministries	Under discussion	Under discussion	Under discussion	Under discussion
Egypt	Different ministries	Under discussion	District level	Under discussion	Up scaling to district level
Ethiopia	One ministry	State and district	State and District	Piloted	Piloted at local level
Kenya	One ministry	River basin	Water shed	Established (6)	Legal framework established
Rwanda	Different ministries	Local government	Basin and watershed	Under discussion	Piloted in watersheds
Sudan	One ministry	State	National	Under discussion	Piloted in Gezira scheme
Tanzania	One ministry	Local government	National and basin	Established (9)	Piloted in irrigation
Uganda	One ministry	District	National and district	Lake basin	Legal framework established

The Nile Basin Initiative is still a transitional institutional arrangement at regional level. The NBI has the Council of Ministers as its legislative body and the Nile Basin Secretariat as its executive body. Under the NBI there are regional collaboration initiatives: NBI-Subsidiary Vision Program and the NBI Subsidiary Action Program. The Subsidiary Action Program has created two sub-regional programs: the Eastern Nile Subsidiary Action Program (ENSAP) and the Nile Equatorial Lakes Subsidiary Action Program (NELSAP). In these two subsidiary action programs two configurations of different Nile riparian states are piloting joint initiatives in integrated water resources management at sub-regional level.

**Table 3.2 Administrative levels and the allocation of management functions**

<b>Administrative level</b>	<b>Management functions<sup>2</sup></b>
1. National level	<b>Constitutional, Organisational and Operational Functions</b>
2. Regional level	<b>Constitutional Function:</b> vision establishment, policy development, formal legislation, creation institutions, co-ordination of strategies and strategic planning
3. Sub-regional level	<b>Organisational Function:</b> strategies, Criteria guidelines and standard development, secondary legislation/regulations, organization of planning and implementation
4. Sub-national level	<b>*Operational Function:</b> Implementation, water use management, water utility management, monitoring, enforcement of laws and regulations

The configuration between the national and sub-national administrative levels varies widely per riparian state. The national states in Ethiopia and Sudan are federations of sub-national states that govern territories mainly formed along ethnical boundaries. In these two riparian states the water resources management mandates are demarcated between state rivers and water bodies within the territory (sub-national state) and rivers crossing the state boundaries (federal state).

The Governments of various riparian states are adopting the river basin as the basic unit for integrated water resources management. In Kenya, Tanzania, Uganda, Rwanda and Ethiopia administrative reforms have been implemented that decentralize the organizational functions to the sub-national level and the operational function to the lowest administrative level: the districts. The first River Basin Authority in the Nile Basin for the tributaries of the Blue Nile in Ethiopia is in the process of establishment. In Kenya and Tanzania water resource management organizations have been established along river basin boundaries. Most of the other riparian countries are studying how the river basin management concept could be applied.

**Table 3.3 Operational definitions of the five stakeholders categories for the DSS development**

<b>Stakeholder categories</b>	<b>Interest in NBI-DSS</b>
Potential DSS using organizations	Institutions that have water management and socio-economic development mandates and therefore have an interest in using in future the DSS for preparing and taking rational and scientific decisions
Potential DSS development partners	Institutions that can contribute to the development of the knowledge base and modelling of the DSS for simulating the effects and impact of human interventions in the river basin or its sub systems
DSS Interested parties	Institutions that through their societal functions and involvements in the water sector have an interest to follow the DSS development process and to be informed about forthcoming investments and water allocation decisions
Data supplying organizations	Institutions that collect and process climatic, biophysical, hydrometric, spatial and socio-economic data needed for the development of a DSS but are not interested to involve in the DSS development process

The stakeholders are divided into four categories on the basis of their expected involvements in the development of a basin-wide DSS develop. The potential DSS using organizations are mainly public sector organizations that are directly or indirectly involvement in public sector decisions concerning: 1) investment in the water sector, or 2) water resources management. This

<sup>2</sup> **Constitutional Function:** tasks and competencies needed to set rules, establish institutions and to develop policies

**Organisational Function:** tasks and competencies needed to develop regional strategies as logical combinations of members measures and to organise their implementation

**Operational Function:** tasks and responsibilities to carry out strategies (IHE: 2001,15).

**Governance function:** tasks and competencies related to both the constitutional and organizational functions

stakeholders category can be sub-divided into decision makers and management, where the first sub-category have the mandate to take the major decisions that are prepared by the second sub-category. The DSS development partners are water administration, research institutes and universities that involve in knowledge development and in the application of ITC in the water sector, and potentially can provide services that are needed for the development of a Decision Support System. The interested parties are public, private and voluntary sector organizations that on the basis of their function in society have an interest to be consulted and/or informed about the DSS conceptual design and development process. The data supplying organizations can provide the data that is needed for modelling, however have no interest to involve in the DSS development process. The category of 'DSS development partners' and 'interested parties' can be sub-divided in national and regional level.

### 3.1 DSS Stakeholders at Regional level

During the Country assessments also some regional stakeholders have been visited. These stakeholders are potential development partners, interested parties and potential data supplying institutions. The NBI-WPMP-DSS section has already established a regional DSS network in which it collaborates with regional institutions and experts in the field of water resource planning and management. Table 3.4 compiles the regional stakeholders that have been proposed and ranked by the resource institutes.

The list of regional stakeholders has been composed on the basis of the interviews and stakeholders ranking matrix. The intergovernmental organisations in the region/continent, the international development organizations involved in regional water and environmental research and management projects, the international funding organizations and donors, and the international non-governmental organizations engaged in the regional water sector are considered as stakeholders in transboundary water management.

**Table 3.4 Regional Stakeholders in the DSS Development Process**

Potential DSS development partners	Interested parties	Data supplying institution
<ul style="list-style-type: none"> <li>• African Ministerial Committee on Water (AMCOW)</li> <li>• FAO Projects (Afri-cover,)</li> <li>• International Water Management Institute, (IWMI) Addis Ababa</li> <li>• Regional Center for Mapping and Remote Sensing Nairobi</li> <li>• Inter Governmental Development Authority (IGAD)</li> <li>• NBI-Eastern Nile Subsidiary Action Plan (ENSAP)</li> <li>• NBI-Nile Equatorial Lakes Subsidiary Action Plan (NELSAP)</li> <li>• NBI-Nile Transboundary Environmental Action Program (NTEAP)</li> <li>•</li> <li>• NBI-Confidence Building and Stakeholders Involvement (CBSI)</li> <li>• East African Community-Lake Victoria Environmental Management Project</li> </ul>	<ul style="list-style-type: none"> <li>• Nile Basin Discourse</li> <li>• International NGOs</li> <li>• East African and Mediterranean Water Partnerships</li> <li>• International development organizations</li> <li>• International donors</li> <li>• International development banks</li> </ul>	<ul style="list-style-type: none"> <li>• United Nations Environmental Program (UNEP)</li> <li>• United Nations Development Program (UNDP)</li> <li>• ICIT</li> <li>• ICAD</li> <li>• SIMNET</li> <li>• SADCC</li> <li>• ICPAC</li> <li>• International Commission on Irrigation and Drainage (ICID)</li> <li>• World Meteorological Organization</li> </ul>

The NBI organizations are identified as main stakeholders of transboundary water management in the region. The linkages between the different NBI programs and the DSS initiative did not yet receive the attention that it deserves. However, the concerned parties are aware that the linkages between the NBI-DSS initiative and the other initiative need to be strengthened. This will contribute to the creating of conditions for sustainable regional collaboration in water resources planning and management. Therefore all NBI initiatives are considered as the main DSS development partners at regional level, which contribute to the development of a regional water resources strategy, on which the modelling of the DSS can be based. However, the development of a regional strategy requires that the Nile Basin Initiative get a permanent institutional structure.

Intergovernmental organizations have been engaged in development initiatives in the water and environment sectors in the Nile Basin Region and the African Continent. The African Water Partnership, the African Ministerial Committee on Water, the Inter Governmental Development Authority of East Africa, and the Lake Victoria Environmental Management Project of the East African Community are regional governmental organizations that are involved in water and land management activities. It is recommended that the NBI-WPMP appraise the synergy potentials of collaboration agreements with these regional institutions through joint knowledge development initiatives and data sharing. The roles and responsibilities of the international development organizations in knowledge development make them potential partners and data suppliers for the DSS development. Although much of the knowledge generated by the organizations related to the United Nations, are in the public domain, their bilateral development and research initiatives have special contractual arrangements that govern the use of collected data. The NBI-WRPM is already collaborating with international research organizations in the field of water management, but needs to explore the collaboration potentials for the research institutes in the field of socio-economic, agricultural and environmental sectors. The International NGOs, donors and funding agencies cannot be considered as stakeholders for the development of a Nile Basin Decision Support System. These international organizations have contractual arrangements that specify their rights to be informed about the progress, effect and impacts of the activities for which they provide funding. Funding agencies and donors can become partners for the development of the regional DSS but this will not make them stakeholders in the DSS development process neither at regional nor national level.

The riparian states have a common interest to inform the international funding agencies and donors about regional programs and projects, and the progress achieved. Therefore it is recommended that the NBI-Secretariat and the NBI-Water Resources Planning and Management Project develop a specific communication strategy for international organizations. Target of the strategy could be to enhance the organizations willingness to provide technical and financial assistance to regional and national projects that have been prepared through the application of the regional DSS.

### **Results stakeholders ranking at country level in the Nile Basin**

In most riparian states, a Committee of Water Related Ministers has been formed or is under preparation, which is headed by the Prime Minister and has beside the Minister of Water, also the Minister of Foreign Affairs and the Minister of Internal Affairs as its members. In some riparian state also the Minister of Finance, of Economic Development Planning and the Minister of Agriculture participate in this High-level decision-making Committee, which decides on key political and transboundary water resources management issues. These decision makers take the milestone decisions but delegated the involvements in the DSS development process to the managers of the water administration and water knowledge centers.

**Table 3.5** General results of stakeholders ranking

Stakeholder categories	Ranking results
Stakeholders national level	<ul style="list-style-type: none"> <li>*Transboundary water resources management issues are responsibility of public administration at national level</li> <li>*Water administration/agencies and water knowledge centres are major stakeholders institutions at national level</li> <li>*Public, private, voluntary partnerships become increasingly important at national level for dealing with water resources management challenges</li> </ul>
Stakeholders regional level	<ul style="list-style-type: none"> <li>*NBI initiatives need a permanent institutional structure for dealing with regional water resource planning and management issues</li> <li>*Regional knowledge centres need to be engaged in DSS development process to make use of their knowledge and expertise</li> </ul>
Stakeholders sub-national level	<ul style="list-style-type: none"> <li>*Decentralization processes in public water sector to state, river basin and local government needs to be anticipated</li> <li>*Stakeholders at sub-national level needs to be engaged in DSS development process</li> </ul>

Table 3.5 shows the results of the stakeholders ranking on desirable involvements in water management decisions at national, regional and sub-national level. Transboundary water resources management is considered the mandate of the national public sector. The national water administration and water knowledge centres are the main stakeholders for the development of a decision support system. The national water administrations work towards a strengthening of regional collaboration at Nile Basin level, and on the other hand towards a strengthen public-private sector partnerships at sub-national level.

The managers of the water administration and water knowledge centres support the vision of a more open water governance system. A comparison of potential stakeholders from the private and voluntary sector shows that their ranking is higher for the desirable compared to the current situation. In the riparian states where public sector reforms have been implemented, the ranking of stakeholders at sub-national level is significant higher than in countries where discussions about participatory processes have started more recently. But in the riparian states where organisational and operational responsibilities have been delegated to the lowest appropriate water management level (subsidiarity principle), the national and regional water administrations are ranked as main stakeholders for transboundary water management issues.

For the ranking of the stakeholders the criteria of desirable involvement in national water resources management decision has been used. This criterion is considered most appropriate to rank the stakeholders for their involvement in the development of a decision support system. Firstly the national administrative level occupies the top position in the decision hierarchy for water management decisions in the region, Secondly the desirable involvements of stakeholders in future needs to be considered for the development of a DDS. This plan will be further deal with the ranking of the stakeholders on the desirable involvements in decisions at national level (second criteria). The identified stakeholders have presented in four categories in accordance with the definitions shown in Table 3.6 in decending order the absolute average. The stakeholders presented without a ranking value haven been added during the review process of the inception report. Appendix 2 presents the calculated absolute averages of the potential stakeholders in the nine riparian countries for all six ranking criteria.

