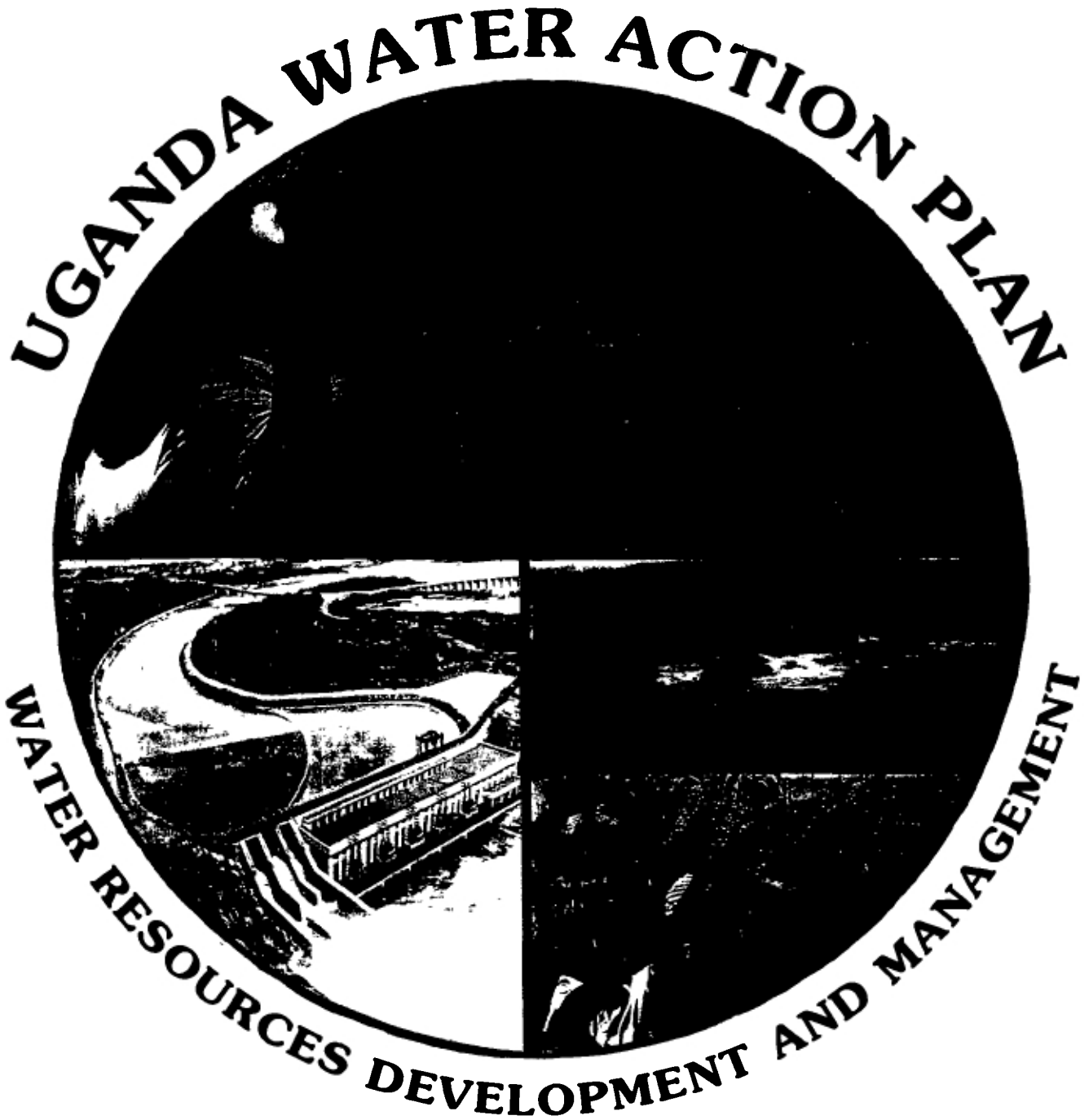




THE REPUBLIC OF UGANDA



INTERNATIONAL ASPECTS
(DOC. 009)

MINISTRY OF NATURAL RESOURCES
DIRECTORATE OF WATER DEVELOPMENT

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UGANDA WATER ACTION PLAN

WATER RESOURCES DEVELOPMENT AND MANAGEMENT

INTERNATIONAL ASPECTS

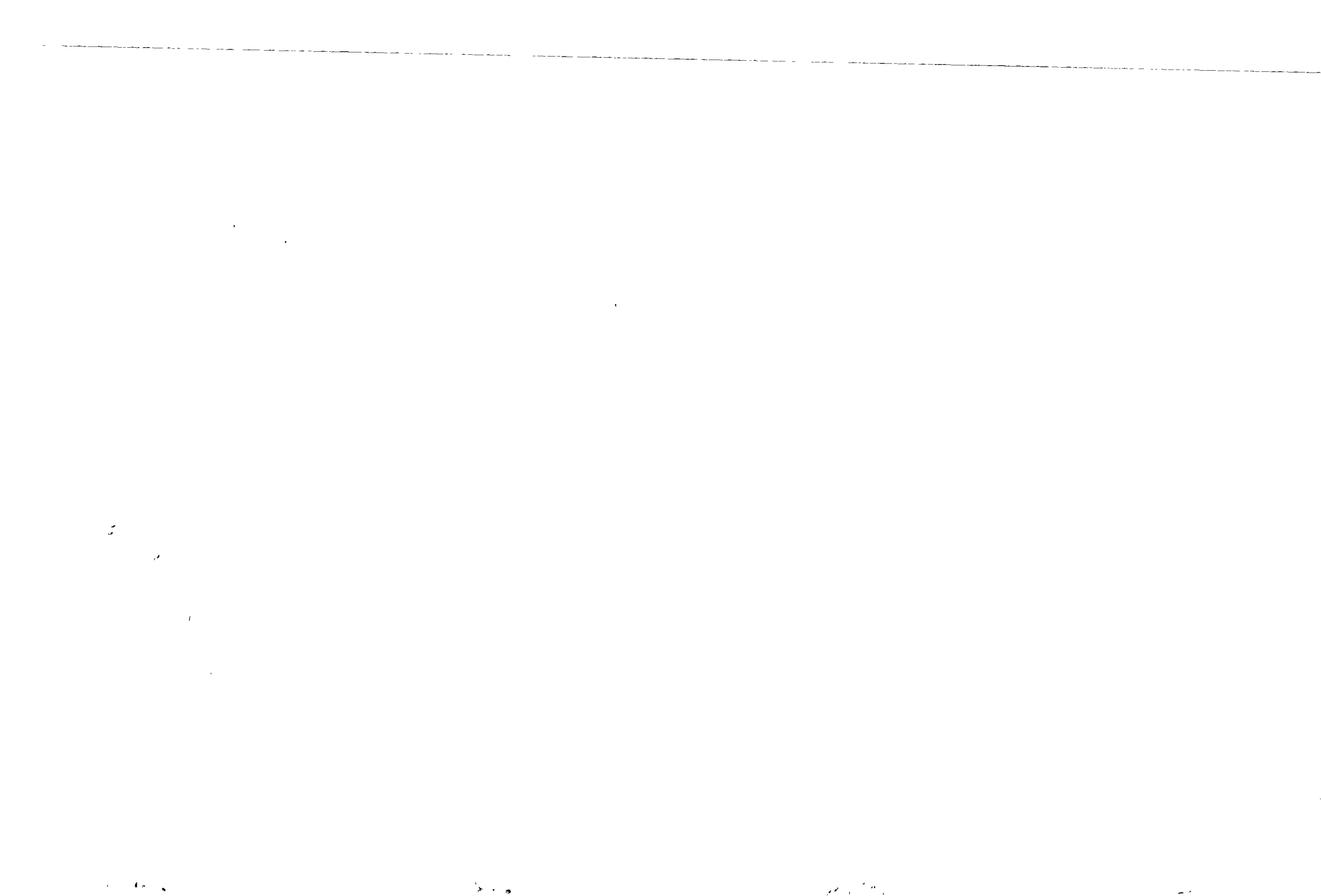
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Uganda Water Action Plan

Directorate of Water Development

INTERNATIONAL STUDY

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Uganda Water Action Plan

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Uganda Water Action Plan

Directorate of Water Development

ABBREVIATIONS

Danida	Danish International Development Assistance
DWD	Directorate of Water Development
GEMS	Global Environmental Monitoring System
HYDROMET	Hydrometeorological Survey of the Catchments of Lakes Victoria, Kyogo and Albert
IGADD	Intergovernmental Authority on Drought and Development
MWEM & EP	Ministry of Water, Energy, Minerals and Environment Protection
PJTC	Permanent Joint Technical Committee
TECCONILE	Technical Co-operation Committee for the Promotion of the Development and Environmental Protection of the Nile Basin
UEB	Uganda Electricity Board
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
WAP	Water Action Plan
WMO	World Meteorological Organization



0 SUMMARY

0.1 Surface water resources and demands

Approximately 78% of the total flow of the Nile at the Uganda/Sudanese border is comprised of direct rainfall over the equatorial lakes, while the remaining flow comes from surface runoff from the land catchments. Uganda contributes 39% of the flow from land catchments, while other riparian countries contribute 61%. The average outflow of Lake Victoria (1948-1970) is 914 m³/s, while the outflow to Sudan is 1251 m³/s. The Ugandan catchments contribute some 18% of the total outflow to Sudan.

It is not possible to make an accurate estimate of potential demands of all the upper riparians, including Uganda, due to the inconsistency of available figures. However, a very rough check can be made using figures from the concerned countries that have been made at different points in time. If the maximum potential demands are utilised the flow of the Nile at Jinja and the Sudanese border is likely to be significantly reduced (see Table 0.1 below).

