

Sudan

Institutional Arrangements

The Ministry of Irrigation and Water Resources is the federal body in Sudan that is responsible for the governance functions for the water sector¹. The National Council for Water Resources is the high level decision making body for policies and legislation and has representatives of the water related ministries, the state governments and stakeholders in the water sector. There is also a National Coordination Committee for the Blue Nile, which advise the senior MIWR decision makers about the operation of dams in which stakeholders for the water release planning are represented.

Table 1.1 Key institutions involved in the water sector of Sudan

Constitutional function	Organisational function	Operational function
Ministry of Irrigation and Water Resources (MIWR)	Ministry of Irrigation and Water Resources (MIWR)	State Departments of Physical planning and water affairs ²
National Council for Water Resources (NCWR)	Ministry of Agriculture and Natural Resources (MANR)	State Departments of Agriculture and Natural Resources *1
Ministry of Agriculture and Natural Resources (MANR)	State Minister responsible for Physical planning and water affairs	National Water Corporation
Higher Council of Environment and Natural Resources (HCENR)	State Minister responsible for agriculture and natural resources	Sudan National Electricity Corporation
Ministry of Energy and Mining (MEM)		Management Boards of national irrigation schemes
Ministry of Finance and National Economics		Agricultural Corporations
Ministry of Environment and Tourism		Water Users Associations
Ministry of Local Government		
Ministry of Foreign Affairs		

The Nile Waters Directorate and the Dams and Nile Control Directorate are the two directorates that are responsible for managing the Nile water resources of Sudan. The irrigation schemes and the drinking water treatments plants are the main consumptive users of the water, while the hydropower plants are the main non-consumptive water user in Sudan.

The Irrigation Services Directorate is responsible for the management of the four national irrigation schemes (Gezira and Managil, New Halfa, El Suki and Rahad) and the water supply to irrigation schemes that are managed by the State Governments.. The Irrigation Service Directorate supervises the semi-autonomous management boards, which was responsible for the management of the national irrigation schemes.

¹ The governance function covers both the constitutional and organizational functions.

² The ministries and departments at state level dealing with water and irrigation have different names depending on the major activities in the specific state.

The National Water Corporation is responsible for the governance and organisational functions in the drinking water sub-sector. The State Drinking Water Corporations, under the authority of the respective state ministers, are responsible for the operational function.

The Sudan Electricity Regulation Authority of the Ministry of Energy and Mining is responsible for the governance function in the electricity sector. The National Electricity Corporation is responsible for the organizational and operational function of the hydropower plants.

The Ministry of Finance and National Economy has the mandate to prioritise the investments proposed by the public-sector organizations in the water sector at federal and state level. The Ministry of Investments promotes private sector investments in the water sector, however their interest currently limited to hydropower plants and small scale irrigation schemes.

The Higher Council for Environment and Natural Resources is the high-level decision making body for policies and legislation on environment and natural resources. The Ministry of Environment and Tourism is responsible for the governance and organisational functions. The HCENR supervises the environmental and social impact assessments of national projects that are proposed by the public and private sectors, including in the water sector.

The Ministry of Local Government and the Ministry of Foreign Affairs are responsible for respectively the relations in the water sector between the state and federal governments, and for the bi- and multilateral relation in the water sector of the federal government.

Trans-boundary treaties and agreements

There have been several colonial and post-colonial bi-lateral and multi-lateral transboundary treaties and agreements related to the use and management of the waters of the Nile Basin. The following table provides a list of these treaties and agreements.

Table 1.2 Trans-boundary treaties in Nile Basin

Date	Treaty basin	Signatories	Treaty Name
August 5, 1994	Lake Victoria	Kenya, Tanzania, Uganda	Agreement to initiate program to strengthen regional coordination in management of resources of Lake Victoria
July 1, 1993	Nile	Egypt, Ethiopia	Framework for general co-operation between the Arab republic of Egypt and Ethiopia
May 18, 1981	Kagera	Burundi, Rwanda, Tanzania, Uganda	Accession of Uganda to the agreement for pertaining to the creation of the organization for the management and development of the Kagera river basin
August 24, 1977	Kagera	Burundi, Rwanda, Tanzania, Uganda	Agreement for the establishment of the organization for the management and development of the Kagera river basin
November 8, 1995	Nile	Sudan, Egypt	Agreement between Egypt and Sudan the government of the united Arab Republic and the government of Sudan
July 16, 1952	Nile	Egypt, Great Britain and Northern	Exchange of notes constituting an agreement between the government of the United Kingdom of Great Britain and Northern Ireland and the government of Egypt regarding the construction