13 respondents in management positions in the Egyptian Ministry of Water Resources and Irrigation, the Water Research institutes and the Universities made the ranking. Potential users are mainly public sector organizations directly or indirectly involved in the water sector at national rather than sub-national level. Private, voluntary and some public sector organizations are considered as interested parties. The respondents seem to support the vision that stakeholders'

consultation and participation is important for dealing with the water management challenges of the future.

**Table 3.6 Ranked Stakeholders by Categories in Egypt and Average Scores (N=13)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>MWRI Planning Sector (4.5)</li> <li>MWRI Dams sector (4.4)</li> <li>MWRI Ground Water Sector (4.3)</li> <li>MWRI Nile Water Sector (4.2)</li> <li>MWRI Irrigation sector (4.0)</li> <li>Ministry of Agriculture and Land Reclamation (3.8)</li> <li>Ministry of Foreign Affairs (3.8)</li> <li>Egyptian Environmental Affairs Agency (3.8)</li> <li>MWRI Water Quality Unit (3.6)</li> <li>MWRI-Irrigation Improvement sector (3.6)</li> <li>MWRI-Nile Protection (3.5)</li> <li>Ministry of Electricity (3.3)</li> <li>Drinking Water and Sanitation Companies (3.1)</li> <li>Electricity Companies (2.9)</li> </ul>	<ul style="list-style-type: none"> <li>National Water Research Centre (4.6)</li> <li>MWRI Planning Sector (4.5)</li> <li>MWRI Dams sector (4.4)</li> <li>MWRI Nile Water Sector (4.2)</li> <li>Nile Research Institute (3.8)</li> <li>Hydraulic Institute (3.8)</li> <li>Water Resources Research Institute (3.8)</li> <li>NBI-SAP (3.5)</li> <li>NBI-SVP (3.1)</li> <li>Ministry of Electricity (3.3)</li> <li>National Agricultural Research Centre</li> </ul>	<ul style="list-style-type: none"> <li>Investors (3.8)</li> <li>Nile Basin-Discourse (3.8)</li> <li>Regional Centre of training and water studies (3.2)</li> <li>Farmers Organizations (3.8)</li> <li>Water Users Organizations (3.5)</li> <li>Egyptian Water Partnership (3.4)</li> <li>Farm Companies (3.4)</li> <li>National Politicians (3.2)</li> <li>Environmental NGOs (3.1)</li> <li>Consumers Association (2.8)</li> <li>Universities (2.5)</li> </ul>	<ul style="list-style-type: none"> <li>Central Laboratories (3.4)</li> <li>Egyptian Meteorological Agency (2.9)</li> </ul>

In Sudan 12 respondents in senior management positions in the Ministry of Water Resources, the water related research institutes, the Ministry of Agriculture and Natural Resources, the Sudan Electricity Regulatory Authority and the National Forests Corporation ranked the stakeholders. The water related ministries both at Federal and State level entered the ranking for potential DSS users. In addition, public organizations with mandates in environmental protection, electricity, forestry, finance and health were incorporated. Research and NBI-related projects are considered as potential partners for DSS development and the Meteorological Corporation for data supplying. The respondents considered that the voluntary sector, NGOs and universities as interested parties who need to be informed and consulted on important developments on DSS.

**Table 3.7 Stakeholders per category in Sudan with average score (N=12)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>MIWR Water Resources Directorate (4.5)</li> <li>MIWR Dams Directorate (3.9)</li> <li>MIWR Planning Directorate (3.7)</li> <li>MIWR Irrigation Service Directorate (3.6)</li> <li>MIWR Projects Directorate (3.3)</li> <li>Min Agriculture and Natural Resources (3.3)</li> <li>Min. Finance and National Economy (3.2)</li> </ul>	<ul style="list-style-type: none"> <li>Hydraulic Research Institute (4.1)</li> <li>Technical Water Resources Organ</li> </ul>	<ul style="list-style-type: none"> <li>Nile Basin Discourse (2.3)</li> <li>Sudanese Water Society (2.3)</li> <li>National Farmers Union (2.3)</li> <li>Environmental Protection</li> </ul>	<ul style="list-style-type: none"> <li>Meteorological Corporation of</li> </ul>

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>Sudan National Electricity Corporation (3.0)</li> <li>Sudan Electricity Regulatory Authority (3.0)</li> <li>Higher Council for Environment and Natural Resources (3.0)</li> <li>National Water Corporation (2.9)</li> <li>Ministry of Livestock and Fisheries (2.8)</li> <li>National Forests Corporation (2.7)</li> <li>State Ministries of Agriculture Livestock and Irrigation (2.4)</li> <li>Irrigation Scheme Board (2.4)</li> <li>Technical offices MIWR Planning Directorate (2.3)</li> <li>Ministry of Energy and Mining (2.3)</li> <li>Ministry of Industry (2.1)</li> <li>River Navigation Corporation (2.1)</li> <li>State Ministries of Physical Planning and Public Utilities (2.0)</li> <li>State Ministries of Finance and Economy (2.0)</li> <li>Local Water Corporations (2.0)</li> <li>State Ministry of Health (1.8)</li> </ul>	<ul style="list-style-type: none"> <li>(3.6)</li> <li>NBI-NTAEP (3.0)</li> <li>Agricultural Research Corporation (2.7)</li> <li>Universities (2.2)</li> </ul>	<ul style="list-style-type: none"> <li>Association (2.3)</li> <li>Water Users Associations (2.2)</li> <li>Sudanese Federation of Engineers (2.2)</li> <li>Agricultural Corporations (2.2)</li> <li>Universities (2.2)</li> <li>Sudanese Environmental Protection Society (2.0)</li> <li>Agricultural Engineers Union (2.0)</li> <li>Environmental NGOs (2.0)</li> <li>Investors (1.8)</li> <li>Sudanese Water Partnership</li> </ul>	<ul style="list-style-type: none"> <li>Sudan (2.7)</li> <li>Central Statistical Agency</li> </ul>

In Ethiopia seven respondents returned the filled ranking matrixes of which six were senior managers of the Ministry of Water Resource and one of the Environmental Protection Agency. The Bureaus of Water related Ministries at state level ended high in the ranking, showing that the state administrative level are important stakeholders in national water management decisions. Beside the politicians at the various levels also the private and voluntary sector organizations received a high ranking in Ethiopia, which illustrate their role in the participatory and decentralized water governance system that Ethiopia is developing.

**Table 3.8 Stakeholders per category in Ethiopia with average scores (N=7)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>MOWR-Boundary and Transboundary Rivers Department (4.5)</li> <li>MOWR-Hydrology Department (4.5)</li> <li>MOWR-Irrigation and Drainage Department (4.4)</li> <li>MOWR-Irrigation and Drainage Department (4.4)</li> <li>MOWR-Dams and Hydropower Department (4.4)</li> <li>Bureau of Water, Mines and Energy /Water Resources Development (4.4)</li> </ul>	<ul style="list-style-type: none"> <li>Water Resources Research Institute (5)</li> <li>MOWR-Hydrology Department (4.5)</li> <li>NBI-SAP (ENTRO-NTEAP) (3.9)</li> <li>NBI-SVP (National Focal Point)</li> </ul>	<ul style="list-style-type: none"> <li>Local and regional politicians (4.0)</li> <li>Nile Basin Discourse (NGO) (3.6)</li> <li>Christian Relief and Development Association (3.5)</li> <li>-House of Representatives (3.4)</li> <li>Agricultural</li> </ul>	<ul style="list-style-type: none"> <li>National Meteorological Agency (3)</li> <li>Ethiopian Mapping Agency (2.5)</li> <li>MWR-Water Resource Information Center (3.0)</li> <li>Geological Survey of</li> </ul>

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>Ethiopian Electricity and Power Corporation (4.3)</li> <li>Regional Government (4.2)</li> <li>Ministry of Foreign Affairs (4.1)</li> <li>MOWR-Basin Dev. Study and Water Utilization Department (4.1)</li> <li>Irrigation Development Authorities (4.0)</li> <li>Bureau of Agriculture, Rural Development and Cooperatives (3.9)</li> <li>Ministry of Agriculture and Rural Development (3.8)</li> <li>Basin Water Resources Management Agency (3.8)</li> <li>Environmental Protection Agency (3.8)</li> <li>Bureau Regional Planning and Development (3.8)</li> <li>MOWR-Water Resources Administration &amp; Urban WS&amp;S Department (3.7)</li> <li>MOWR-Project and Planning Department (3.6)</li> <li>MOWR-Rural Water Supply &amp; Sanitation Department (3.6)</li> <li>River Navigation Corporation (3.3)</li> <li>Ministry of Finance and Economic Development (3.2)</li> <li>Ministry of Trade and Industry (2.8)</li> <li>Town Water Boards (2.8)</li> <li>Ministry of Mines and Energy (2.8)</li> <li>Ethiopian Electric Agency (2.7)</li> </ul>	<ul style="list-style-type: none"> <li>(3.8)</li> <li>Universities (3.7)</li> <li>University-water related institutes (3.4)</li> <li>Ethiopian Agricultural Research Organization (2.7)</li> </ul>	<ul style="list-style-type: none"> <li>Companies (3.2)</li> <li>Chamber of Commerce (3.2)</li> <li>Environmental NGOs (3.1)</li> <li>Fishermen Association (3.1)</li> <li>Agricultural Water Users Associations (3.1)</li> <li>Commission of Agriculture and Environmental Rehabilitation (3.0)</li> <li>External Support Agencies (ESA) (3.0)</li> <li>Ethiopian Youth Association (2.9)</li> <li>Professional Associations (2.9)</li> <li>Bureau of Tourism (2.7)</li> <li>Farmers Cooperatives (2.7)</li> <li>MOWR-Women Affairs (2.7)</li> <li>Farmers Union (2.5)</li> <li>Fishery Companies (2.5)</li> </ul>	<ul style="list-style-type: none"> <li>Ethiopia (2.5)</li> <li>Central Statistical Agency</li> </ul>

The key water sector institutes in Ethiopia proposed to create an additional stakeholders category namely; "Decision Makers". The decision makers do not actively involve in the DSS development process but need to be informed about the progress since they take the milestone decisions. The stakeholders that are proposed for this category are: 1. Prime Minister Office, 2. Council of Ministers, 3. House of Representatives, 4. Regional Councils, 5. Ministry of Water Resources, 6. Ministry of Foreign Affairs, 7. River Basin Authority. In other riparian countries similar high-level Water Committees are already functioning. The recommendation needs to be given proper attention and a uniform approach in the region is recommended for informing the decision makers about the progress and constraints in the development of a basin-wide DSS.

In Kenya, five respondents of the water administration at national and regional level carried out the ranking. A similar observation can be made as in Ethiopia: the water resources management agencies at sub-national level (WRMA and WSB) end high in the ranking of potential DSS users. NBI initiatives, universities and research institutions are considered as potential DSS development partners. The Nile Basin Discourse Forum, which is an APEX organization of NGOs involved in environment and water, is together with the Water Resources Users Organizations considered as the main interested parties. The resource institutes in Kenya added several institutions that can be considered as potential research partners or data suppliers.



**Table 3.9 Stakeholders per category in Kenya with average scores (N=5)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>• Ministry of Water and Irrigation (4.7)</li> <li>• Water Resources Management Authority (WRMA) (4.6)</li> <li>• Ministry of Environment (4.3.)</li> <li>• WRMA-Lake Victoria North (4.2)</li> <li>• Lake Victoria Commission (4.1)</li> <li>• WRMA-Lake Victoria South (4.1)</li> <li>• National Environmental Management Authority (4.1)</li> <li>• Ministry of Livestock and Fisheries Development (4.0)</li> <li>• Ministry of Agriculture (4.0)</li> <li>• National Irrigation Boards (4.0)</li> <li>• Water Services Regulatory Board (4.0)</li> <li>• Lake Basin Development Authority (4.0)</li> <li>• Water Services Board Lake Victoria North (3.9)</li> <li>• Water Services Board Lake Victoria South (3.9)</li> <li>• Ministry of Regional Development (3.7)</li> <li>• Ministry of Planning and National Development (3.5)</li> <li>• Kenya Electricity Generation Company (3.5)</li> <li>• Ministry of Health (3.3)</li> <li>• Ministry of Energy (3.1)</li> <li>• Ministry of Industry and Commerce (3.0)</li> <li>• Kenya Forest Services (3.0)</li> <li>• Water Services Providers (2.8)</li> </ul>	<ul style="list-style-type: none"> <li>• NBI-SVP (4.3)</li> <li>• NBI-SAP Sio Malaba Malakisi (4.0)</li> <li>• Kenya Agriculture Research Institute (3.8)</li> <li>• Universities (3.0)</li> <li>• Kenya Water Institute (2.9)</li> </ul>	<ul style="list-style-type: none"> <li>• Kenya Nile Basin Discourse Forum (3.7)</li> <li>• Water Resources Users Organizations (3.7)</li> <li>• East African Wildlife Society (3.0)</li> <li>• Universities (3.0)</li> <li>• Water Appeal Board (2.3)</li> <li>• National Water Conservation and Pipeline Corporation (1.7)</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Water and Irrigation</li> <li>• WRMA</li> <li>• Kenya Meteorological Department (3.8)</li> <li>• Kenya Marine and Fisheries Research Institute (3.7)</li> <li>• IGAD Climate Prediction and Application Center (3.6)</li> <li>• Regional Center for Mapping of Resources and Development (3.6)</li> <li>• Institute of Met. Training and Research (3.5)</li> <li>• Ministry of Land Survey (3.1)</li> <li>• National Bureau of Statistics (2.9)</li> </ul>

In Uganda the stakeholders ranking matrix was filled by three respondents of the Ministry of Water and one of the National Environment Management Authority. At national level the various ministries that are directly or indirectly involved in the water sector are considered as main stakeholders for the DSS system. The water administration at sub-national level in Uganda received high rankings indicating their relative importance in water management decisions. The NBI Initiatives, the research institutes and the Makerere University received high ranking and are considered as potential partners for the DSS development. In Uganda the Nile Basin Discourse Forum, the East African Community, politicians at all administrative levels, and the water related voluntary sector organizations are considered as interested parties. The geological survey, mapping, meteorological and statistic institutes are considered as potential data supplying institutes for a DSS.