Table 0.1 - Projected water demands for consumptive use and resource availability

SECTOR/RESOURCE	LAKE VICTORIA	UGANDAN CATCHMENTS
WATER SUPPLY DEMANDS		
Jinja & Kampala	1.8 m ³ /sec	
Medium & small urban	-	1.4 m ³ /sec
Rural domestic	-	6.9 m ³ /sec
Livestock	-	7.1 m ³ /sec
IRRIGATION DEMANDS		
410,000 ha (FAO) or	-	126 m ³ /sec
247,000 ha (HYDROMET)	-	78 m ³ /sec
or,		
186,800 ha (Halcrow)		57 m ³ /sec
RESOURCE AVAILABILITY	914 m ³ /sec	220 m ³ /sec

It is emphasized that the demand figures for irrigation represent estimates of what is technically possible, not necessarily what is realistic in a socio-economic development context. See the Rapid Water Resource Assessment WAP DOC. 007 for further details of the Ugandan situation.

The prospect of a significant reduction of the Nile flow will create international consequences in the form of protests from the lower riparians Egypt and Sudan.

It is therefore necessary to study further the water balance and demands to facilitate integrated planning and development for equitable utilization of the Nile Basin waters within the context of internationally accepted principles and obligations.

0.2 International water quality aspects

In general, water quality and existing pollution loads in the region are not being monitored sufficiently to make adequate assessments of existing water quality or cause/effect relationships. However, it is apparent that the most striking international issue at present is the dramatic deterioration of the water quality and ecology of Lake Victoria during the last two decades, which in turn has affected water quality in the Victoria Nile.

The content of nutrients and organic matter in the rivers entering the lake from Kenya and Tanzania contribute a major pollution load to the lake, while urban and industrial wastewater discharges from towns surrounding the lake are also a significant contamination factor. The Nile perch may also be a significant factor in the changing ecological balance. However, the exact causes of the observed deterioration of the lake have not yet been identified.

Extrapolation of present trends predicts an even more dramatic future change when taking into account the increasing population in the catchment area and the reduced buffer capacities of the ecosystem caused by the already observed structural changes. If trends are not altered significantly by implementation of international management plans, a disaster may be foreseen involving:

- a dramatic reduction of the fish stocks with severe economic implications for the region
- hypereutrophication with increasing algae blooms in the lake areas adjacent to Kampala, Jinja, Kisumu and other large towns
- a further deterioration of the general water quality, and
- oxygen depletion at lower depths in larger areas of the lake endangering sustainable fishery
- water hyacinth infestation.

Therefore, international action is urgently required among the riparian states.

0.3 International legal aspects

0.3.1 Significant international treaties

The Nile Waters Agreement of 1929 between Great Britain and Egypt contained a clause which required that no Nile Basin countries under British administration could take any measures or construct any works that would affect the flow of the Nile without the prior agreement from Egypt.

The Owen Falls Dam Agreement of 1949 between Great Britain and Egypt provided for the construction of the dam for the purposes of hydro-electricity generation for Uganda and for increasing the role of Lake Victoria as a storage reservoir for Egypt. An Egyptian engineer was to be stationed at the dam to ensure water resources were managed according to the agreement. Nothing was to be done that contradicted the provisions of the 1929 agreement. Egypt was to pay compensation for any damage caused by the raising of the lake level. The level of the lake has risen, but compensation has not been paid. The project and agreement were to be reviewed 20 years after commencement (1961), but this has not taken place. Uganda, however, repudiated all colonial agreements at independence although she has continued to act within the provisions of the Owen Falls Dam agreement.

After gaining independence, Uganda entered into three agreements with Nile Basin states regarding technical cooperation. The HYDROMET Agreement was signed in 1967, and after termination it was succeeded by the TECCONILE Agreement of 1992. These agreements were in the form of projects to assist the member states in developing the technical capacity and infrastructure needed for gauging the Nile Basin water resources. The projects have included a laboratory in Entebbe and measuring stations on the Nile. The long term programme of TECCONILE includes increasing technical cooperation and preparation of regional projects. The organization comprises a technical committee and a council of ministers. Secondly, The Kagera Basin Agreement is composed solely of Upper Nile Basin states, excluding Egypt and Sudan. This agreement covers all aspects of the development of the Kagera River Basin, which involves Burundi, Rwanda, Tanzania and Uganda. Thirdly, The Permanent Joint Technical Committee was formed in 1959 by Egypt and Sudan. This committee apportioned the utilization of the flow of the Nile between the two countries and committed them to have a common position in regards to other Nile Basin states. The other states, including Uganda, have had informal consultations with the Committee, but these have not been able to resolve the issue of apportionment of water rights between all states.

The Undugu Group is an informal grouping of all the Nile Basin states which has met eight times since 1983. Its agendas reflect a common interest in an overall mechanism for cooperation regarding the basin, largely in the political and economic spheres.

The present international treaties to which Uganda is a party are all quite vague on water quality issues and the prevention of transboundary pollution. The treaties do not specify duties, responsibilities and obligations in relation to known/identified water quality issues nor do they specify means of conflict resolutions.

0.3.2 Uganda's actions regarding international agreements

In 1963, shortly after independence, the Prime Minister of Uganda wrote to the Secretary-General of the United Nations repudiating all treaties concluded during colonial times. This was followed by a declaration of Parliament in Sessional Paper No.3 of 1963. The declaration was not followed-up by any specific actions regarding each treaty and what they might have been replaced with.

The idea that a new state can come into being without regarding past obligations is not a concept generally accepted in international law. However, all of the Upper Nile Basin states (Uganda, Ethiopia, Kenya, Tanzania, Zaire, Rwanda and Burundi) have made such pronouncements in one form or another.

In regards to the Owen Falls Agreement, Uganda has continued to honour its terms, also continuing to allow an Egyptian engineer to be stationed at the dam. In general, Uganda has continued to consult with basin states in regards to international water resources, and has conducted itself within the requirements of customary international law.

0.3.3 Relevant current international water law

Customarily accepted international water law accepts the doctrine of "Equitable Utilization of Shared Water Resources": This doctrine recognizes the sovereignty of states in regard to water resources, but also imparts an obligation on the part of a state using the resource not to injure the interests and rights of other states sharing the same resource. This doctrine is expressed in The Helsinki Rules on the Uses of the Waters of International Rivers, and in environmental declarations of the United Nations

The above doctrine rejects the concept of absolute territorial sovereignty of a state over all water flowing through it, although differing opinions are expressed by some nations today, including Ethiopia. This doctrine also rejects the concept of absolute territorial integrity which holds that the lower riparian has the right to the continued, uninterrupted natural flow of water from the territory of the upper riparian.

Customary international law consistently states that a nation does not have the right to pollute shared water to the detriment of co-riparians. Further, it is stated that a nation should bear the cost of the pollution caused by its activities ("polluter pays").

0.3.4 Ugandan interests

Uganda is an upper riparian in relation to Egypt and Sudan, and has an interest in the utilization of the water resources within its territory for the benefit of social and economic development. In relation to Kenya, Tanzania, Rwanda, Burundi and Zaire, however, Uganda is a lower riparian and has an interest in the uninterrupted flow of water and conservation of water quality before it enters the Nile system at Jinja. Therefore, in regards to negotiating positions, Uganda's interests will lie with lower or upper riparians depending on the issue at hand.

Uganda also has an interest in water resources from an economic perspective. It could be argued that the economic costs borne by Uganda to conserve the quantity and quality of water resources in Lake Victoria and the Nile system should be shared with the lower riparian states. In an international dimension, such a concept would supplement the doctrine of equitable utilization of a shared water resource with the obligation of all the states to participate in the conservation of the resource regardless of national boundaries.