Date	Treaty basin	Signatories	Treaty Name
		Ireland	of the Owen Falls dam in Uganda
January 19, 1950	Nile	Egypt, Great Britain on behalf of Uganda	Exchange of notes constituting an agreement between the government of the United Kingdom of Great Britain and Northern Ireland on behalf of the government of Uganda and the government of Egypt regarding cooperation in meteorological and hydrological surveys in certain areas of the Nile basin
December 5, 1949	Nile	Egypt, Great Britain on behalf of Uganda	Exchange of notes constituting an agreement between the government of the United Kingdom of Great Britain and Northern Ireland and the government of Egypt regarding the construction of the Owen Falls dam, Uganda
May 31, 1949	Nile	Egypt, Great Britain	Exchange of notes constituting an agreement between the government of the United Kingdom of Great Britain and Northern Ireland and the government of Egypt regarding the construction of the Owen Falls dam, Uganda
December 7, 1946	Nile	Egypt, Great Britain	Exchange of notes constituting an agreement between the government of the United Kingdom of Great Britain and Northern Ireland and Egypt regarding the utilization of profits from the 1940 British government cotton buying commission to finance schemes for village water supplies
November 22, 1934		Belgium; Great Britain	Agreement between the United Kingdom and Belgium regarding water rights on the boundary between Tanganyika and Ruanda - Urundi
May 7, 1929	Nile	Egypt; Great Britain	Exchange of notes between His Majesty's government in the United Kingdom and the Egyptian government in regard to the use of the waters of the river Nile for irrigation purposes
December 20, 1925	Lake Tana	Great Britain, Italy	Exchange of notes between United Kingdom and Italy respecting concessions for a barrage at Lake Tana and a railway across Abyssinia from Eritrea to Italian Somaliland
December 13, 1906	Nile	France, Great Britain, Italy	Agreement between Great Britain, France and Italy respecting Abyssinia
May 9, 1906	Nile	DR Congo, Great Britain	Agreement between Great Britain and the independent state of the DR Congo, modifying the agreement signed at Brussels 12 May 1894, relating to the spheres of influence of Great Britain and the Independent State of the DR Congo in East and Central Africa
May 15, 1902	Nile	Ethiopia, Great Britain	Treaties between Great Britain and Ethiopia, relative to the frontiers between Anglo-Egyptian Sudan, Ethiopia, and Eritrea
March 18, 1902	Nile	Ethiopia, Great Britain	Exchange of notes between Great Britain and Ethiopia
April 15, 1891	Nile	Great Britain, Italy	Protocol between Great Britain and Italy for the demarcation of their respective spheres of influence in Eastern Africa

Source: UNEP (2002), Atlas of International Freshwater Agreements

There are two other on-going multi-lateral agreements being negotiated by the Nile basin countries which are of major importance to the NBI-DSS. These are:

- Agreement on the Nile River Basin Cooperative Framework; and
- Protocol for Data Sharing.

Issues identified by key stakeholders

The following are some of the key water resources related issues that were identified by the stakeholders in the respective countries of the Nile Basin. These issues were categorized into structural and institutional issues.

- Structural Issues
 1. Lack of modelling for optimal use of the Sudanese withdrawals
 2. Food insecurity due to lack of supplementary irrigation facilities
 3. Desertification of semi-arid areas
 4. Siltation of irrigation and drainage canals
 5. River bank erosion, sedimentation of reservoirs, rivers widening, and morphological change
 6. Limited base flow in Blue Nile, Atbara and Sobat rivers towards the end of dry season
 7. Waste water disposal and hygiene in densely populated areas along the Nile River
 8. Limited funding for modern measurement equipment to collect accurate information on hydrologic and climatic parameters and update of land use/cover images,
 9. Huge potentials in irrigation and limited available water resources
 10. Need to enhance flood forecast and drought prediction capacity through better monitoring and sharing of hydrological and meteorological data with Nile Basin countries.
 11. Limited potable water infrastructure
 12. Need for groundwater potential assessment & production
 13. Disparity between available water and future demand for the different sectors according to mid- and long-term plans and ambitious future plans in the different states.
 14. Water hyacinth problems in the states
 15. Navigation improvement
 16. Water losses
 17. Need to increase storage
 18. Wetland management
 19. Water harvesting
- Institutional issues
 1. Lack of coordination between the different states and the definition of the roles and responsibilities of the Federal and state Governments
 2. Lack of complementing top-down with bottom-up planning approaches

3. Lack of transparency of the planning and decision process of major water infrastructure projects
4. Lack of preparation of the Irrigation Service Directorate, the Sudan Gezira Board and the water users for the understanding of their new roles and required capacities.
5. Fisheries Management
6. Application of legislation & laws on water use and distribution.
7. Lack of appropriate capacity in the state and at local level.
8. Capacity building (human and institutional)
9. Stakeholder participation
10. Awareness of public and decision makers