**Table 3.10 Stakeholders per category in Uganda with average scores (N=4)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>Min. of Water and Environment (DWD, DWRM, DEM) (4.6)</li> <li>National Environment Management Authority (4.1)</li> <li>LVRAC (3.8)</li> <li>Min. of Agriculture, Animal Husbandry and Fisheries (3.7)</li> <li>National Water and Sewerage Corporation (3.5)</li> <li>Local Governments (3.5)</li> <li>Lake George and Edward Basin Organization (3.5)</li> <li>Lake Albert Basin Organization (3.5)</li> <li>Min. of Energy and Mineral Development (3.3)</li> <li>Ministry of Lands (3.2)</li> <li>Uganda Revenues Authority (3.1)</li> <li>Electricity Regulatory Authority (3.1)</li> <li>Electricity Companies (2.8)</li> <li>Min. of Finance, Planning and Economic Development (2.5)</li> <li>Min. of Health (2.5)</li> <li>Water supply and treatment companies (2.4)</li> <li>Lake Victoria Fisheries Organization</li> <li>National Fisheries Resources Research Institute</li> <li>National Planning Authority</li> <li>Institute of Public Health (MAK)</li> <li>Ministry of Disaster Preparedness</li> </ul>	<ul style="list-style-type: none"> <li>NBI-SAP (4.6)</li> <li>NBI-SVP (3.5)</li> <li>Science and Technology Commission (3.3.)</li> <li>Water Resource Research Institute (2.7)</li> <li>Makerere Institute of Environment and Natural Resources (2.3)</li> <li>Dep. Civil Engineering (Mak)</li> <li>Dep. Civil Engineering (Kyu)</li> <li>Economic Policy Research Center</li> <li>Directorate of Water Resources Management</li> </ul>	<ul style="list-style-type: none"> <li>Nile Basin Discourse Forum (3.9)</li> <li>East African Community (3.7)</li> <li>Local and regional politicians (3.6)</li> <li>Tourism Board (3.5)</li> <li>National politicians (3.2)</li> <li>Parliamentary committee on natural resources (3.2)</li> <li>Agricultural Water Users Associations (2.9)</li> <li>Environmental NGOs (2.9)</li> <li>Women Associations (2.9)</li> <li>Professional Associations (2.8)</li> <li>Fishermen Associations (2.7)</li> <li>Consumers Associations (2.7)</li> <li>Chamber of Commerce (2.4)</li> <li>Shipping and transport companies (2.3)</li> <li>Fisheries Companies (2.3)</li> <li>Recreation/tourism Companies (2.1)</li> <li>Farmers Organizations (1.9)</li> <li>Makerere University (1.9)</li> <li>Lake Kyoga Integrated Management Organization</li> <li>Ministry of Justice and Constitutional Affairs</li> <li>Ministry of Foreign Affairs and regional cooperation</li> </ul>	<ul style="list-style-type: none"> <li>Geological Survey (3.6)</li> <li>Mapping Authority (2.7)</li> <li>Makerere Meteorological Unit (2.5)</li> <li>Uganda Bureau of Statistics (2.2)</li> <li>Institute of Public Health (Mak)</li> <li>Meteorology dept. DWRM, Nafirri</li> <li>NWSC</li> <li>NFA</li> <li>Ministry of Disaster Preparedness</li> </ul>

In Tanzania three respondents of the resource institutes made a ranking of the stakeholders, which resulted in a relatively uniform ranking. The Ministries that have direct or indirect mandates related to the water sector are considered as main stakeholders are national level. The results of the ranking also show the impact of the institutional reform processes in public sector and in the water sector specifically. The Basin Water Boards and the Basin offices received high rankings. Universities, voluntary and private organizations, which are involved in water related initiatives,

received high rankings. Like in the other riparian states of Lake Victoria, the joint environment management project of the East African Community ended high in the ranking

**Table 3.11 Stakeholders per category in Tanzania with average scores (N=3)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>• Ministry of Water (4.3)</li> <li>• Ministry of Agriculture, Food Security and Cooperatives (4.3)</li> <li>• Ministry of Finance (4.3)</li> <li>• Ministry of Health and Social Welfare (4.3)</li> <li>• Ministry of Lands and Settlement Developments (4.3)</li> <li>• Ministry of Energy and Minerals (4.3)</li> <li>• National Environmental Management Council (4.3)</li> <li>• National Water Board (4.3)</li> <li>• Ministry of Livestock Development (4.3)</li> <li>• Basin Water Board (4.3)</li> <li>• Basin Water Offices (4.3)</li> <li>• Water supply and sewerage authority (4.3)</li> <li>• Ministry of Planning, Economy and Empowerment (4.0)</li> <li>• Ministry of Natural Resources and Tourism (4.0)</li> <li>• Tanzania Electrical Supply Company (4.0)</li> <li>• Directorate of Environment (4.0)</li> <li>• Lake Victoria Environmental Management Project (4.0)</li> <li>• East African Community (4.0)</li> </ul>	<ul style="list-style-type: none"> <li>• Water Resource Institutes (4.3)</li> <li>• Tanzania Fisheries Research Institute (4.3)</li> <li>• Commission for Science and Technology (4.0)</li> <li>• NBI (4.0)</li> <li>• SADC (4.0)</li> </ul>	<ul style="list-style-type: none"> <li>• Nile Basin Discourse (5.0)</li> <li>• National politicians (4.0)</li> <li>• Local and regional politicians (4.0)</li> <li>• Attorney's General Chambers (4.0)</li> <li>• Regional Secretariats (4.0)</li> <li>• ICUN (4.0)</li> <li>• WWF (4.0)</li> <li>• Water Aid (4.0)</li> <li>• University of Dar-es-Salaam (4.0)</li> <li>• Sokoine University of Agriculture (4.0)</li> <li>• Ardhi University (4.0)</li> <li>• Farm Companies (4.0)</li> <li>• Farmers Companies (4.0)</li> <li>• Tanzania Chamber of - Commerce and Agriculture (4.0)</li> <li>• Fisheries Companies (4.0)</li> <li>• Shipping &amp; Transport companies (4.0)</li> <li>• Recreation &amp; Tourism companies</li> <li>• Water Users Associations (4.0)</li> <li>• Consumers Associations (4.0)</li> <li>• Environmental NGOs (4.0)</li> <li>• Fishermen Associations (4.0)</li> <li>• Women Associations (4.0)</li> <li>• Professional Associations (4.0)</li> </ul>	<ul style="list-style-type: none"> <li>• Tanzania Geological Survey Agency (4.3)</li> <li>• Tanzania Meteorological Agency (4.0)</li> <li>• National Bureau of Statistics (4.0)</li> <li>• Surveys and Mapping Division (MLSD) (4.0)</li> </ul>

Ten respondents ranked the stakeholders in Rwanda. The water related ministries and authorities at national level received the highest ranking. Rwanda is one of the riparian states where the lower administrative authorities and national and regional projects ended high in the ranking. The NBI-initiatives, the hydrological services and universities are considered as potential development partners. In Rwanda the voluntary organizations and politicians are considered the main

interested parties. The statistical, meteorological and mapping organizations are considered as potential data supplying institutions.

**Table 3.12 Stakeholders per category in Rwanda with average score (N=10)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>• MINITERRE (5)</li> <li>• MINAGRI (4.7)</li> <li>• Rwanda Environment Management Authority (4.7)</li> <li>• Rwanda Utilities Regulation Authority (4.5)</li> <li>• Province administration (4.1)</li> <li>• Irrigation Development Authorities (4.1)</li> <li>• Ministry of Finance and Economic Planning (4.1)</li> <li>• ELECTROGAZ Water RWASCO (4.1)</li> <li>• MININFRA Energy (3.5)</li> <li>• MINALOC (3.4)</li> <li>• Rwanda Bureau of Standards (3.4)</li> <li>• District government (3.0)</li> <li>• Major project implementation Units (e.g. World Bank, ADB) (3.0)</li> <li>• Ministry of Health (2.9)</li> <li>• ELECTROGAZ Energy RECO (2.6)</li> <li>• EGL/SINELAC (2.6)</li> <li>• Rwanda Agricultural Development Authority (RADA)</li> <li>• Rwanda Animal Resources Development Authority (RARDA)</li> <li>• Rural Sector Support project</li> <li>• Ministry of Foreign Affairs</li> </ul>	<ul style="list-style-type: none"> <li>• Hydrological Service (3.8)</li> <li>• NBI-Shared Vision Program (3.8)</li> <li>• NELSAP (3.7)</li> <li>• University (UNR) (2.8)</li> <li>• KIST (2.4)</li> <li>• Institute Supérieure d'Agriculture at Elevage (ISAE)</li> <li>• Rwanda Agricultural Research Institute (ISAR)</li> <li>• Institut de Recherche Scientifique et Technologie (IRST)</li> </ul>	<ul style="list-style-type: none"> <li>• Professional associations (3.6)</li> <li>• Agricultural Associations (3.0)</li> <li>• Consumers Associations (2.9)</li> <li>• ISAR (2.9)</li> <li>• Industrial and Mining Companies (2.8)</li> <li>• Environmental Associations/NGOs (2.6)</li> <li>• Women's Associations (2.3)</li> <li>• Regional Projects (e.g. Mutara, Bugesera) (2.2)</li> <li>• ISAE Busogo (2.1)</li> <li>• National politicians (2.0)</li> <li>• Farm Companies (1.9)</li> <li>• Local and regional politicians (1.5)</li> <li>• Rwanda Private Sector Federation (RPSF)</li> <li>• Media</li> </ul>	<ul style="list-style-type: none"> <li>• Statistical Office (3.7)</li> <li>• Meteorology Dept. (3.5)</li> <li>• MINAGRI Mapping &amp; GIS (2.8)</li> <li>• Center for Geographical Information Systems (CGIS)</li> <li>• MININFRA (Meteorology, Cartography)</li> </ul>

Nine respondents ranked the stakeholders in Burundi. The national institutions responsible for managing electricity and water supply utilities, ended high in the ranking. These organizations together with the water related ministries are considered as the potential users of the DSS. The NBI-initiatives, the research institutes and universities are considered as potential development partners. In Burundi, the project organization structure is widely used in the water sector and therefore projects voluntary organizations and politicians are considered as interested parties. The statistical, geological and health institutions are considered potential data supplying institutions.