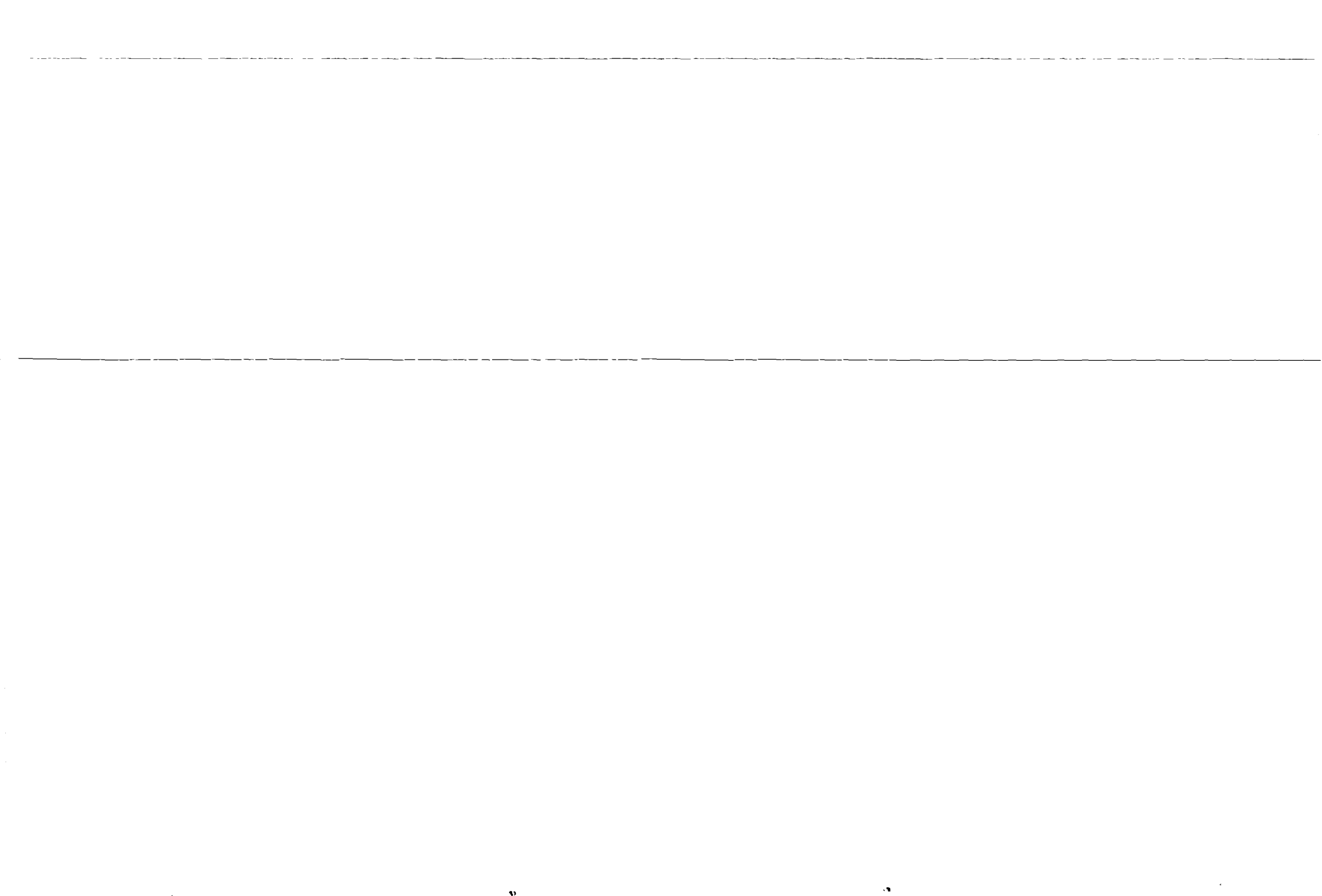
A multinational basin-wide organization concerned with management of the water resource would be contributed to by each state in accordance with the benefits derived from the water resource.

0.3.5 National institutional framework

Presently, Uganda does not have a national coordinating mechanism for the formulation of policy regarding international water resources. The Ministry of Foreign Affairs supported by the Ministry of Natural Resources handles international water issues. DWD staff normally act as representatives to the relevant international institutions.

The proposed Water Policy Committee, (refer WAP DOC.008 "Institutional and Management Aspects") as the national coordinating mechanism for the Water Action Plan, could also cover international issues, perhaps with a specialized sub-committee. This sub-committee would be responsible for coordinating the technical inputs and formulating and revising international water resources policies.

In terms of immediate tasks to be done, there is an urgent need for a coordinated policy from Uganda's side regarding the water quality problems in Lake Victoria. It is also necessary to develop a policy regarding which international institution should be promoted to deal with the general water resources management aspects of the Nile Basin, including the question of water rights. The potential high level of demand for the water resources of the Nile Basin makes it imperative that a mechanism soon be established for equitably resolving those demands.



1 INTRODUCTION

1.1 Water Action Plan development

Project documents entitled "Water Action Plan for Water Resources Development and Management (WAP)", dated January 1993 and October 1993, were agreed between the Government of Uganda and the Government of Denmark (acting through the Ministry of Foreign Affairs - Danida).

The project documents describe two phases of a planning process aiming to develop a Water Action Plan for Uganda.

CONTENTS OF WAP PHASE I	
-	a rapid assessment of the water resources situation in the physical and management context
-	a preliminary proposal for the establishment of an enabling environment for flexible water resources management with linkages between land and water resources, and including suggestions for management roles and functions at various levels, and suitable institutional structures
-	a preliminary outline of a national water resources policy
-	preparation of detailed project proposals for specific projects in the water resources sector

CONTENTS OF WAP PHASE II

- a draft national water resources policy accompanied by target descriptions and brief guidelines
- an outline proposal for appropriate local water resources management levels based on district studies
- an outline proposal for management procedures providing the administrative machinery at national and district levels with guidelines for sustainable water resources management
- a design of a groundwater database and a plan/guidelines for interaction between the various existing and future computerized systems relevant to water resources management
- support to the preparation of regulations supporting the Water Resource Statute regarding surface water and groundwater abstraction as well as wastewater discharge
- an outline of training and capacity building activities supporting the appropriate sectors in water resources management
- a project catalogue with proposed priorities for projects identified during the Water Action Plan Phases I & II
- a draft Water Action Plan synthesizing the activities carried out in a coherent presentation
- implementation and monitoring guidelines for the subsequent Water Action Plan implementation
- a National Seminar for discussion of the draft Water Action Plan by concerned parties

The implementing agency in Uganda is the Directorate of Water Development (DWD) within the Ministry of Natural Resources. A team of Danish consultants has been engaged by Danida to work within the DWD in the execution of the project. The consultant team has been composed of staff members from the VKI Water Quality Institute (leading partner), COWIconsult, Nordic Consulting Group and the Danish Hydraulic Institute.

1.2 Guiding principles for the Water Action Plan

The Uganda Water Action Plan is intended to provide a framework for the protection and development of Uganda's water resources. It will provide a flexible and dynamic framework for development and management of the water resources of the country, rather than a traditional prescriptive master plan.

The Water Action Plan deals with aspects of integrated water resources development and management, recognizing the guiding principles emerging from discussions at international conferences, consultations and workshops in Copenhagen (November 1991), Dublin (January 1992) and Rio (UN Conference on Environment and Development, UNCED, June 1992).

GUIDING PRINCIPLES FOR THE WATER ACTION PLAN	
-	fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment
-	land and water resources should be managed at the lowest appropriate levels
-	the government has an essential role as an enabler in a participatory, demand-driven approach to development
-	water should be considered as a social and economic good, with a value reflecting its most valuable potential use
-	water and land use management should be integrated
-	women play a central part in the provision, management and safeguarding of water
-	the private sector has an important role in water management

1.3 Documentation

During the background studies and drafting of the Water Action Plan a number of working documents have been prepared in draft, and comments to these have been obtained from various relevant parties. In concert with the developments in the Water Action Plan process, parts of these documents have become obsolete after having served their purpose of raising points for discussion and explaining status and contents of the work.

The experience and consensus obtained from those drafts have thus been carried over into a number final documents. These are also drawing heavily on excerpts from the working papers and the draft reports from WAP Phase I and Consolidation Phase I. The resulting list of final documents is given in Appendix 1.1. The set of documents constituting the core of the Water Action Plan are nos. 005 to 014.

1.4 Report on international aspects

This report presents a brief history of the international aspects of the Nile seen from the Ugandan perspective. The major surface water quantity and quality aspects are described and the implications of the location of Uganda as both a lower riparian (in relation to Kenya, Tanzania, Zaire, Rwanda and Burundi) and an upper riparian (in relation to Sudan and Egypt) are considered.

International treaties, both historical and those presently in force, are summarized with respect to their constraints and opportunities for Uganda. Ugandan international actions before and after independence are briefly described and current Ugandan interests in development of its water resources are also described. Current international water law is discussed and national and international institutions are described and assessed as to their role in the international cooperation between the riparians. The report further contains a short summary outlining key issues to be addressed. Finally, transboundary pollution is examined in light of customary international law.

2 INTERNATIONAL ASPECTS OF UGANDA'S WATER RESOURCES**2.1 Surface water resources in the international perspective****2.1.1 The Upper Nile System with reference to Uganda**

Uganda is situated completely within the Nile basin. Within Uganda, or on her boundaries, are found all the key Equatorial Lakes from which the upper reaches of the White Nile spring. These lakes include Lake Victoria, Lake Kyoga, Lake Albert, Lake Edward and Lake George. The source of the Nile is found at Jinja and is an outlet of Lake Victoria. The Nile flows northwards through Lake Kyoga and Lake Albert and enters Sudan at Nimule. A tributary of the Nile springs from the foothills of the Rwenzori mountain into Lake George, reaches Lake Edward, flows North as the Semliki River and into Lake Albert.

Lake Victoria is fed by numerous rivers and streams emerging from Kenya, Tanzania and, to a very small degree, from Uganda. The most notable river is the Kagera River. This river originates in Burundi and flows through Rwanda before passing Uganda and Tanzania and discharging into Lake Victoria at its Western shore.

A number of rivers flow through the foothills of Mount Elgon and feed Lake Kyoga. River Aswa originates in the hills of Karamoja and finally enters the Nile River after having crossed the border between Uganda and Sudan. The WAP.DOC.007 report "Rapid Water Resources Assessment", contains more details on the Upper Nile system including the Equatorial Lakes.

A schematic presentation of Uganda's position in the Upper Nile system and the average flows are given in Fig 2.1.

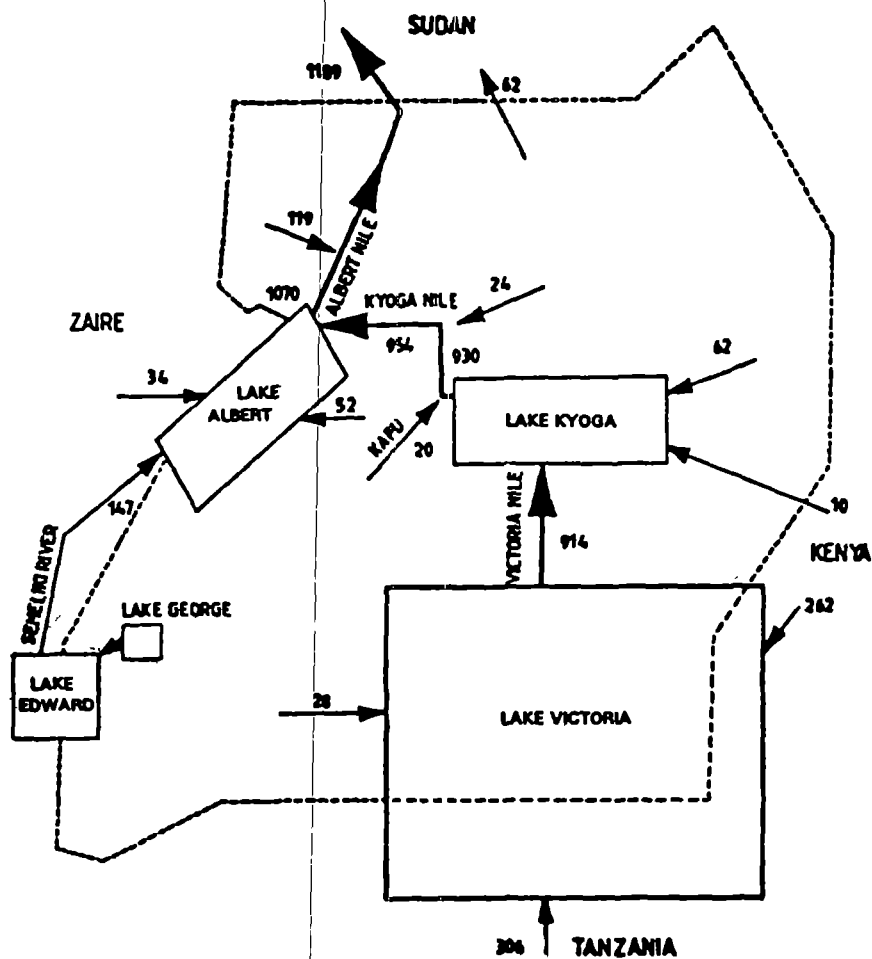


Figure 2.1 - The Upper Nile system components within Uganda (figures in m^3/s give the average flows)

In practical terms all of Uganda's surface water resources are part of the Nile River system.

2.1.2 Water balances and contributions

From the international perspective it is interesting to note Uganda's contributions of water to the Nile. The water balances of Lake Victoria, Lake Kyoga and Lake Albert are given in Table 2.1 supplemented with the flows of the Albert Nile (the Nile between lake Albert and the Sudanese border) and the Aswa River.

Table 2.1 - Lake water balances supplemented with the Aswa River and the Albert Nile (1948-1970)

Description	Lake Victoria (m ³ /s)	Lake Kyoga (m ³ /s)	Lake Albert (m ³ /s)	Albert Nile (m ³ /s)	Aswa River (m ³ /s)	Total (m ³ /s)	% of total contribution
Ugandan catchments	28	82	149.5	119	62	440.5	8.7
Other catchments	568	10	107.5	0	0	685.5	13.6
Lake rainfall	3625	176	121.0	0	0	3922.0	77.7
Total contribution	4221	268	378.0	119	62	5048.0	100.0
Lake evaporation	3157	242	263.0	0	0	3662.0	72.5
Lake storage	150	10	-25.0	0	0	135.0	2.7
Outflow	914	930	1070.0	1189	62	1251.0	24.8

Source: HYDROMET

Lake storage appears because a net storage has occurred in the period in which the water balance has been calculated. From the table it appears that of the total flow of the Nile, after the confluence with Aswa River, 77.7%, comes from rainfall over the lakes (ignoring Lake George and Lake Edward), 8.7% from land catchments within the Ugandan territory, and 13.6 % from land catchments in the other upper riparian countries. Comparing contributions from land catchments only, Uganda contributes 39% and other countries contribute 61%.

The characteristic feature of significant evaporation from large lake surfaces is apparent from the table. The outflow from Lake Victoria is 914 m³/s. Lake Kyoga receives additional inflow at 92 m³/s giving a total of 1006 m³/s. Despite this inflow, the outflow from Lake Kyoga is only 930 m³/s. Similarly, for Lake Albert total inflow of 257 m³/s only increases the outflow from 930 m³/s to 1070 m³/s.

If one considers the aggregated effect of Uganda on the Nile the following Table 2.2 can be constructed.

Table 2.2 - Contribution to the Nile from within Uganda (1948-1970)

DESCRIPTION	FLOW (M ³ /S)	% OF OUTFLOW TO SUDAN
Outflow to Sudan	1251.0	100
Inflow to Uganda through borders	117.5	9
Inflow from Lake Victoria	914.0	73
Contribution from within Uganda	219.5	18

Source: HYDROMET

Thus, Ugandan catchments contribute 18% of the average flow received downstream of the Sudanese border. From Table 2.1 and 2.2 it can be seen that although the yield from the Ugandan catchments is 440.05 m³/s, only 219.5 m³/s is added to the Nile flow. This illustrates the high evaporation rate from the lakes (50% of the possible yield evaporates).

2.1.3 Water balances and demands

The water demands of the upper riparians, including Uganda, may affect the Nile flows significantly. Table 2.3 has been prepared in order to obtain an initial estimate of the possible combined effect of upstream and Ugandan consumptive use. The table is based very high future demand estimate figures for Uganda (year 2010) quoted from various sources (see WAP.DOC. 007 "Rapid Water Resources Assessment"), while the corresponding figures for Tanzania are taken from the UNEP Country Report, 1993. The only potential demand figures available for Kenya, Rwanda and Burundi are estimates (year 2000) made by HYDROMET in 1981. A consumptive demand for Zaire has been assumed to be the same as that for Rwanda. Thus, these estimates are widely differing in background and not directly comparable. However, for the purpose of a rough check of the significance of projected demands in the riparian states, these estimates were adopted.

Table 2.3 - Average inflows (1948-70) potential consumptive water demands and affected flows.

DESCRIPTION	AVERAGE FLOWS (m ³ /S)	POTENTIAL DEMAND (m ³ /S)	AFFECTED AVERAGE FLOWS (m ³ /S)	USED % OF AVERAGE FLOW
Kenya	262	60	202	23
Tanzania (incl. Rwanda- Burundi)	306	117	189	38
Zaire	108	17	91	16
Uganda	441	143	298	32
Total demands upstream Jinja		337		
Total demands all states				
Flows at Jinja	914		737	21
Nile outflow from Uganda	1189		831	28

Inconsistent sources

It appears, given the above assumptions for demands, the flow at Jinja is likely to be reduced by 21% in the future, while the flow of the Nile at the Sudanese border is likely to be reduced by 28%. These are only estimates and the analysis should be repeated using consistent and realistic data. However, the results are adequate for a first approximation.

The prospect of a significant reduction of the Nile flow will create international consequences in the form of protests from the lower riparians Egypt and Sudan. It is therefore necessary to study the present international legal obligations, further develop forms of cooperation regarding the utilization of the Nile Basin waters, and examine the possibilities for equitable sharing arrangements. The remaining part of the report examines these issues.

2.1.4 Water quality aspects

The international issues regarding water quality relate to the quality of the water bodies, which are shared between Uganda and its neighbouring countries. Thus, activities affecting the quality of water coming into Uganda, as well as activities within Uganda affecting quality of water bodies flowing out of Uganda, are of international concern.

The primary water system, the Nile system, is predominantly fed by Lake Victoria. This lake is shared by Uganda, Kenya and Tanzania. The water quality of Lake Victoria governs the basic water quality in the upper part of the Nile system and also impacts the lower areas. As a consequence, development activities within these three riparian countries, as well as countries draining to tributaries of the lake (Rwanda and Burundi), are of common concern for the exploitation of:

- Lake Victoria (Uganda, Kenya, Tanzania)
- Victoria, Kyoga and Albert Nile (Uganda)
- The Nile downstream from Uganda (Sudan, Egypt)

Furthermore, Uganda shares the Semliki River and Lake Albert with Zaïre. As previously mentioned, the Semliki River springs from the Eastern side of the Rwenzori mountains, runs through Lake George and Lake Edward into Zaire, whereafter it joins the southern part of Lake Albert. The basic water quality of the Semliki system is thus governed by the characteristics of the Ugandan Rwenzori catchment and the human activities taking place there, while pollutants added in the Zaire section will contribute to the general water quality of Lake Albert and further downstream the Nile.

In addition to the international aspects of the Victoria, Kyoga, Albert, Nile and Semliki River systems, a number of smaller rivers and streams, which cross the borders between Uganda and its neighbouring countries, may give rise to local conflicts regarding water quality aspects.

In general, the water quality and existing pollution loads in the region are not being monitored sufficiently to make adequate assessments of existing water quality or cause/effect relationships. Thus, a future surveillance of the shared water resources may reveal additional water quality problems. For example, it is not known to what extent the effluents from the former mining-area in Kilembe/Kasese affects the water quality and ecology of the Lake George/Lake Edward system.

Presently, the most striking international issue is the strong indication of a rapid deterioration of the water quality and ecology of the shared Lake Victoria. This issue emphasises the necessity of collaboration between the riparian countries to be undertaken immediately.

As a consequence of a number of probable influence, including increased pollution loads and the introduction of the Nile Perch, the water quality and ecology of Lake Victoria has changed dramatically during the last two decades. Formerly, the lake was generally well oxygenated. Lack of oxygen is now prevailing at deeper depths and destroying the food source for bottom fish. At the same time, the composition of algae species in the upper layers has changed and no longer constitutes a good food source for indigenous fish that existed decades ago. A special concern is the proliferation of the potentially toxic blue-green algae. This change, in combination with the ongoing intensive fishing effort and the recent introduction of the water hyacinth, constitutes a severe threat to a continued and sustainable fishery in Lake Victoria.