**Table 3.13 Stakeholders per category in Burundi with average scores (N=9)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>• Regideso Energy Supply (4.6)</li> <li>• Regideso Water Supply (4.5)</li> <li>• Ministry of Agriculture and Animal Husbandry (4.2)</li> <li>• Ministry of Energy and Mines (DGEE/WR) (4.1)</li> <li>• Ministry of Energy and Mines (DGEE/E) (4.1)</li> <li>• Ministry of Energy and Mines (DGHER) (4.1)</li> <li>• MINATET Environment (4.1)</li> <li>• MINATET Land reclamation (4.0)</li> <li>• EGL/SINELAC (3.7)</li> <li>• Ministry of Planning and Reconstruction (3.6)</li> <li>• Municipality Technical Services (3.5)</li> <li>• Irrigation Development Agency (3.5)</li> <li>• MINATET Forestry (3.4)</li> <li>• Ministry of Public Works (3.3)</li> <li>• Ministry of Finance (3.1)</li> <li>• Ministry of Transport and Telecommunication (2.9)</li> </ul>	<ul style="list-style-type: none"> <li>• IGEBU Hydrometeorology and Agroclimate (4.8)</li> <li>• UN Organizations (FAO-UNDP-UNICEF) (4.0)</li> <li>• NBI-SVP (3.9)</li> <li>• NBI-NELSAP (3.7)</li> <li>• University of Burundi (3.4)</li> <li>• ISABU-Institute of Agricultural Science (3.1)</li> </ul>	<ul style="list-style-type: none"> <li>• Fisheries Company (4.0)</li> <li>• National Institute of Environment and Conservation (3.9)</li> <li>• Water Supply Projects (3.9)</li> <li>• International donors (3.9)</li> <li>• Environmental NGOs (3.5)</li> <li>• Fishermen Associations (3.5)</li> <li>• Agricultural Companies (3.4)</li> <li>• Regional Projects (3.4)</li> <li>• Provincial administration (3.4)</li> <li>• Rehabilitation projects (3.3)</li> <li>• National politicians (3.3)</li> <li>• Local administration (3.3)</li> <li>• Consumers Association (3.3)</li> <li>• Bilateral donors (3.3)</li> <li>• Industrial and Mining Companies (3.1)</li> <li>• Women Associations (3.0)</li> <li>• Tourism Companies (3.0)</li> <li>• Water Users Associations (3.0)</li> <li>• Local and regional politicians (2.7)</li> <li>• Professional Associations (2.5)</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Public Health (3.9)</li> <li>• Institute of Statistics and Economy (3.0)</li> <li>• Geological Institute of MoE&amp;M (3.0)</li> </ul>

Three respondents of the resource institutes ranked the stakeholders in the D.R. Congo. The water related ministries and the organizations that manage water related public utilities in the basin are considered the potential users of the DSS. The NBI-initiatives, the water related research institutions and universities are considered potential partners for developing the DSS at national level. The water section of the Regional Centre of Nuclear Studies in Kinshasa and the Congolese Institute for the Conservation of Nature in Kivu Province are considered potential partners for data collection. In D.R.Congo the development of civil society has a relative recent history and therefore the number of interested parties is limited. The potential data supplying institutes are similar to these in the other riparian states.

**Table 3.14 Stakeholders per category in Congo with average score (N=3)**

Potential DSS Users	Potential DSS development partners	Interested parties	Data supplying institutes
<ul style="list-style-type: none"> <li>• National Action Committee on Water and Sanitation (5.0)</li> <li>• National Electricity Corporation (5.0)</li> <li>• Provincial and local authorities (5.0)</li> <li>• Ministry of Energy (5.0)</li> <li>• Ministry of Health (5.0)</li> <li>• National Sanitation Programme (5.0)</li> <li>• Ministry of Agriculture (5.0)</li> <li>• Ministry of Finance (4.0)</li> <li>• Ministry of Environment (4.0)</li> <li>• Ministry of Mines (3.3)</li> </ul>	<ul style="list-style-type: none"> <li>• NBI-SAP (5.0)</li> <li>• NBI-SVP (5.0)</li> <li>• National Scientific Council (5.0)</li> <li>• National Institute for Agricultural Studies and Research (5.0)</li> <li>• Polytechnical Faculty (5.0)</li> <li>• Regional Centre of Nuclear Studies Kinshasa (4.3)</li> <li>• Public Health School (4.3)</li> <li>• Centre for Geological and Mining Research (4.0)</li> <li>• Faculty of Agricultural Science (3.7)</li> <li>• Congolese Institute for the Conservation of Nature (3.0)</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Nile Basin Discourse (5.0)</li> <li>• Federation of private enterprises (5.0)</li> <li>• Transport companies (5.0)</li> <li>• Environmental Associations (5.0)</li> <li>• Women Associations (5.0)</li> <li>• Professional Associations (5.0)</li> </ul>	<ul style="list-style-type: none"> <li>• National Meteorological Authority (4.3)</li> <li>• National Statistical Institute (4.0)</li> <li>• Geographical Institute of Congo (4.0)</li> </ul>

In summary, the main potential users of a basin wide DSS will be the water sector related ministries at national level. In countries where a decentralization process has been initiated, the water related bureaus of authorities at sub-national level came out of the ranking as important stakeholders. In all riparian countries water related research institutes, universities and NBI-related initiatives are considered as potential DSS development partners. In all countries private and voluntary sector organizations are considered as interested parties that need to be informed and consulted on important issues, since they represent the water users. The number of potential data supplying institutes that entered the list has been limited. Therefore it is recommended that after a decision has been taken about the key decisions on which the DSS initially will focus, the information requirements and the data sources need to be defined accurately. Then it will be possible to specify the hydraulic, hydro-agricultural, hydro-meteorological, biophysical and socio-

economic data that is needed and the identify the institutes that can provide or generate the required data.

## 4 Stakeholders Consultation Plan

### 4.1 Introduction

The objective of the analysis phase is to identify the key decisions, information needs and requirements of the Nile Basin DSS focusing on the decision making policies, procedures and planning processes of the different water resources management, and to prepare a clear design for the future DSS. For that purpose, two sub-regional and nine national awareness and training workshops will be conducted to enhance the stakeholders understanding about the DSS capacities. Linked to these trainings, consultation workshops will be organized where the key features of the DSS system will be discussed.

### 4.2 Objectives, participants and proposed programs of sub-regional & national stakeholders' consultations

The Terms of Reference of the study specifies the following deliverable of the analytical phase:

1. Identification of key decisions and information requirements;
2. Identification of needs for DSS related data;
3. Identification long-term needs for data collection and monitoring;
4. Detailed needs assessment and system requirements;
5. Identification of overall need /requirements;
6. Functional capacity of DSS;
7. River/sub-river basin modelling and multi-objective analysis tools;
8. Basin wide communication and information knowledge system; and
9. Training Needs Assessment.

The stakeholders' consultations is a participatory process in which the stakeholders are consulted about the main trans-boundary water management issues, the key decisions that form the target for a basin-wide DSS in short, medium and long terms, the modelling and data requirements, and the institutional and capacity building arrangements. For the consultations representatives of the highest ranked stakeholders in the categories of 'potential users', 'potential development partners' and 'interested parties' will be invited. The consultants have prepared programs for sub-regional and national stakeholders consultation workshops in which a common understanding will be developed of basic planning concepts, decision hierarchies, modelling and data requirements. In this chapter the preparation arrangements and agendas for the regional and national workshops will be presented.

The participants of the sub-regional DSS awareness and training workshop will be the same as the participants of the regional stakeholders consultation. The two workshops will be organized back-to-back so that the stakeholders consultation will benefit from the awareness/training that the participants received. The participants of the sub-regional awareness/training workshops are the members of the Regional DSS-network, the nine National DSS specialists, and the nine national DSS counterparts. The members of the regional DSS network are the senior managers of the NBI programs and water related research programs in the region. The regional NBI



organization will select the participants for the sub-regional workshops. The participants of the sub-regional DSS awareness and training workshop will be the same as the participants of the subregional stakeholders consultation.

A program of two days has been prepared for the sub-regional and of three days for the national stakeholders consultation. The two sub-regional consultation workshops will focus on thematic and institutional issues concerning the regional and sub-regional DSS centers. The nine national consultations will focus on the thematic, methodological and institutional issues concerning the linkages between organizations managing the national water governance systems, the national water knowledge systems, the sub-national water regulators, and the national DSS centres.

The Preparation Teams of the National Stakeholder Consultation are responsible for inviting the participants considering the results of the participatory stakeholders rankings. The National DSS specialist, the National DSS counterpart, the coordinator of the NBI-focal office or Technical Organ of Water Resources, the National Confidence Building and Stakeholders Involvement specialists and the local consultants form the Preparation Teams of the National Stakeholders Consultations. Maximal 40 representatives of the identified stakeholders can participate in the National Consultation Workshops. The consultants will prepare guidelines for the selection of the participants, which aims for the involvement of one manager and one planners of the highest ranked institutions in the category potential users of the DSS system. In addition, one representative needs to be invited of the highest ranked water related research institutes, water agencies at sub-national level, and of private and voluntary sector organizations involved in the national and sub-national water sector should participate. The Preparation Teams should use the results of the participatory stakeholders ranking but may also select stakeholders that have been added during the review process of the inception report as long as they give a justification.

The consultants will prepare a special report on the objectives and organization of the national stakeholders consultations. Therefore this Annex B of the Inception Report will present the proposed agendas of the sub-regional and country level stakeholders consultation workshops. The programming of the stakeholders' consultations should be done in a flexible way taking into consideration the different administrative and socio-economic contexts at national levels. The results of the stakeholders ranking at national level provides an excellent opportunity for involving the leaders of the public private-voluntary sector partnerships that form the basis of the new water governance systems that are piloted in the Nile Basin.

### 4.3 Proposed program for the sub-regional stakeholders consultation workshops

Two sub-regional stakeholders consultation workshops will be organized back-to-back to the sub-regional DSS awareness/training workshops in Addis Ababa and Kigali. For these two regional workshops the NBI organization will invite between 15 and 20 participants respectively from the ENSAP and NELSAP Member States. The focus of sub-regional consultations will be on the sub-regional and regional dimension of the DSS conceptual design and development process. Logically the transboundary water management issues of the Eastern Nile and Nile Equatorial Lakes sub-regions will form the entry point of the discussions. Special attention will be paid to the linkage between the national, sub-regional and regional level in the knowledge and modelling efforts as well in the institutional arrangements between the various categories of stakeholders that have been identified

**Table 4.1 Proposed Agenda for Sub-regional Level Consultations**

<b>Topic</b>	<b>Method</b>	<b>Responsibility</b>
<b>Day One</b>		
0. Opening		Facilitator
1. What is a DSS and What Can it Do?	PowerPoint presentation 1	International Consultant
	Plenary discussion	Facilitator
2. Thematic and Key Issues	PowerPoint presentation 2	International Consultant
	Plenary discussion	Facilitator
3. Stakeholders Mapping	Briefing on Venn diagrams and Group Work in four break-out groups	International Consultant
	Plenary discussion	Facilitator
4. Identification and clustering of decisions	Briefing on decision hierarchies and Groups Work in identification and ranking of decisions	International Consultants
	Plenary discussion	Facilitator
<b>Day Two</b>		
5. Output, criteria and Indicators	Briefing on criteria and indicators and Group Work on criteria and indicators	International Consultant
	Plenary discussion	Facilitator
6. Models/tools and Data/Information	Powerpoint Presentation 3 and Group work on data and information requirements	International Consultant
	Plenary discussion	Facilitator
7. Institutional arrangements for DSS development process	Powerpoint Presentation 4	International Consultant
	Plenary discussion	Facilitator
	Group Work and plenary discussion	Facilitator
8. Workshop Conclusions		Facilitator

The sub-regional consultations provide an ideal opportunity for a try-out of the program of the consultation workshop. All participants are involved in the discussions on water resources planning and management issues. In the training workshops the awareness of the use of computerized decisions support systems have been raised. In addition, the divergence in opinions and interests between the participants of the sub-regional consultation workshops is smaller than between the participants of the country level consultations. Therefore the sub-regional consultations provide a good opportunity to test the program and to gain experiences.

#### 4.4. Proposed programs for country level consultation workshops

In all nine member states in the Nile basin a country level consultation workshop of three-days will be organized. For the country level workshop maximally 40 participants can be invited to participate. The country level workshops will in most riparian states be organized back to back with the DSS awareness and training workshop. Having the same participants for both workshops has the advantage that the participants are well informed for the consultation. However there is a danger that the managers and planners of the water related national Ministries, and the leaders of the public, private and voluntary sector organizations from the Nile sub-river basins are under represented in the consultation workshops. The selection guidelines pay special attention to the participation of these stakeholders in the country level consultations.

The country level consultations involve stakeholders with different level of involvements in the discourses on national and regional water resources planning and management issues. The current discussions of these issues can be characterized by divergence of concepts and ideas, however for conceptual design of the Nile Basin Decision Support System requires convergence between the different stakeholders on conceptual understanding and vision. Therefore the consultants decided to prepare a program for a three-day workshop that provides many opportunities for group and plenary discussions in order to develop common understanding of water resources planning and management concepts, DSS modelling options and data/knowledge requirements, and institutional arrangement for DSS development.

**Table 4.2 Proposed Agenda for Country Level Consultations**

<b>Topic</b>	<b>Method</b>	<b>Responsibility</b>
<b>Day One</b>		
0. Opening		Facilitator
1. What is a DSS and What Can it Do?	PowerPoint presentation 1	International Consultant
	Plenary discussion	Facilitator
2. Thematic and Key Issues	PowerPoint presentation 2	International Consultant
	Plenary discussion	Facilitator
3. Stakeholders Mapping	Briefing 1. on Venn diagrams and Group Work in four break-out groups	International Consultant
	Plenary discussion	Facilitator
4. Identification and clustering of decisions	Briefing 2. on decision hierarchies	International Consultant
<b>Day Two</b>		
4. Identification and clustering of decisions	Group work on decision hierarchies in four break-out groups	Facilitator
	Plenary discussion	Facilitator
5. Output, criteria and Indicators	Briefing 3. on criteria and indicators	International Consultant
	Group Work on criteria and indicators	Facilitator
<b>Day Three</b>		
5. Output, criteria and Indicators	Plenary discussion	Facilitator
6. Models/tools and Data/Information	Powerpoint Presentation 3 and Group work on data and information requirements	International Consultant
	Plenary discussion	Facilitator
7. Institutional arrangements for DSS development process	Powerpoint Presentation 4	International Consultant
	Plenary discussion	Facilitator
	Group Work and plenary discussion	Facilitator
8. Workshop Conclusions		Facilitator

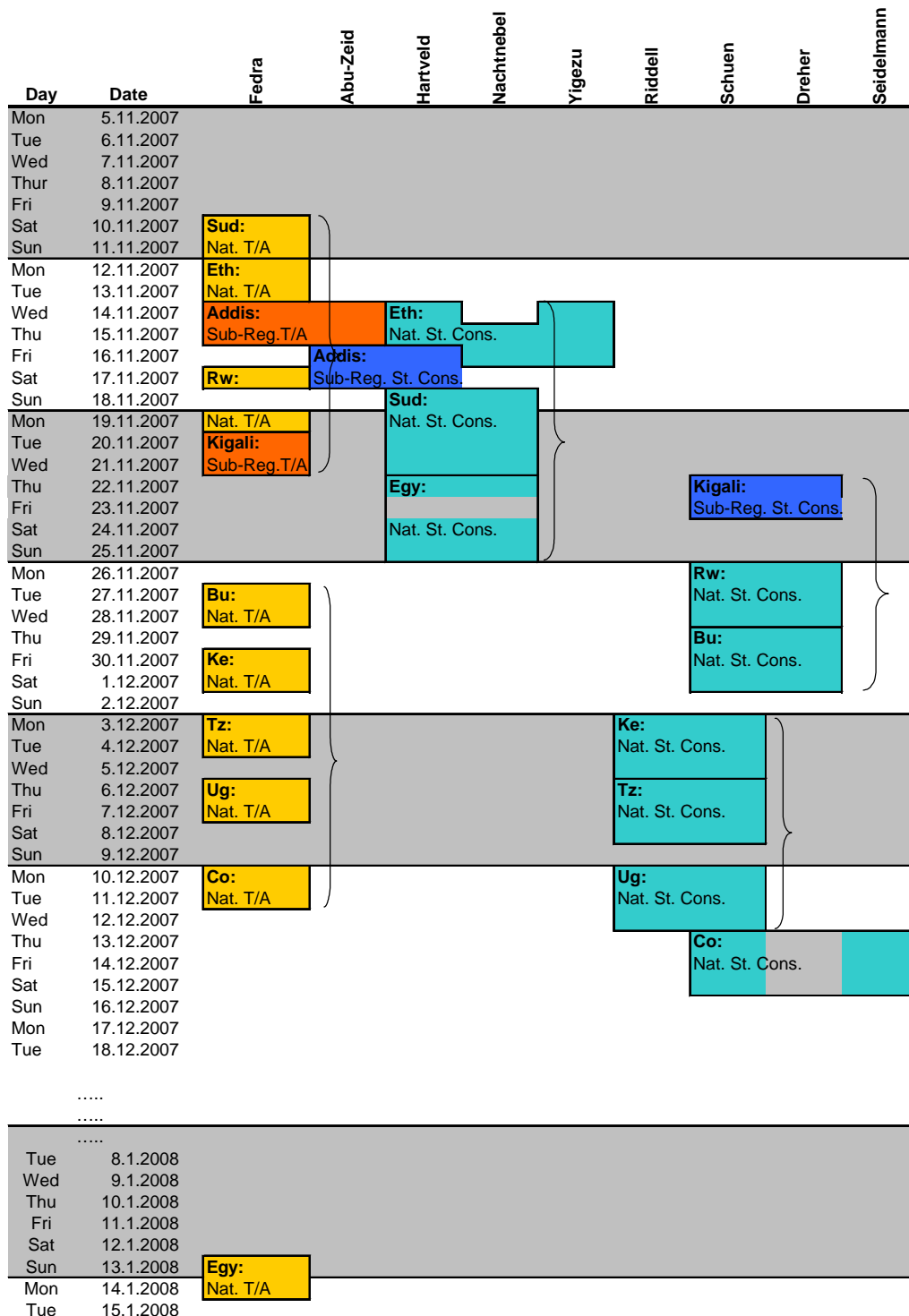
Ideally a dedicated individual, engaged for the purposes, should facilitate the country level consultation workshops. In the country level consultations various stakeholders with different interests participate, for which facilitation is needed that can connect process and content of the discussion. The some facilitator would preferable engaged in respectively the Francophone, the East African and the Eastern Nile country workshops. If it proves to be impossible to make a special arrangement for the facilitation, the international and local consultants need to agree on a sharing of the facilitation, presentation and reporting requirements of the workshops.

The guidelines for the selection of the participants of the country level consultations excluded the potential data suppliers. Experiences during the country assessment showed that potential data suppliers, which have no special connection with the water sector, showed little interest in the development of a decision support system. Their interest was to supply data that is needed, preferably on a commercial basis. After the workshops the stakeholders will have developed a ranking of the decision hierarchies and it will be easy to specify which data and information is needed for the modelling effort. At that time it will be more appropriate to enter into discussions with the data suppliers and discuss concrete data needs of the regional, sub-regional and national DSS units.

### 4.4 Proposed time schedule for stakeholders' consultation missions

#### Mission Schedule Analysis Phase

key: T/A ... Training and Awareness Creation Workshop  
 St. Cons. ... Stakeholder Consultations  
 Nat. ... National  
 Sub-Reg. ... Sub-Regional



## 5 Appendices

### 5.1 Appendix 1 - Draft Stakeholders ranking matrix in Sudan

Ranking of stakeholders involvement in important water decisions in the river basin(s) in Sudan		Resource institution: _____ (Please fill the name!!)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
No	Stakeholders	Current involvement in water decisions at national level	Desirable involvement in water decisions at national level	Current involvement in water decisions at sub-river basin level	Desirable involvement in water decisions at sub-river basin level	Current engagement in transboundary water initiatives	Level of importance of their decisions for transboundary water management issues
	<b>Public Organizations (national level)</b>						
1	Ministry of Irrigation and Water Resources-Water Resources Directorate						
2	Ministry of Irrigation and Water Resources-Planning Directorate						
3	Ministry of Irrigation and Water Resources-Irrigation Service Directorate						
4	Ministry of Irrigation and Water Resources-Projects Directorate						
5	Ministry of Irrigation and Water Resources-Dams Directorate						
6	Ministry of Finance and National Economy						
7	Ministry of Energy and Mining-Geological Research Authority of Sudan						
8	Sudan Electricity Regulatory Authority						
9	Higher Council of Environment and Natural Resources						
10	Ministry of Agriculture and Forestry						
11	Ministry of Livestock and Fisheries						
12	Ministry of Industry						
13							
14							
	<b>Semi-public organizations (national level)</b>						
15	Agricultural Research Corporation						
16	National Water Corporation						
17	Sudan National Electricity Corporation						
18	Forestry Corporation						
19	Meteorological Corporation of Sudan						
20	Universities						
21							
22							
	<b>Private sector organizations (national level)</b>						
23	Businessman union						
24							
	<b>Voluntary sector organizations (national level)</b>						
25	Farmers Union						
26	Environmental NGOs						
27	Professional associations (water management engineers)						
28							
	<b>Public Organizations (sub-national level)</b>						
29	Technical Office of Planning Directorate						
30	State Ministry of Agriculture, Livestock and Irrigation Management						
31	State Ministry of Physical Planning						
32	State Ministry of Finance and Economy						
33	State Ministry of Health						
34							
35							
	<b>Semi-public organizations (others)</b>						
36	Irrigation Scheme Board						
37	University-Water Resources Institute						
38	Agricultural Corporations						
39	Local Water Corporations						
40							
41							
	<b>Private Organizations</b>						
42	Private Farm Companies						
43	Farmers Cooperatives						
44	Shipping-navigation Companies						
45	Recreation-tourism Companies						
46							
47							
	<b>Voluntary organizations</b>						
48	Agricultural Water Users Associations						
49	Consumers Associations						
50	Environmental Foundation/Associations						
51	Fishermen Communities/Associations						
52	Women Associations						
53	Professional associations						
54							
	<b>International/transboundary organizations</b>						
55	NBI-Shared Vision Program						
56	NBI-Subsidiary Action Sub-program						
57	Nile Basin Discourse (NGO)						
58							

## 5.2 Appendix 2 - Scores of stakeholders' ranking matrix in the riparian countries

**Table A2.1** Absolute average of Stakeholders scores in Egypt (n=13)

NO	Stakeholders	Current Involvement in Water Decision at National Level	Desirable Involvement in Water Decisions at National Basin Level	Current Involvement in Water Decisions at Sub-River Basin Level	Desirable Involvement in Water Decisions at Sub-River Basin Level	Current Engagement in Transboundary Water Initiatives	Level of Importance of their Decisions for Transboundary Water Management Issues
<b>Public Organizations (National Level)</b>							
1	National Water Research Center	3.8	4.6	2.4	3.4	2.1	3.6
2	Ministry of Water Resources and Irrigation	4.9	4.9	4.3	4.7	4.0	4.6
3	Regional Center of Training and Water Studies	2.2	3.2	2.1	2.7	2.2	2.9
4	Egyptian Metrological Agency	1.9	2.9	1.7	2.9	1.8	3.3
5	EEAA	2.2	3.8	1.6	3.4	1.4	3.5
6	Ground Water Sector	3.2	4.3	2.3	3.8	1.7	3.5
7	Dams Sector MWRI	3.8	4.4	2.3	3.5	1.5	3.6
8	Planning Sector MWRI	3.8	4.5	2.7	4.0	2.4	3.7
9	Ministry of Agriculture	3.2	3.8	2.6	3.3	2.4	3.5
10	Nile Research Institute	3.2	3.8	2.5	3.5	2.2	3.5
11	Nile Protection	2.7	3.5	1.8	2.9	1.5	2.8
12	Central Laboratories	2.3	3.4	1.8	2.8	1.5	2.6
13	Nile Water Sector	3.7	4.2	3.8	4.3	4.0	4.6
14	Water Resources Research Institute	3.1	3.8	2.4	3.8	2.2	3.6
15	National Politicians	2.8	3.2	2.3	3.4	2.5	3.4
16	Hydraulic Institute	3.1	3.8	2.7	3.8	2.3	3.5
17	Water Quality Unit	2.1	3.6	1.5	2.9	1.6	3.0
18	Ministry of Electricity	2.5	3.3	2.1	3.1	2.1	3.3
19	Irrigation Developments Authorities	2.5	3.6	1.8	3.1	1.7	2.8
20	Drinking Water and Sanitation Company	2.5	3.1	1.7	2.4	1.4	2.1
21	Electricity Companies	2.1	2.9	1.5	2.5	1.5	2.7
22	University	1.5	2.5	1.3	2.5	1.2	2.7
23	Farm Companies	1.5	3.4	1.2	2.7	1.1	2.5
24	Farmers Organizations	1.6	3.8	1.2	2.9	1.1	2.8
25	Agriculture Water Uses Associations	1.8	3.5	1.5	2.7	1.3	2.6
26	Consumers Associations	1.5	2.8	1.2	2.5	1.1	2.4
27	Ministry of Foreign Affairs	2.0	3.8	2.0	3.8	2.0	4.0
28	Environmental Foundation Associations	1.6	3.1	1.4	2.6	1.2	2.8
29	Ministry of Investment	1.0	3.0	1.0	3.0	1.0	3.0
30	Egyptian Water Partnership	1.7	3.4	1.6	2.8	1.8	3.1
<b>International Transboundary Organizations</b>							
32	NBI- Shared vision Program	1.7	3.1	2.3	3.8	2.4	4.2
33	NBI- Subsidiary Action Sub-Program	1.9	3.5	2.2	3.7	2.5	4.1
34	Nile Basin Discourse (NGO)	1.4	3.1	1.6	3.6	1.6	3.7
35	Investors	2.8	3.8	3.0	3.8	2.4	3.8