Water quality has deteriorated in the near shore regions of many areas including Kampala, Jinja and Entebbe. This constitutes a threat for the regions relying on water supply intakes from the lake. Similar problems exist in Kisumu Bay in Kenya.

The effect of the present state of Lake Victoria on the water quality downstream in the Victoria Nile is apparent. Often, high concentrations of blue-green algae are observed here, constituting a threat to the water supply for humans, livestock and other purposes.

The main contributions to the lake are the rivers Nyando, Nzoia and Migori in Kenya and Mara, Rowana, Simio and Kagera in Tanzania. The content of nutrients and organic matter in these rivers constitutes the major load on the lake.

Moreover, a number of towns discharge urban domestic and industrial wastewater directly into the lake. Approximately 100,000 people are connected to the sewerage system in Kampala. Here the wastewater is discharged into the Nakivubo Swamp. Though most of the organic material and nutrients are presently retained in the swamp, development of the city will increase the pollution loadings to the lake if appropriate treatment measures are not implemented.

Kisumu in Kenya, having a population of approximately 300,000, discharges its sewage into Lake Victoria in the enclosed Kisumu Bay where the water quality conditions have deteriorated to a level where the lake water is not suitable for the drinking water supply. The sewage from Mwanza, Bukoba and Musoma in Tanzania is discharged into the lake after simple treatment.

The exact causes of the observed deterioration of the lake are suspected but not yet documented. However, the rapid changes show that the lake, although very large, is highly sensitive to external impacts.

Extrapolating from present trends, even more dramatic changes will be expected due to an ever increasing population of the catchment area and due to the reduced buffer capacities of the ecosystem, caused by the observed structural changes. If the trends are not altered by the implementation of common management plans, a disaster for the lake ecosystem may be foreseen with:

- a dramatic reduction of the fishery with severe economic implications for the region
- hypereutrophication with increasing algae blooms in the lake areas adjacent to Kampala, Jinja and Kisumu and other larger towns

- a further deterioration of the general water quality, and
- oxygen depletion at lower depths in larger areas of the lake endangering a sustainable fishery.

2.2 Development of an international legal system for the Nile

2.2.1 The pre-colonial period

As a geographical entity, Egypt has always been climatically disadvantaged receiving negligible rainfall and depending on the Nile for her agriculture and national water needs on the Nile. Irrigated agriculture evolved early in Egypt due to these natural conditions. Both the Sudan and Egypt depended on the natural cycle of the river for their water needs.

In the nineteenth century, the conditions in the Nile Valley began to change. Rapid population growth in Egypt and the introduction of the growing of cotton as a crop for export led to the need for more water for irrigation. Water resources became a political and international issue. Under Mohammed Ali Pasha, the Ottoman Governor of Egypt, there was considerable construction of barrages on the river to enhance irrigation. These retention works were extended by his successor Khedive Ismail.

As well as extending irrigation, the Ottoman Viceroys sought to control the entire Nile Valley. The Sudan was brought under the control of Egypt. Egypt also attempted to extend its influence into Uganda through exploration and conquest. Sir Samuel Baker, Governor of the Sudan, and his successors Gordon and Emin Pasha, (Governor of Equatoria) all tried unsuccessfully to take over present day Uganda and were restrained by the forces of the Kingdom of Bunyoro under King Kamurasi in 1864 and his successor King Kabalega in 1875.

During the scramble for African territory in the 1880's, Egypt was placed under the colonial domination of Britain. This ended the Egyptian drive for its own imperial domination of the Nile Valley. Britain also became the colonial power in the Sudan (where it obtained a condominium with Egypt after defeating the fundamentalist Islamic Mahdi Movement), Uganda and Kenya.

Egypt, however, remained a force to reckon with in British imperial policy. The acquisition of Uganda by Britain, for example, was inspired by the need to secure the source of the Nile for Egypt. The acquisition of Kenya, on the other hand, was necessary to provide an access to the sea for Uganda. This importance of Egypt was to be reflected in all future colonial policies relating to the Nile.

2.2.2 The colonial period

In the early colonial period Britain set out to secure the waters of the Nile for the use of Egypt. It also conceded the needs of the Sudan, whose northern regions were as arid as most of Egypt. Britain sought to achieve this by entering into treaties with other European colonial powers. In the 1920's, after regaining autonon from Britain, Egypt entered into treaties with Britain (on behalf of her colonial possessions) to secure the waters of the Nile for the use of Egypt. In all instances, the presumption was that the upper riparian states, in the more climatically favoured areas, did not need the Nile waters for irrigation since they could depend on rainfed agriculture.

Agreements between Britain and other colonial powers relating to the Nile

- The Agreement between Italy and the United Kingdom of 15 April 1891:

This agreement the spheres of influence between Britain and Italy in Eastern Africa and included a provision whereby the Italian Government undertook not to construct any works that would divert or modify the flow of the river Atbara into the Nile.

- The Treaty of 15 May 1902 between the United Kingdom (acting for Egypt and the Sudan) and Ethiopia:

This agreement defined the boundaries of the Sudan and other British possessions bordering on Ethiopia and in addition obligated Ethiopia not to construct any works on the Blue Nile, Lake Tsana and the Sobat which would arrest their flow into the Nile except with the agreement of the United Kingdom and the Government of the Sudan.

- The Treaty of 9 May 1906 between the United Kingdom and the Independent State of the Congo:

This treaty redefined the spheres of influence of the parties and included a provision whereby, the Independent state of the Congo undertook not to construct any works on the Semliki or Isango River which would diminish the volume of water entering Lake Albert except with the agreement of the Sudanese Government.

- The Tripartite Agreement of 13 April 1906 between United Kingdom, France and Italy.

This agreement included inter alia a provision requiring the powers to act in concert to preserve the interest of Great Britain and Egypt in the waters of the Nile and its tributaries.

- The Nile Waters Agreement of 1929 between Egypt and the United Kingdom.

This agreement sought to divide the waters of the Nile between Egypt and the Sudan, and especially to allocate water to the latter for irrigation in the Gezira. It contained a clause whereby Great Britain undertook not to construct any irrigation or power works on the Nile or its tributaries or associated lakes in the Sudan or in the territories under the administration of Britain without the consent of Egypt, if such works would have the effect of reducing or delaying the water destined for Egypt.

- The Supplementary Agreement of 1932 between United Kingdom and Egypt.

This agreement provided for the building of the Jebel Awliya Dam near Khartoum on the Blue Nile for the benefit of Egypt and by Egyptian Funds.

- The Anglo Belgian Agreement of 1934.

This was the only agreement which was not directed at the interests of Egypt but was intended to apportion the waters of the Kagera between Tanganyika and Ruanda-Urundi.

- The Owen Falls Agreements: of 30 May 1949, 5 December 1949 and 5 January 1953; between United Kingdom and Egypt:

These Agreements provided for the participation of Egypt in the construction of the Owen Falls Dam, and the use of Lake Victoria as a storage reservoir of water for Egypt. They also provided for the financial contribution of Egypt and the compensation Egypt would pay to the East African states due to damage incurred as a result of the rising level of the lake.

- The Agreement for Co-operation of February 1950 between the United Kingdom and Egypt:

This agreement was related to co-operation in the carrying out of hydrological and meteorological survey between Egypt and the British Authorities in Uganda.

- The Supplementary Agreement of 1952, between Sudan and Egypt.

This enabled the raising of the level of the Sennar Dam and Jebel Awliya Reservoir and provided for the construction of a dam at the fourth cataract.

Regulation schemes not covered by treaties

At the initiative of Egypt the following schemes were conceived:

- The Equatorial Nile Project

This project sought to increase the yield of water from the White Nile to be used when the flood waters from the Blue Nile were not available. The major components of the scheme were a dam at the Owen Falls to regulate the flow of Lake Victoria and a barrage at Masindi Port to regulate the flow from Lake Kyoga. Further, the scheme included a dam at Mutir in the West Nile Province of Uganda to provide a storage reservoir and regulate the flow from Lake Albert, and the Jonglei Canal project in the Sudan, which could create a by-pass channel for White Nile waters, thereby reducing wastage in the swamps of the Sudd region. Except for the Owen Falls Dam, none of the scheme components have been implemented.

- The Lake Tsana project

Egypt proposed to develop controls over the flow of the Blue Nile from Lake Tsana. This has also not been realized due to the lack of an agreement between Ethiopia and the lower riparian states.

2.2.3 The post colonial era

In the post colonial era there have been few remarkable developments of international law in the Nile Valley, particularly relating to the apportionment of water rights. Egypt has continued to assert its rights on the basis of the colonial treaties. The other basin states have, on the other hand, repudiated the claim by Egypt that they succeeded to those colonial treaties. However, the following two important treaties were made:

- the 1959 Agreement for the Full Utilization of the Nile Waters Between Egypt and the Sudan.

This agreement provided a basis for the equitable sharing of the waters of the Nile between the lower most riparians. It also provided for the construction of the Aswan High Dam and for the sharing of the costs and benefits of the dam. The agreement further provided for the construction of other works in the Nile by the parties for their joint benefit. In addition the parties established a Permanent Joint Technical Committee to administer works and any issues arising from the treaty. The parties also acknowledged that other riparian countries may claim a share of the Nile Water. The parties undertook to study the claims jointly and adopt a unified view.

- The 1977 Agreement establishing the Kagera Basin Authority and the Management of the Kagera River basin

This Agreement to which Uganda is a party, groups together Uganda, Burundi, Rwanda and Tanzania, being the states of the Kagera Basin. The treaty sets up the Kagera Basin Organization and provides for co-operation in the general development of the Basin.