**Table A2.2 Absolute average of Stakeholders scores in Sudan (n=12)**

NO	Stakeholders	Current Involvement in Water Decision at National Level	Desirable Involvement in Water Decisions at National Basin Level	Current Involvement in Water Decisions at Sub-River Basin Level	Desirable Involvement in Water Decisions at Sub-River Basin Level	Current Engagement in Transboundary Water Initiatives	Level of Importance of their Decisions for Transboundary Water Management Issues
1	Ministry of Irrigation and Water Resources-Water Resources Directorate	4.5	4.5	4.4	4.4	4.4	4.4
2	Ministry of Irrigation and Water Resources-Planning Directorate	3.7	3.7	3.6	3.6	3.6	3.5
3	Ministry of Irrigation and Water Resources-Irrigation Service Directorate	3.6	3.6	3.5	3.5	3.5	3.5
4	Ministry of Irrigation and Water Resources-Projects Directorate	3.4	3.3	3.3	3.3	3.2	3.2
5	Ministry of Irrigation and Water Resources-Dams Directorate	3.9	3.9	3.8	3.9	3.8	3.8
6	Ministry of Finance and National Economy	3.2	3.2	3.1	3.2	3.1	3.1
7	Ministry of Energy and Mining-Geological Research Authority of Sudan	2.3	2.3	2.2	2.2	2.2	2.2
8	Sudan Electricity Regulatory Authority	3.1	3.0	3.0	3.0	2.9	3.0
9	Higher Council of Environment and Natural Resources	2.9	3.0	2.9	2.9	2.9	3.0
10	Ministry of Agriculture and Forestry	3.3	3.3	3.3	3.3	3.3	3.3
11	Ministry of Livestock and Fisheries	2.8	2.8	2.7	2.7	2.6	2.6
12	Ministry of Industry	2.1	2.1	2.0	2.0	2.0	2.0
13	Hydraulics Research Station	4.1	4.1	4.1	4.1	4.0	4.0
15	Agricultural Research Corporation	2.7	2.7	2.6	2.6	2.6	2.6
16	National Water Corporation	2.9	2.9	2.9	2.9	2.9	2.9
17	Sudan National Electricity Corporation	3.0	3.0	2.9	2.9	2.9	2.9
18	Forestry Corporation	2.5	2.5	2.4	2.4	2.4	2.4
19	Meteorological Corporation of Sudan	2.7	2.7	2.7	2.7	2.7	2.7
20	Universities	2.2	2.2	2.2	2.3	2.2	2.3
23	Businessman union	1.8	1.8	1.7	1.8	1.7	1.8
24	River Navigation Corporation	2.1	2.1	2.1	2.1	2.1	2.1
25	Farmers Union	2.3	2.3	2.3	2.3	2.3	2.3
26	Environmental Protection Society	2.1	2.2	2.2	2.2	2.2	2.2
27	Sudanese Federation Engineers Union (water management section)	2.0	2.1	2.0	2.1	2.1	2.1
28	Agriculturalist Engineers Union	1.9	2.0	2.0	2.0	2.0	2.0
29	Sudanese Youths Organization for Water	1.5	1.5	1.5	1.5	1.5	1.5
30	Consumers Association	1.5	1.5	1.5	1.5	1.5	1.6
31	Sudanese Women Association	1.5	1.5	1.5	1.5	1.5	1.5
32	Fishermen Association	1.8	1.8	1.7	1.8	1.8	1.8
33	Sudanese Environmental Conservation Society	2.0	2.0	2.0	2.0	2.0	2.0
34	Technical Office of Planning Directorate	2.3	2.3	2.2	2.3	2.3	2.3
35	State Ministry of Agriculture, Livestock and Irrigation Management	2.5	2.4	2.4	2.4	2.4	2.4
36	State Ministry of Physical Planning	2.0	2.0	2.0	2.1	2.1	2.1
32	State Ministry of Finance and Economy	2.0	2.0	2.0	2.0	2.0	2.0
33	State Ministry of Health	1.8	1.8	1.8	1.8	1.8	1.8
36	Irrigation Scheme Board	2.5	2.4	2.4	2.4	2.4	2.4
37	University-Water Resources Institute	1.9	1.9	1.9	2.0	1.9	2.0
38	Agricultural Corporations	2.2	2.2	2.2	2.2	2.2	2.2
39	Local Water Corporations	2.0	2.0	1.9	1.9	1.9	1.9
42	Private Farm Companies	1.7	1.7	1.7	1.7	1.7	1.7
43	Farmers Cooperatives	1.8	1.8	1.8	1.8	1.8	1.8
47	Farmers Union	2.2	2.2	2.1	2.2	2.2	2.2
48	Agricultural Water Users Associations	2.1	2.2	2.1	2.2	2.2	2.2
50	Environmental NGOs and CBOs	1.9	2.0	2.0	2.0	2.0	2.0
53	Engineers Associations	1.8	1.8	1.8	1.8	1.8	1.8
55	NBI-NTEAP	3.0	3.0	3.0	3.1	3.1	3.1
56	NBI-National Focal Point	3.5	3.6	3.6	3.6	3.6	3.7
57	Nile Basin Discourse (NGO)	2.3	2.3	2.3	2.3	2.3	2.3
58	Sudanese Water Society	2.3	2.3	2.3	2.3	2.3	2.3



**Table A2.3 Absolute average of Stakeholders scores in Ethiopia (n=7)**

NO	Stakeholders	Current Involvement in Water Decision at National Level	Desirable Involvement in Water Decisions at National Basin Level	Current Involvement in Water Decisions at Sub-River Basin Level	Desirable Involvement in Water Decisions at Sub-River Basin Level	Current Engagement in Transboundary Water Initiatives	Level of Importance of their Decisions for Transboundary Water Management Issues
1	MOWR-Irrigation and Drainage Department	4.4	4.4	4.3	4.3	4.3	4.3
2	MOWR-Dams and Hydropower Department	4.4	4.4	4.3	4.3	4.3	4.3
3	MOWR-Basin Development Study and Water Utilization Department	4.1	4.1	4.1	4.2	4.2	4.1
4	MOWR-Boundary and Transboundary Rivers Department	4.5	4.5	4.5	4.5	4.5	4.5
5	MOWR-Water Resources Administration & Urban WS&S Department	3.7	3.6	3.6	3.6	3.5	3.5
6	MOWR-Rural Water Supply & Sanitation Department	3.7	3.7	3.7	3.7	3.8	3.8
7	MOWR-Project and Planning Department	3.6	3.6	3.5	3.5	3.5	3.5
8	Ministry of Finance and Economic Development	3.2	3.2	3.1	3.1	3.1	3.1
9	Ministry of Agriculture and Rural Development	3.8	3.8	3.8	3.8	3.8	3.8
10	Ministry of Trade and Industry	2.9	2.8	2.8	2.7	2.6	2.6
11	Environmental Protection Agency	3.7	3.7	3.7	3.7	3.6	3.6
12	House of Representatives (Standing Committee Natural Resources)	3.4	3.4	3.4	3.4	3.3	3.3
13	Ethiopian Agricultural Research Organization (EARO)	2.7	2.7	2.7	2.7	2.7	2.7
15	Ethiopian Electricity and Power Corporation	4.3	4.3	4.3	4.3	4.2	4.2
16	Universities	3.7	3.7	3.7	3.7	3.8	3.7
17	Agricultural Companies (f.e. sugar)	3.2	3.2	3.2	3.2	3.2	3.2
18	Chamber of Commerce	2.8	2.8	2.8	2.8	2.7	2.7
19	River Navigation Corporation	3.3	3.3	3.3	3.3	3.3	3.3
20	Farmers Union	2.9	2.9	2.9	2.9	2.9	2.9
23	Ethiopian Youth Association	2.9	2.9	2.9	2.9	2.9	2.9
24	Ethiopian Women Association	2.9	2.9	2.9	2.9	2.9	2.9
25	Fishermen Association	3.1	3.1	3.1	3.1	3.1	3.1
26	Environmental NGOs	3.4	3.4	3.4	3.4	3.4	3.4
27	Christian Relief and Development Association	3.5	3.5	3.5	3.5	3.4	3.4
28	Regional Government	4.2	4.2	4.2	4.1	4.1	4.1
29	Bureau Regional Planning and Development	3.8	3.8	3.8	3.8	3.8	3.8
30	Basin Water Resources Management Agency	3.8	3.8	3.8	3.7	3.7	3.7
31	Bureau of Water, Mines and Energy /Water Resources Development	4.4	4.4	4.4	4.4	4.3	4.3
32	Bureau of Agriculture and Rural Development	3.9	3.9	3.9	3.9	3.9	3.9
33	Commission of Agriculture and Environmental Rehabilitation	3.0	3.0	3.0	3.0	3.0	3.0
34	Bureau of Tourism	2.7	2.7	2.6	2.6	2.5	2.5
35	Town Water Boards	2.8	2.8	2.8	2.7	2.7	2.7
36	University-water related institute	3.4	3.4	3.4	3.4	3.4	3.4
32	Private Farm Companies	2.7	2.7	2.7	2.7	2.7	2.7
33	Farmers Cooperatives	2.7	2.7	2.8	2.8	2.8	2.8
36	Water transport Companies	2.3	2.3	2.4	2.4	2.5	2.5
37	Fishery Companies	2.5	2.5	2.5	2.5	2.5	2.5
38	Farmers' Union	2.6	2.6	2.7	2.7	2.7	2.7
39	Agricultural Water Users Associations	3.1	3.1	3.1	3.1	3.1	3.1
42	Environmental NGOs and CBOs	2.8	2.8	2.8	2.8	2.8	2.8
43	Fishermen Associations	2.6	2.6	2.6	2.6	2.6	2.6
47	Professional Associations	2.9	2.9	2.9	2.9	2.9	2.9
48	NBI-SAP (ENTRO-NTEAP)	3.8	3.8	3.8	3.8	3.8	3.7
50	NBI-SVP (National Focal Point)	3.9	3.9	3.9	3.9	3.9	3.8
53	Nile Basin Discourse (NGO)	3.6	3.6	3.6	3.6	3.6	3.5
55	International Funding Agencies/External Support Agencies (ESA)	3.0	3.0	3.0	3.0	3.0	2.9
56	MOWR-Women Affairs	2.7	2.7	2.7	2.7	2.7	2.7
57	National Meteorological Agency	3.0	3.0	3.0	3.0	3.0	3.0
58	Ministry of Mines and Energy	2.8	2.8	2.8	2.8	2.8	2.8
59	Ministry of Foreign Affairs	4.1	4.1	4.1	4.1	4.1	4.1
60	Ethiopian Mapping Authority	2.5	2.5	2.5	2.5	2.5	2.5
61	Ministry of Health	2.0	2.0	2.0	2.0	2.0	2.0
62	Geological Survey of Ethiopia	2.5	2.5	2.5	2.5	2.5	2.5
64	Irrigation Development Authorities	4.8	4.8	4.8	4.8	4.8	4.8
65	Local and regional politicians	4.0	4.0	4.0	4.0	4.0	4.0
66	Water Resources Research Institute	5.0	5.0	5.0	5.0	5.0	5.0
67	MOWR-Hydrology Department	4.5	4.5	4.5	4.5	4.5	4.5
68	Ethiopian Electric Agency	2.7	2.7	2.7	2.7	2.7	2.7
69	Ethiopian Road Authority	2.5	2.5	2.5	2.5	2.5	2.5
70	MWR-Water Resource Information Center	3.0	3.0	3.0	3.0	3.0	3.0