Post colonial agreements of a technical nature

In 1967, the HYDROMET project was created pursuant to an agreement of most of the basin states. The project aimed to carry out a hydrometeorological survey of the catchments of the Equatorial Lakes. This project expired in 1992 and has been replaced by the TECCONILE project, also on the basis of an agreement by the basin states. Its principal aim is to create a basis for co-operation in the Nile valley especially in areas of meteorology and hydrological data. Uganda is not only a party to the TECCONILE Project but also hosts its headquarters.

Uganda is also a member of the Intergovernmental Authority on Drought and Development (IGADD). The other member states comprise Djibouti, Ethiopia, Kenya, Somalia and Sudan. Priority programmes of IGADD focus on national and regional projects in the following areas:

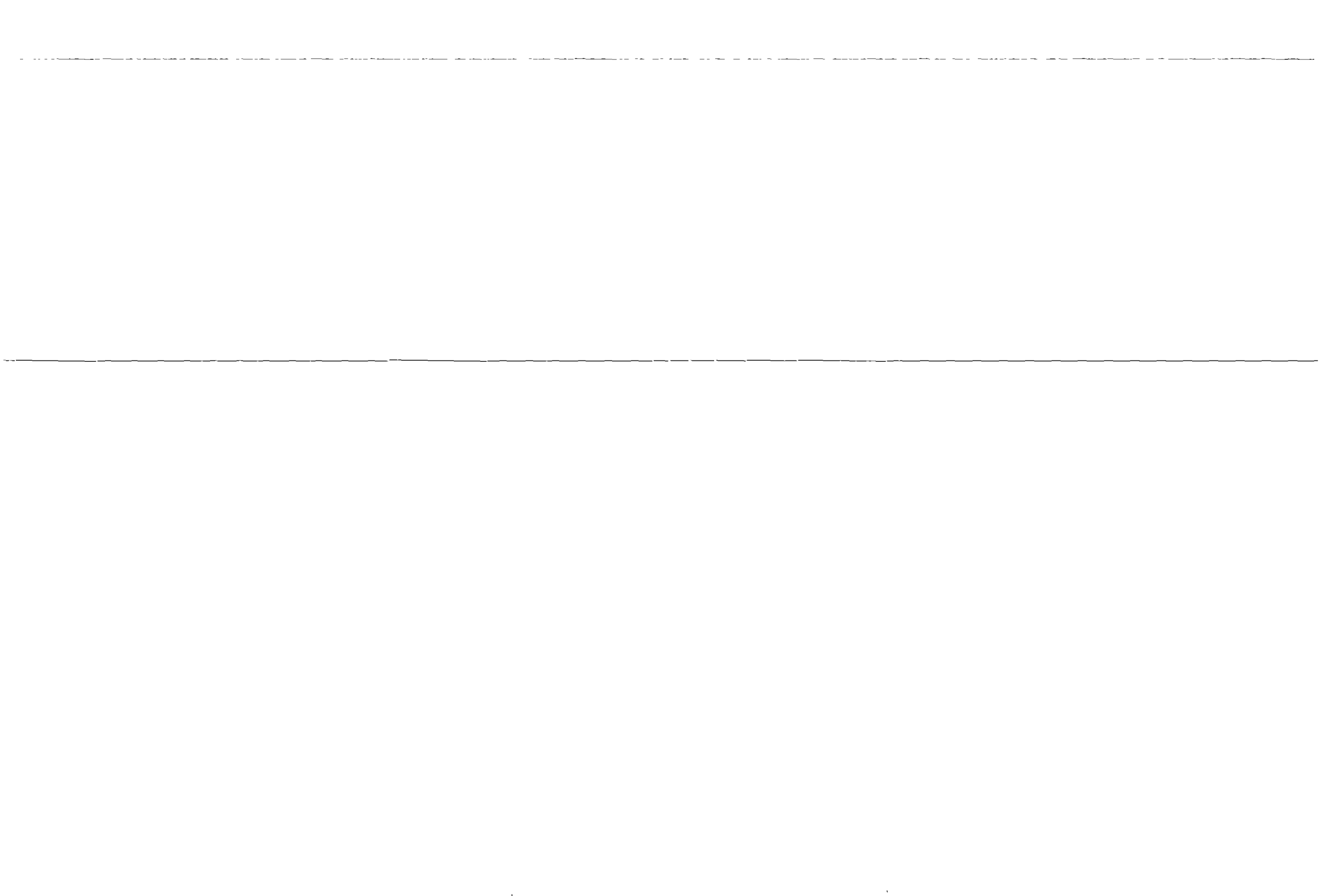
- food security and early warning
- information systems including environmental parameters
- disaster preparedness
- water resources

- desertification control
- drought monitoring and control.

2.3 ter quality in the international legal system for the Nile Basin

The colonial agreements relating to the Nile Basin were all concerned with the apportionment of rights to the Nile waters. The agreements lack provisions relating to water quality. At the time of the issue, the apportionment of water rights was the primary concern because of the overall dependence of Egypt on Nile waters and, therefore, the need to ensure the continued availability of that water. At the same time, there was no serious problem of transboundary water pollution, given the state of development in the region. Related issues of water resources management, such as environmental conservation and watershed management were not very well understood or given attention.

In some of the post-colonial agreements, such as the Kagera Basin Agreement and the TECCONILE Agreement, a general duty to prevent and abate pollution is provided for. This duty is, however, not specified nor detailed. The position of the control of transboundary pollution in both the colonial and post-colonial agreements in International law is discussed in Appendix 2.1 "Transboundary Pollution".



3 SIGNIFICANT INTERNATIONAL TREATIES

3.1 The 1929 Nile Waters Agreement

The 1929 Agreement was effected by an exchange of notes between the Government of Egypt and the Government of Great Britain for territories under British Administration within the Nile Valley, including Uganda. The Agreement primarily related to the division of water between Egypt and Sudan, especially in view of the increasing use of water for irrigation in Sudan. The pertinent issues in this agreement which have implications for Uganda are:

The British Government "acknowledged the natural and historical rights of Egypt in the Waters of the Nile" (para. 4), while the Egyptian note specifies the need for agricultural expansion. Neither note defined these rights and, therefore, these rights have to be determined according to customary international law.

The Egyptian note (para. 4(ii)) goes further to provide that:

The 1929 Agreement
"Save with the previous agreement of the Egyptian Government, no irrigation or power works or measures are to be constructed or taken on the River Nile and its branches or on the lakes from which it flows, so far as all these are in the Sudan or in countries under British Administration which would, in such a manner as to entail any prejudice to the interests of Egypt, either reduce the quantity of water arriving in Egypt or modify the date of its arrival or lower its level".

The British note accepts the Egyptian note and makes no contrary reservation to these issues.

Other pertinent provisions of the Agreement with implications for Uganda are Paragraphs 4(v) and 4(vi) of the Egyptian Note. Paragraph 4(v) requires the British Government to use its good offices to facilitate measurements, surveys, studies and works in the territories under its administration. Paragraph 4(vi) requires that all issues arising relating to principle, administration and technical matters shall be settled in good faith. The Governments of Egypt and Britain committed themselves to settle any disputes arising through arbitration by an independent body.

The Nile Commission Report of 1925 is "an integral part of the agreement." In its operative part the Report states:

Commission Report 1925

"The Commission has been impressed by the fact that future development in Egypt may require the construction of works in the Sudan, and neighbouring territories such as Uganda, Kenya and Tanganyika and it feels that Egypt should be able to count on receiving all assistance from the administrative authorities in the Sudan in respect of schemes undertaken in the Sudan as well as from the British Government in any questions concerning the neighbouring territories."

During its continuance as a colonial power in East Africa, Britain did not negotiate any variation with respect to its obligations to Egypt contained in the 1929 Agreement in relation to those territories. In 1952 there was a further exchange of notes, whereby it was agreed inter alia that the respective shares of Egypt and Sudan in water made available from future control measures and projects within their territories should be decided in discussions between the two countries before any work is undertaken. This exchange of notes was later followed by intensive negotiations between Egypt and Sudan from 1956 to 1959, when the "Agreement for the Full Utilization of the Nile Waters" was concluded between the two states. This agreement created the basis for co-operation between the two states in matters related to the Nile, and replaced the 1929 Agreement. It also created the Permanent Joint Technical Commission, which was to be responsible for the implementation of the agreement.

3.1.1 Constraints for Uganda

By purporting to subject any future developments of Nile waters in Uganda, whether for irrigation or for the development of hydro-electric power, to Egyptian consent, the 1929 Nile Waters Agreement greatly curtails Uganda's water policy options, if the agreement is accepted as being valid. In view of the fact that all of Uganda's water eventually forms part of the Nile system, it would follow that Uganda would not undertake any major project involving water resources without seeking the consent of Egypt.

3.2 Owen Falls Dam Agreement 1949

This Agreement was entered into by an exchange of notes between the British Government and the Egyptian Government on 30 May 1949 and 31 May 1949 respectively. These notes were the culmination of intensive negotiations between the two parties, which had been going on since 1948. The Agreement's terms, apart from the technical details on the construction of the dam, incorporate the elements that had been agreed upon in the Equatorial Nile Project. The Agreement provided for;

Owen Falls Dam Agreement 1949

The construction of the dam at Owen Falls for the production of hydro-electric power and for the control of the waters of the Nile.

The responsibility of the Uganda Electricity Board for the construction of the dam and the presence of a resident Egyptian engineer to ensure that the interests of Egypt were taken into account.