**Table A2.4 Absolute average of Stakeholders scores in Kenya (n=5)**

NO	Stakeholders	Current Involvement in Water Decision at National Level	Desirable Involvement in Water Decisions at National Basin Level	Current Involvement in Water Decisions at Sub-River Basin Level	Desirable Involvement in Water Decisions at Sub-River Basin Level	Current Engagement in Transboundary Water Initiatives	Level of Importance of their Decisions for Transboundary Water Management
1	Ministry of Water and Irrigation	4.7	4.7	4.7	4.8	4.9	4.9
2	Water Resources Management Authority	4.6	4.6	4.6	4.7	4.7	4.8
3	Ministry of Lands-Survey of Kenya	3.1	3.1	3.0	3.1	3.1	3.1
4	Ministry of Planning and National Development	3.5	3.5	3.4	3.5	3.5	3.7
5	Kenya National Bureau of Statistics	3.0	2.9	2.8	2.9	2.9	3.0
6	Ministry of Regional Development	3.7	3.7	3.7	3.8	3.8	3.9
7	Ministry of Livestock and Fisheries Development	4.0	4.0	4.0	4.0	4.0	4.1
8	Ministry of Agriculture	4.0	4.0	3.9	3.9	3.9	4.0
9	Ministry of Environment	4.3	4.3	4.3	4.3	4.2	4.3
10	National Environment Management Authority-NEMA	4.1	4.1	4.0	4.0	4.0	4.0
11	Ministry of Energy	3.1	3.1	3.1	3.2	3.2	3.2
12	Kenya Electricity Generating Company-KENGEN	3.5	3.5	3.5	3.6	3.7	3.7
13	Ministry of Health	3.3	3.3	3.3	3.4	3.4	3.4
15	Kenya Meteorological Department	3.8	3.8	3.7	3.7	3.7	3.7
16	National Irrigation Board	4.0	4.0	3.9	3.9	3.8	3.8
17	Water Services Regulatory Board	4.0	4.0	4.0	3.9	3.9	3.9
18	Ministry of Industry and Commerce	3.0	3.0	2.9	2.9	2.8	2.8
19	Lake Victoria North Water Services Board	3.9	3.9	3.9	3.8	3.8	3.8
20	Lake Victoria South Water Services Board	3.9	3.9	3.9	3.8	3.8	3.8
23	Lake Victoria North Catchment Area-WRMA	4.2	4.2	4.1	4.1	4.0	4.0
24	Lake Victoria South Catchment Area-WRMA	4.2	4.1	4.1	4.0	4.0	4.0
25	Lake Basin Development Authority	4.0	4.0	4.0	3.9	3.8	3.8
26	Kenya Marine and Fisheries Research Institute	3.7	3.7	3.7	3.7	3.7	3.8
27	National Water Conservation and pipeline corporation	1.7	1.7	1.7	1.7	1.7	1.7
28	Kenya Agricultural Research Institute	3.8	3.8	3.8	3.8	3.8	3.8
29	EWASO NGIRO South Authority	0.0	0.0	3.0	2.0	0.0	0.0
30	The East African Wildlife Society	3.0	3.0	3.0	3.0	3.0	3.0
31	Kenya Forest Service	3.0	3.0	3.0	3.0	3.0	3.0
32	Universities	3.1	3.0	3.0	3.0	2.9	2.9
33	Kenya Water Institute (KEWI)	2.9	2.9	2.8	2.9	2.8	2.9
34	Water services providers	2.8	2.8	2.8	2.8	2.8	2.8
35	Water appeal board	2.3	2.3	2.3	2.3	2.3	2.3
36	Water Resources Users Associations	3.6	3.7	3.8	3.8	3.8	3.9
32	Kenya Nile Discourse Forum(NGO)	3.5	3.7	3.7	3.7	3.6	3.6
33	Sio-Malaba Malakisi NBI-SAP	4.0	4.0	4.0	4.0	3.9	3.8
36	NBI-Shared Vision Program	4.3	4.3	4.3	4.3	4.2	4.2
37	IGAD Climate prediction and Applications Centre	3.6	3.6	3.5	3.4	3.5	3.5
38	Regional Centre for Mapping of Resources & Development	3.5	3.6	3.5	3.5	3.5	3.4
39	Institute of Met. Training and Research (IMTR)	3.5	3.5	3.5	3.4	3.4	3.4
42	Lake Victoria Commission	4.2	4.1	4.1	4.0	4.0	3.9

**Table A2.5 Absolute average scores Stakeholders in Uganda (N=4)**

Stakeholders	Current involvement in water decisions at national level	Desirable involvement in water decisions at national level	Current involvement in water decisions at sub-river basin level	Desirable involvement in water decisions at sub-river basin level	Current engagement in transboundary water initiatives	Level of importance of their decisions for transboundary water management issues
Ministry of Energy and Mineral Development	3.2	3.3	3.4	3.6	3.7	3.8
Ministry of Water and Environment (DWD, DWRM, DEM)	4.6	4.6	4.6	4.7	4.7	4.7
Ministry of Lands	3.2	3.2	2.9	3.2	3.1	3.2
Geological Survey	3.3	3.6	3.3	3.7	3.5	5.0
Ministry of Finance, Planning and Economic Development	2.3	2.5	2.6	2.8	2.9	3.1
Uganda Revenue Authority	2.9	3.1	3.1	3.2	3.2	3.2
Uganda Bureau of Statistics	2.0	2.2	2.1	2.4	2.4	2.4
Ministry of Health	2.5	2.5	2.2	2.5	2.4	2.6
Mapping Authority	2.8	2.7	2.4	2.6	2.4	2.5
Ministry of Agriculture Animal Husbandry and Fisheries	3.5	3.7	3.7	3.9	4.0	4.2
National Water and Sewerage Corporation	3.5	3.5	3.4	3.7	3.8	3.9
National Environment Management Authority	4.0	4.1	4.1	4.3	4.4	4.5
Science and Technology Commission	3.2	3.3	3.1	3.4	3.2	3.5
Electricity Regulation Authority	2.6	3.1	3.4	4.0	4.1	4.4
National politicians	3.0	3.2	3.4	3.6	3.7	4.0
Parliamentary committee on natural resources	2.9	3.2	3.1	3.4	3.4	3.7
Tourism Board	2.0	3.5	3.0	3.5	3.2	3.3
Lake George and Edward Basin Organisation	3.4	3.5	3.4	3.6	3.4	3.6
Lake Albert basin organisation	3.4	3.5	3.4	3.6	3.4	3.6
<b>LVRAC</b>	3.5	3.8	4.0	4.3	4.0	5.0
Water supply and treatment companies	2.4	2.4	2.2	2.3	2.1	2.1
Electricity companies (West Nile Thermo company)	2.6	2.8	2.8	2.9	2.8	3.0
Local government	3.3	3.5	3.4	3.6	3.5	3.6
Local and Regional politicians	3.1	3.6	3.9	4.4	4.4	4.9
Makerere University	1.7	1.9	1.8	2.0	1.8	2.1
Water Resources Research Institute	2.7	2.7	2.5	2.7	2.5	2.7
Makerere Institute of Environment and Natural Resources	2.2	2.3	2.1	2.3	2.1	2.3
Makerere Meteorology Unit	2.2	2.5	2.3	2.5	2.4	2.6
Flower companies??	1.7	1.8	1.7	1.9	1.8	2.0
Farmers Organization(UNFA)	1.7	1.9	1.8	2.0	1.8	2.0
Chamber of Commerce	2.1	2.4	2.4	2.7	2.7	3.0
Fishery Companies	2.2	2.3	2.0	2.2	1.9	2.2
Shipping-transport Companies?	2.1	2.3	2.1	2.2	2.0	2.2
Recreation/tourism Companies	1.8	2.1	1.9	2.2	2.0	2.2
Agri cultural Water Users Associations	2.4	2.9	2.4	2.7	2.3	2.7
Consumers Associations	2.4	2.7	2.3	2.7	2.4	2.7
Environmental Alert ETC, many NGOs	2.4	2.9	2.4	2.9	2.4	2.7
Fishermen Associations	2.5	2.7	2.5	2.7	2.5	2.6
Women Associations	2.4	2.9	2.4	2.9	2.4	2.7
Professional associations	2.3	2.8	2.3	2.7	2.2	2.5
Uganda Nile Discourse Forum	3.0	3.4	3.3	3.3	3.0	4.0
NBI-Shared Vision Program	3.3	3.5	3.4	3.3	3.1	3.0
NBI-Subsidiary Action Sub-program	4.0	4.6	4.8	5.0	5.0	5.0
Nile Basin Discourse (NGO)	3.3	3.9	3.4	3.7	3.1	3.3
East African Legislative Assembly / East African Community	3.5	3.7	3.4	3.3	3.3	3.4

**Table A2.6 Absolute average scores Stakeholders in Tanzania (N=3)**

No	Stakeholders	Current involvement in water decisions at national level	Desirable involvement in water decisions at national level	Current involvement in water decisions at sub-river basin level	Desirable involvement in water decisions at sub-river basin level	Current engagement in transboundary water initiatives	Level of importance of their decisions for transboundary water management issues
1	Tanzania Meteorological Agency	3.0	4.0	3.0	4.0	2.3	4.0
2	Ministry of Water	4.7	4.3	4.0	4.3	4.7	5.0
3	Tanzania Geological Survey Agency	3.0	4.3	3.0	4.3	2.7	4.5
4	Ministry of Planning, Economy and Empowerment	3.0	4.0	2.5	4.0	2.0	5.0
5	Ministry of Finance	3.3	4.3	2.7	4.3	2.5	5.0
6	National Bureau of Statistics	3.0	4.0	2.5	4.0	2.0	5.0
7	Ministry of Health and Social Welfare	3.3	4.3	3.3	4.3	3.5	5.0
8	Surveys and Mapping Division (MLSD)	2.5	4.0	2.5	4.0	4.0	4.0
9	Ministry of Lands and Settlements Development	2.7	4.3	2.7	4.3	3.5	4.5
10	Ministry of Energy and Minerals	3.7	4.3	3.7	4.3	4.0	4.5
11	National Environmental Management Council	3.7	4.3	3.7	4.3	3.5	5.0
12	Commission for Science and Technology	3.0	4.0	2.5	4.0	2.0	4.0
13	Tanzania Electric Supply Company	3.5	4.0	3.5	4.0	2.0	2.0
14	Ministry of Agriculture, Food Security and Cooperatives	3.7	4.3	3.7	4.3	4.0	5.0
15	Directorate of Environment	4.0	4.0	3.5	4.0	4.0	5.0
16	National Water Board	3.0	4.3	2.7	4.3	2.5	5.0
17	Ministry of Natural Resources and Tourism	4.0	4.0	3.5	4.0	4.0	5.0
18	Ministry of Livestock Development	3.7	4.3	3.3	4.3	3.5	4.0
19	Tanzania Fisheries Research Institute	3.7	4.3	3.3	4.3	3.5	4.0
20	Attorney General's Chambers	3.0	4.0	2.5	4.0	3.0	5.0
21	National politicians	3.0	4.0	2.5	4.0	2.0	4.0
22	Basin Water Boards	4.0	4.3	4.0	4.3	4.5	5.0
23	Basin Water Offices	4.3	4.3	4.0	4.3	4.5	5.0
25	Regional Secretariats	3.0	4.0	3.0	4.0	3.0	4.0
26	Water supply and sewerage authorities	4.0	4.3	3.7	4.3	3.3	3.0
27	Local government authorities	3.0	4.0	3.0	4.0	4.0	4.0
28	Local and Regional politicians	3.0	4.0	3.0	4.0	2.5	4.0
29	University of Dar es Salaam	3.0	4.0	3.0	4.0	2.5	4.0
30	Sokoine University of Agriculture	3.0	4.0	3.0	4.0	3.0	4.0
31	Ardhi University	3.0	4.0	3.0	4.0	3.0	4.0
32	Water Resources Institute	3.7	4.3	3.7	4.3	3.3	4.5
33	Lake Victoria Environmental Management Project (LVEMP)	4.5	4.0	4.0	4.0	5.0	4.0
34	Farm Companies	2.5	4.0	3.0	4.0	3.0	3.0
35	Farmers Organization	2.5	4.0	3.0	4.0	2.5	3.0
36	Tanzania Chamber of Commerce and Agriculture	2.0	4.0	2.5	4.0	2.0	3.0
37	Fishery Companies	2.5	4.0	2.5	4.0	2.0	3.0
38	Shipping-transport Companies	2.0	4.0	2.5	4.0	2.0	3.0
39	Recreation/tourism Companies	2.0	4.0	2.5	4.0	2.0	3.0
40	Water Users Associations	3.5	4.0	4.0	4.0	2.0	5.0
41	Consumers Associations	3.5	4.0	4.0	4.0	4.0	5.0
42	Environmental NGOs	3.5	4.0	3.5	4.0	4.0	5.0
43	Fishermen Associations	2.5	4.0	2.5	4.0	2.0	5.0
44	Women Associations	2.5	4.0	2.5	4.0	2.0	5.0
45	Professional associations	2.5	4.0	2.5	4.0	2.0	5.0
46	Nile basin Initiative	5.0	4.0	4.0	4.0	5.0	5.0
47	SADC	5.0	4.0	4.0	4.0	5.0	5.0
48	EAC	5.0	4.0	4.0	4.0	5.0	5.0
49	Water Aid (NGO)	3.5	4.0	3.5	4.0	4.0	5.0
50	WWF (NGO)	3.5	4.0	3.5	4.0	4.0	5.0
51	ICUN (NGO)	3.5	4.0	3.5	4.0	4.0	5.0
52	Nile Basin Discourse (NGO)	4.0	5.0	4.0	5.0	4.0	5.0