The Uganda Electricity Board to be responsible for the operation of the dam but discharges through the dam to be regulated on the instructions of an Egyptian Resident Engineer and his staff in accordance with arrangements to be made between the Egyptian Ministry of Public Works and Uganda Authorities "pursuant to provisions of agreements to be concluded between the two Governments."

The right of the Uganda Electricity Board to take any action at the dam which does not adversely affect the water discharges through the dam and is in accordance with the 1929 Nile Waters Agreement.

The Egyptian Ministry of Public Works and the Uganda Electricity Board were to consult on matters of mutual interest, to settle differences in the spirit of friendly co-operation and to settle disputes through arbitration.

The exchange of notes of May 30 and 31, 1949 did not cover all the elements of the "Equatorial Nile Project". It was restricted to the construction of the Owen Falls Dam. The proposed regulation of Lake Kyoga at Masindi Port and Lake Albert at Mutir and the Jonglei Canal scheme did not become part of this formal treaty.

3.2.1 Basis of the participation of Egypt in the construction of the Owen Falls Dam

As observed above, the right of the upper riparian to use the waters of the Nile provided it did not entail prejudice to the interests of Egypt by reducing the quantity of water arriving in Egypt or modifying the date of its arrival, was not hampered by the 1929 Nile Waters Agreement between Britain and Egypt. Therefore, it followed that power works could be constructed on the basis of the run of the river without the need to seek the agreement of the Egyptian Government. This argument was continually made by the Uganda colonial authorities during the negotiations leading to the exchange of notes.

The history of the negotiations shows that despite the exchange of notes of 1949 somewhat respecting the spirit of the 1929 Agreement, the participation of Egypt was based on her desire to use Lake Victoria as storage reservoir for her needs for equalized flows from year to year. As a result of this need to store water in Lake Victoria the construction of the dam took into account a possible raising of the lake level by up to three metres. Egypt, in turn, had to pay £980,000 compensation to the Uganda Electricity Board for loss of hydro-electric power generating potential.

3.2.2 The status of other elements of the Equatorial Nile Project

The "Draft Summary of the Equatorial Nile Project" paragraph 5 provides that the works were to be completed in stages and that agreements would have to be made on each stage for protective and remedial measures. With respect to the projects in Ugandan territory, (i.e the regulation of Lake Albert at Mutir and Lake Kyoga at Masindi Port), no such agreements have been made. It follows that there exist no obligations with respect to the construction of these facilities, until the required agreements are concluded.

3.2.3 Rights conferred by the 1949 Agreement to Egypt

The rights conferred by the Agreement are specific. They relate to the participation of Egypt in the construction of the dam and the creation of a reservoir behind the dam. The right was also created for control of discharge of water through the dam. This is the reason for the presence of an Egyptian Resident Engineer and staff at Owen Falls Dam.

The fact that the agreement saves the right of Uganda Electricity Board to take any action which it considers desirable, provided that this action does not entail any prejudice to the interests of Egypt in accordance with the Nile Waters Agreement of 1929 and does not adversely effect the discharges of water to be passed through the dam in accordance with arrangements to be agreed between the two governments, is crucial to the nature of rights acquired by Egypt. The Agreement was not intended to exist in perpetuity. The Agreement (as part of the Equatorial Nile Project) was to be reviewed after 20 years from the commencement of water storage. The operative provision reads;

"Review of the Project"
After twenty years from the date on which storage in Lake Victoria first begins, all parts of the project shall be reviewed by the participating Governments in the light of the additional hydrological information which will then be available and of the experience of the actual working and its results which will then have been obtained".

The storage in Lake Victoria began in 1961. The project is, therefore, overdue for review. Since the agreement specified that all parts of the project would be reviewed, it could be argued that the entire agreement, including its terms, may be renegotiated.

3.3 Other agreements related to the construction of the Owen Falls Dam

Two other Agreements were signed between Britain and Egypt relating to the construction of the Owen Falls Dam; The Agreement on Approving the Contract for the Owen Falls Dam of 5 December 1949, and Agreement on the Financial Arrangements of 5 January 1953. The first agreement dealt with the approval of the contract for construction and approval of the contractors. In the Agreement for financial arrangements, Egypt paid the Uganda Protectorate £226,543 to raise the dam by 1.3 metres above the originally intended level to allow additional storage of water. Egypt also agreed to compensate Uganda Electricity Board (UEB) for "consequential loss of hydropower and recognition of unspecified damage below Owen Falls Dam."

Egypt also undertook to pay compensation for any damage caused by the rising level of the lake. However, Egypt has not paid any compensation. It has not been possible to determine if claims relating to raised water level damage have been made by the states bordering the lake.

3.4 Agreement for cooperation in the meteorological and hydrological survey 1950

This Agreement was effected by the exchange of notes between the British Ambassador at Cairo and the Egyptian Minister for Foreign Affairs on January 19, 1950 and February 28, 1950. It entered into force on March 1, 1950. Under this agreement, Egypt and the Colonial Authorities in Uganda undertook to co-operate and carry out a survey which would enable Egypt to determine the amount of water it expected from the region of the Equatorial Lakes. The Ugandan authorities were to establish stations for collecting data. The number of posts varied according to agreements. An Egyptian Resident Engineer at Owen Falls Dam was to ensure, through inspections, that data were collected at these stations. Egypt was to pay a fee of between £E 4,200 and £E 4,500.

The agreement covered the same area and scope of objectives as the later Hydromet Agreement of 1967. Thus the 1950 Agreement must have lapsed because under the Vienna Convention on the Law of treaties, stating that a treaty will terminate if the parties to the Treaty conclude a later treaty on the same subject and if it appears that the parties intended that the matter should be governed by the later treaty.

3.5 Colonial treaties with Zaire, Rwanda and Burundi

There were treaties entered into by Britain and Belgium on issues relating to the Nile and the Kagera. The Treaty of 9 May 1906, between Britain and the Independent State of the Congo obligated the latter not to construct any work on the Semliki river which would diminish the volume of water entering Lake Albert except with the consent of the Government of Sudan. On the other hand, the Anglo-Belgian Treaty of 22 November 1934, inter alia required that where water in Kagera River was diverted from a water course, it had to be returned to the same water course before it flows into another territory.

These treaties, despite being of some interest to Uganda considering the importance of the Kagera and Semliki rivers, are, nonetheless, considered to have lapsed in view of the Uganda post-independence pronouncements regarding succession to colonial treaties which are complemented by equivalent statements made by Rwanda, Zaire, and Burundi.

3.6 HYDROMET Agreement 1967

The Agreement for the Establishment of the Hydrometeorologic Survey of Lakes Victoria, Kyoga and Albert was signed in May 1967 by Kenya, Uganda, Tanzania, Sudan and Egypt, the United Nations Development Programme (UNDP) and the World Meteorological Organisation (WMO). The agreement came into force on 17 August 1967, in the form of a project. This was the first post-colonial agreement regarding water resources and, like all subsequent agreements, there is no controversy about its validity as it was entered into by independent states.

The agreement's objective was to enable and enhance the collection of meteorological and hydrological data on the Equatorial Lakes and their catchment areas. The data obtained would be essential in the understanding of the Nile River and associated lakes. The project was eventually expanded to include Rwanda, Burundi and Zaire as parties to the Agreement. Ethiopia participated as an observer. The project headquarters were established at Entebbe.

In 1972 a laboratory was incorporated in HYDROMET and water quality and sediment analysis became part of its regular activities. Twenty-five water quality stations were established and monitored. In the late 1970's HYDROMET joined the Global Environment Monitoring System of Water (GEMS/WATER), and the laboratory was selected to act as the regional collaborating centre. A water quality model was developed for the Upper Nile Basin, but was not put into operation. Civil unrest in Uganda meant that it was not possible to continue monitoring activities, and after Kenya and Tanzania withdrew support in 1982 regular monitoring ceased around Lake Victoria. The project formally expired in 1992 and was replaced by the TECCONILE Agreement.

3.7 TECCONILE Agreement

On December 8, 1992 the states of the Nile Basin reached an agreement for continued technical co-operation in the Nile Valley to replace the HYDROMET project, which expired on 31 December 1992. This new agreement created an arrangement known as Technical Co-operation for the Promotion of the Development and Environmental Protection of the Nile Basin (TECCONILE). This arrangement is based on a project which was agreed upon at a Technical Committee of Hydromet meeting at Dar-es-Salaam, Tanzania in September-October 1992. The Agreement was signed by Egypt, Rwanda, Sudan, Tanzania, Uganda and Zaire. Kenya, Burundi and Ethiopia have not yet signed. The Agreement establishes a follow-up transitional structure to continue the work of HYDROMET. The transitional structure constitutes of an organisation with a Council of Ministers with decision-making powers, a technical committee, and an international secretariat based at Entebbe.

The organisation's aims are both short term and long term. In the short term, the organisation is to assist the participating countries in developing national water master plans and to develop the infrastructure capacity for building and techniques required for managing the Nile Basin water resources.

In the long term, TECCONILE has the objective of assisting member states in the development, conservation and use of the Nile Basin water resources in an integrated and sustainable manner through basin-wide cooperation for the benefit of all. The agreement also provides for assisting states to determine the equitable entitlement of each riparian state to the Nile waters.

The TECCONILE Agreement proposes to achieve its objectives by adopting an ambitious programme. The initial agreement is for three years. The long term programme includes:

TECCONILE Programme
Assistance in the development of water master plans.
Creation of a basin-wide information system.
Preparation of an overview of the basin-wide international and legal framework to support the efforts of all basin states to harmonise their water planning management and environmental protection and to facilitate joint development projects.
Assistance in identification and preparation for financing of national and regional projects.
Capacity building for environmental impact assessment and cost benefit analysis.
Review of water quality and quantity data and regional database.
Improvement in information systems including establishment of GIS and modern techniques of data collection.
Preparation and strengthening of monitoring and assessment capabilities.
Transferring to national governments the models developed during the previous phases of the operation of the HYDROMET project.