**Table A2.7 Absolute average scores Stakeholders in Rwanda (N=10)**

No.	Stakeholders	Current involvement in water decisions at national level	Desirable involvement in water decisions at national level	Current involvement in water decisions at sub-national level	Desirable involvement in water decisions at sub-national level	Current engagement in transboundary water initiatives	Level of importance of their decisions for transboundary water management issues
1	MINITERE	4.8	5.0	4.6	4.7	4.5	4.7
2	Ministry of Finance and Economic Planning	3.9	4.1	3.7	4.0	3.4	4.1
3	MINAGRI	2.7	4.7	2.3	4.6	2.5	3.8
4	Ministry of Health	1.2	2.9	1.2	3.0	1.4	2.2
5	MINALOC	1.9	3.4	2.4	4.7	1.5	2.2
6	MININFRA Energy	2.4	3.5	2.0	3.3	2.2	3.0
7	ELECTROGAZ Energy -> RECO	1.7	2.6	1.9	2.8	1.8	2.2
8	ELECTROGAZ Water -> RWASCO	2.4	4.1	2.7	4.3	2.2	3.0
9	REMA (Rwanda Environment Management Authority)	1.9	4.7	1.7	4.6	1.3	3.5
10	Rwanda Bureau of Standards	1.5	3.4	1.5	3.2	1.4	2.5
11	RURA (Rwanda Utilities Regulation Authority)	1.8	4.5	1.5	3.9	1.4	3.4
12	Major project implementation units (eg World Bank, ADB)	2.0	3.0	1.8	3.1	1.9	2.7
13	National politicians	1.9	2.0	2.5	2.4	1.3	1.3
14	Meteorology Dept. (MININFRA)	1.7	3.5	1.7	3.3	1.3	2.7
15	Statistical Office	1.6	3.7	1.6	3.3	1.2	2.5
16	Hydrological Service	1.9	3.8	2.0	3.8	1.4	2.7
17	Geological Service	1.3	2.3	1.3	2.4	1.3	1.7
18	Ministry of Health	1.0	3.0	2.0	4.0	2.0	2.0
19	MINAGRI Mapping & GIS	1.1	2.8	1.1	2.6	1.1	2.1
20	University (UNR)	1.1	2.8	1.1	2.7	1.1	2.1
21	KIST	1.1	2.4	1.0	2.2	1.0	1.7
22	ISAR	1.2	2.9	1.1	2.7	1.0	2.0
23	ISAE Busogo	1.1	2.1	1.0	1.9	1.0	1.5
24	District government	1.7	3.8	2.4	5.0	1.4	2.4
25	Province administration	2.1	4.1	2.8	4.9	1.4	2.4
26	Regional Projects (eg Mutara, Bugesera)	1.2	2.2	1.8	3.6	1.3	1.5
27	Irrigation Development Authorities	1.5	4.1	1.5	4.3	1.4	3.9
28	Local and regional politicians	1.3	1.5	1.8	1.9	1.2	1.2
29	Farm Companies	1.1	1.9	1.2	2.5	1.1	1.3
30	Industrial and Mining Companies	1.8	2.7	1.7	2.9	1.3	1.8
31	Fishery Companies	1.0	1.3	1.0	1.3	1.0	1.3
32	Tourism Companies	1.0	1.1	1.0	1.1	1.0	1.0
33	Agricultural Associations	1.1	3.0	1.1	3.3	1.4	1.9
34	Consumers Associations	1.0	2.9	1.0	3.0	1.3	1.9
35	Environmental Associations/NGOs	1.0	2.6	1.0	2.7	1.0	2.0
36	Fishermen Associations	1.0	1.3	1.0	1.5	1.0	1.3
37	Women's Associations	1.0	2.3	1.0	2.6	1.0	1.9
38	Professional associations	1.1	3.6	1.1	3.7	1.1	2.3
39	NBI-Shared Vision Program	1.0	3.8	1.0	2.5	1.7	5.0
40	NELSAP	2.1	3.7	1.8	3.2	2.9	5.0
41	EGL/SINELAC	1.2	2.6	1.2	2.4	1.4	2.7

**Table A2.8 Absolute average of Stakeholders scores in DR Congo (n=3)**

No	Stakeholders	Current involvement in water decisions at national level	Desirable involvement in water decisions at national level	Current involvement in water decisions at sub-national level	Desirable involvement in water decisions at sub-national level	Current engagement in transboundary water initiatives	Level of importance of their decisions for transboundary water management issues
1	Mettelsat-ERST (National Meteorological Authority)	3.0	4.3	3.3	4.3	2.7	3.7
2	CRGM (Centre for Geological and Mining Research)	3.0	4.0	3.0	4.0	2.0	4.0
3	Ministry of Finance	1.0	4.0	1.0	4.0	2.0	2.0
4	INS (National Statistical Institute)	1.0	4.0	2.0	4.0	1.0	2.0
5	Ministry of Health	4.0	5.0	4.0	5.0	2.0	2.0
6	IGC (Geographical Institute of Congo)	3.0	4.0	3.0	4.0	2.0	4.0
7	Ministry of Agriculture	4.0	5.0	2.0	5.0	0.0	0.0
8	Ministry of Energy	3.7	5.0	4.0	5.0	4.0	4.7
9	Ministry of Environment	4.0	4.0	4.0	5.0	3.7	4.3
10	ICCN (Congolese Institute for the Conservation of Nature)	1.0	3.0	1.0	4.0	1.0	2.0
11	INERA (Nat. Institute for Agricultural Studies and Research)	4.0	5.0	3.0	5.0	2.0	5.0
12	Ministry of Mines	2.7	3.3	3.0	4.3	2.3	4.0
13	National Scientific Council	1.0	5.0	1.0	5.0	1.0	5.0
14	CNAEA (National Action Committee on Water and Sanitation)	5.0	5.0	5.0	5.0	4.0	4.0
15	PNA (National Sanitation Programme)	4.0	5.0	3.0	5.0	2.0	5.0
16	REGIDESO (urban water and electricity), SNHR (rural water)	4.3	5.0	3.7	5.0	3.7	5.0
17	SNEL (National Electricity Corporation)	3.3	5.0	2.7	5.0	3.0	5.0
18	Local authorities	2.0	5.0	2.0	5.0	2.0	5.0
19	Polytechnical Faculty	2.7	5.0	3.3	5.0	3.3	5.0
20	Faculty of Agricultural Sciences	3.0	3.7	3.7	5.0	3.7	4.3
21	CGEA-CRENK (Regional Centre of Nuclear Studies Kinshasa)	3.0	4.3	3.7	5.0	2.7	4.3
22	Public Health School (Ecole de Santé Publique)	2.7	4.3	3.3	5.0	2.7	4.3
23	Federation of private enterprises of Congo	4.0	5.0	1.0	5.0	1.0	5.0
24	Transport Companies	2.0	5.0	2.0	5.0	2.0	5.0
25	Environmental Associations/NGOs	2.0	5.0	2.0	5.0	1.0	5.0
26	Women's associations	2.0	5.0	2.0	5.0	1.0	5.0
27	Professional associations	1.0	5.0	1.0	5.0	1.0	5.0
28	NBI-Shared Vision Program	1.0	5.0	2.0	5.0	3.0	5.0
29	NBI-Subsidiary Action Sub-program	1.0	5.0	2.0	5.0	3.0	5.0
30	Nile Basin Discourse (NGO)	1.0	5.0	2.0	5.0	3.0	5.0

**Table A2.9 Absolute average scores Stakeholders in Burundi (N=9)**

	Stakeholders	Current involvement in water decisions at national level	Desirable involvement in water decisions at national level	Current involvement in water decisions at sub-national level	Desirable involvement in water decisions at sub-national level	Current engagement in transboundary water initiatives	Level of importance of their decisions for transboundary water management issues
1	Ministry of Energy and Mines - DGEE / Water res	3.7	4.4	2.6	3.1	3.1	3.1
2	Ministry of Planning and Reconstruction	3.0	3.6	2.7	3.0	2.7	2.8
3	Ministry of Finance	2.6	3.1	2.4	2.5	2.4	2.5
4	Ministry of Agriculture and Animal Husbandry	4.1	4.2	3.5	3.8	2.8	3.0
5	MINATET - Land reclamation and rural engineeri	3.6	4.0	3.0	3.3	2.9	3.0
6	MINATET - Forestry	3.1	3.4	2.8	3.1	2.8	3.0
7	MINATET - Environment	3.7	4.1	3.3	3.4	3.3	3.5
8	INECN (Nat. Instit. Environment and Conservatio	3.3	3.9	3.0	3.3	3.1	2.9
9	Ministry of Public Works	3.0	3.3	2.5	2.8	2.4	2.5
10	Ministry of Transport and Telecommunications	2.6	2.9	1.6	2.0	2.3	2.5
11	Ministry of Public Health	3.3	3.8	2.1	2.7	2.1	2.3
12	Ministry of Energy and Mines - DGEE / Energy	3.7	4.1	2.9	3.4	3.1	3.5
13	REGIDESO - Energy supply	4.3	4.6	3.3	3.6	3.3	3.9
14	REGIDESO - Water supply	4.3	4.5	3.6	3.9	3.4	3.9
15	SETEMU (Municipal Technical Services, sewerag	2.8	3.5	2.4	3.0	2.1	2.5
16	Ministry of Energy and Mines - DGHER (rural wat	4.0	4.1	3.4	3.4	2.8	2.9
17	Water supply projects (PEAÉ)	3.6	3.9	2.8	3.0	2.4	2.4
18	Rehabilitation / reconstruction projects (PRASAB	3.1	3.4	2.9	3.0	2.1	2.3
19	National politicians	2.8	3.3	2.2	2.5	2.6	3.3
20	IGEBU - Hydrometeorology and agroclimatology	4.2	4.8	4.3	4.3	3.6	3.9
21	ISTEEBU (Institute of Statistics and Economical S	2.7	3.0	2.1	2.1	2.0	2.5
22	Ministry of Energy and Mines - Geological Servic	2.6	3.0	2.3	2.4	1.9	2.3
23	Ministry of Public Health	3.5	3.9	2.8	3.0	2.3	2.6
24	University of Burundi	2.8	3.4	2.5	3.4	2.3	2.5
25	ISABU (Institute of Agricultural Sciences of Burun	2.9	3.1	2.6	3.0	2.5	2.8
26	Commune (administration)	2.9	3.3	2.7	3.4	2.3	2.0
27	Province (administration)	3.0	3.4	2.6	3.3	2.4	2.3
28	Regional projects	3.3	3.4	2.4	3.1	3.0	3.4
29	Irrigation development agencies	3.5	3.5	3.0	3.2	2.3	3.0
30	Local and regional politicians (province)	2.3	2.7	2.1	2.7	1.8	2.2
31	Agricultural Companies	2.8	3.4	2.6	3.3	2.3	2.9
32	Industrial and Mining Companies	2.4	3.1	2.3	2.8	1.9	2.1
33	Fishery Companies	3.8	4.0	3.0	3.3	2.7	3.5
34	Tourism Companies	2.3	3.0	2.1	2.7	2.1	2.4
35	Agricultural water user associations	2.4	3.0	2.3	2.8	1.7	1.8
36	Consumers associations	2.4	3.3	2.2	2.7	1.5	2.0
37	Environmental associations/NGOs	2.8	3.5	2.7	3.2	2.0	2.5
38	Fishermen associations	3.0	3.5	2.7	3.2	2.3	2.5
39	Women's associations	2.4	3.0	2.2	3.0	1.7	2.0
40	Professional associations	2.0	2.5	1.7	2.5	1.7	2.7
41	NBI-Shared Vision Program	3.7	3.9	2.7	3.7	3.7	4.0
42	NELSAP	3.8	3.7	3.2	3.7	3.7	4.0
43	EGL/SINELAC	3.7	3.7	3.0	3.7	3.7	3.7
44	Interntaional donors (WB, ADB, EU...)	3.8	3.9	2.4	3.3	2.8	3.4
45	UN Organisations (FAO, UNICEF, PNUD...)	3.9	4.0	2.6	3.5	3.4	3.6
46	Bilateral donors	3.1	3.3	2.4	3.0	3.1	3.3