TECCONILE is one of the most comprehensive international agreements in the Nile Valley. It is also revolutionary in character in that it is the first post-independence agreement in which Egypt accepts and has signed an undertaking to create an organisation;

"To assist participating countries in the determination of the equitable entitlement of each riparian country to the use of Nile Waters."

The programme thus creates the opportunity to negotiate other agreements regarding the Nile Basin on the same basis.

3.8 Kagera Basin Agreement

The Agreement for the Establishment of the Organisation for the Development and Management of the Kagera River basin was signed by the Heads of State of Burundi, Rwanda and Tanzania at Rusumo on 24 August 1977. The Agreement entered into force on February 1978. Uganda acceded to the treaty on 19 May 1981. The treaty is open to membership of the four basin states only. The treaty aims at promoting the development of the basin generally. The objectives of the treaty cover all aspects of development including water and hydropower development, mining, industry, agriculture, health, tourism, trade, wildlife conservation and development, fisheries and environmental protection.

The treaty permits the state parties to carry out any activities within its scope, subject to the right of the organisation to claim competence for a project with an inter-state character. A project is deemed under Article 2 to have that character if:

Inter-state project criteria
It involves the territory of more than one state. The services and benefits to be derived may be transmitted through or received entirely or partially in, the territory of member states or state other than that of the state where the project, work or programme is to be undertaken. It is likely, in the judgement of the organisation, to produce substantial effects, whether these be beneficial or prejudicial in the territory of a state or states different from that of the state where the project, work or programme is to be undertaken.

The agreement does not clearly indicate the allocation of the rights of the various states to the waters of the River Kagera, but it is the first example of an agreement exclusively composed of Upper Nile Basin states.

4 INTERNATIONAL INSTITUTIONS IN THE NILE BASIN

There are a number of institutions into which the riparian countries of the Nile Basin are grouped. The purpose of this section is to discuss these institutions in terms of their scope and usefulness as vehicles for cooperation for the effective utilization of the Nile waters.

These institutions are the following:

- The Permanent Joint Technical Committee
- HYDROMET/TECCONILE
- Undugu
- Kagera Basin Organisation
- the proposed Nile Basin Commission

The content of the agreements and activities of the TECCONILE Kagera Basin organization were described in Chapter 3.

4.1 Permanent Joint Technical Committee (PJTC)

This effort at international co-operation in the Nile Valley was initiated in 1959. It brings together the downstream basin states of the Nile Basin, i.e Egypt and the Sudan. The agreement setting up the PJTC was drafted and concluded against the background of a controversy between the two countries regarding the Aswan High Dam. Apparently Egypt had made its plans for the construction of the Dam without the consent of Sudan.

The agreement setting up the Joint Technical Committee was a protocol to the 1959 Agreement for the Full Utilisation of the Nile Waters and formed an integral part of that agreement. It provided that the waters of the Nile would be apportioned, without reference to any upstream country, in such a way that Egypt was assured 48 milliard cubic metres while Sudan got 4 milliard cubic meters. Moreover the agreement provided that in any future negotiations with any other basin state, Egypt and Sudan would work out and adopt a joint position.

Since their independence in 1961, 1962 and 1963, Tanzania, Uganda and Kenya respectively, have always held informal consultations with the PJTC regarding Nile issues.

These informal consultations, have however, not been able to resolve outstanding water issues, especially in relation to the apportionment of water rights.

4.2 HYDROMET Survey Project/TECCONILE Project

A significant feature of TECCONILE is that it has a Council of Ministers in addition to a Technical Committee. The provision for a Council of Ministers is an important development and is an improvement on HYDROMET, which was separated from the policy-makers. It points to a more comprehensive cooperation among the riparian countries of the Nile Basin, where the political level is fully integrated into the structure of cooperation

4.3 Kagera Basin Organization

The Organization has an Authority composed of the Presidents of member states. This is the final body in terms of decision-making, operating on the basis of consensus. The political level is, therefore, integrated into the structure of the organization.

The Kagera Basin Organization, with wide-ranging objectives and an integration of the political level into its structure, could have been a basis for a Nile Basin organization or commission. However, being concerned with only Kagera issues and having been conceived for that purpose, it is unlikely that it can be expanded to provide for the wider Nile Basin concerns.

4.4 The Undugu Group

Undugu is a Swahili word meaning "brotherhood" and is applied to a group of states which met in Khartoum in November, 1983. The meeting was attended by Ministers of Foreign Affairs from the following countries: Egypt, Sudan, Uganda, Central African Republic and Zaire. At the conclusion of their 1983 meeting, the Group confirmed the need to coordinate their mutual political positions on the international plane.

The Group is not based on any binding treaty. It meets at ministerial and technical expert levels, and has no elaborate secretariat. It has met 8 times at ministerial level and once at the expert level since its inception in 1983.

5 UGANDA'S INTERNATIONAL ACTIONS BEFORE AND AFTER INDEPENDENCE

5.1 Actions before independence

Prior to its Independence, Uganda's international relations were conducted by the United Kingdom. It is, however, notable that the Protectorate Government in Uganda often expressed opinions on the genuine needs and aspirations of the people of Uganda, especially regarding the use of water resources. The following are among the most important actions of both the Protectorate Government and the British Government:

- In 1929 Sir W.F. Gowers, Governor of Uganda, wrote to the Colonial Office protesting the 1929 Nile Waters Agreement on the grounds that the agreement would prejudice the interests of the people of Uganda, by excluding the possibility of using Nile Waters for irrigation in Uganda, either by gravity or pumping methods. The Governor believed that irrigation may be a very important activity in the economic future of the protectorate
- In 1948 Governor Sir J. Hathorn Hall also strenuously and successfully argued against the construction of a dam proposed by Egypt at Nimule in the negotiations relating to the Equatorial Nile Project and leading to the construction of the Owen Falls Dam. Governor Hall's objections were based on the fact that a dam at Nimule would inundate considerable expanses of Ugandan land, rendering large numbers of people displaced. Eventually it was agreed that a dam should be constructed at Mutir where its effects would be minimized. Governor Hall also strove to limit Egypt's influence over and participation in the Owen Falls Dam Project, in order to increase Uganda's autonomy over her resources and future operation of the dam, as well as minimizing the impacts on the lakeside interests if the level of the lake were to be raised
- Hall's successor, Sir Andrew B. Cohen, also continued with Hall's policies. In addition, Cohen requested the British Government to renegotiate the 1929 Nile Waters Agreement. Cohen's argument was that Uganda needed to utilize her water resources for various uses including irrigation. He requested the British Government negotiate with Egypt on the basis of achieving the right to equitable utilization of the waters for Uganda and the other East African states
- In 1956, the Protectorate Government prepared a paper on the "1929 Nile Waters Agreement and the Position of Uganda" as a basis for negotiations with Egypt. In the paper, it was urged to do away with the 1929 Agreement and

create a new basis for relations, building on the principle of equitable utilization of water resources by all basin states. These negotiations did not take place because of the fact that following the Suez Incident of 1956. Britain and Egypt did not continue relations conducive to negotiations.

5.2 The post independence statements

On 12 February 1963, the Prime Minister of Uganda, in a letter addressed to the Secretary General of the United Nations, declared Uganda's position on the subject of treaties concluded by the British Government and extended to the Protectorate. He stated:

Uganda's Position on Colonial Treaties

"In respect of all treaties validly concluded by the United Kingdom on behalf of the Uganda protectorate, or validly applied or extended by the former to the latter, before October 9, 1962, the Government of Uganda will continue on a basis of reciprocity to apply the terms of such treaties from the time of its independence, that is to say October 9, 1962 until December 31, 1963, unless such treaties are abrogated or modified by agreements with the high contracting parties before December 31, 1963. At the expiry of this period, or of any subsequent extension of the period which may be notified in like manner, the Government of Uganda will regard such treaties, unless they must by the application of the rules of customary international law be regarded as otherwise surviving, as being terminated." (Godana, 1985)

The Prime Minister reiterated further the earnest hope of Uganda that the normal process of diplomatic relations would enable her to reach satisfactory accords with the states concerned to continue or modify the treaties in question.

The Prime Minister's letter was followed by a declaration of Parliament on treaty obligations, which was contained in Sessional Paper No.3 of 1963. The paper reiterated the fact that a number of treaties had been extended or applied to Uganda by the colonial Government. It further stated the right of independent Uganda to determine her attitude towards such treaties. As a consequence, the Sessional Paper stated that Government had decided, after careful study:

Ugandan Government decisions
"as far as possible treaty relationships should be preserved and our obligations to other countries should be honoured; that a firm and binding decision upon each individual treaty must await a thorough examination of the terms of the treaty; that pending the outcome of this examination of the individual treaties, suitable internal arrangements should be made to preserve our international relationships".

5.3 Uganda's practice since independence

The post-Independence statements were not followed by a consistent practice on the part of Uganda to effect their contents. No evaluation of existing treaties was carried out with a view to affirming, modifying or abrogating those treaties. No listing of the treaties which were accepted by Uganda at independence exists. Since the statements were clear that treaties which were not affirmed by December 31, 1963 would be considered repudiated, the assumption would be that Uganda became a state with a tabula rasa (a clean slate), with no international obligations.

The concept that a new state comes into being on a tabula rasa is one met by serious objections. These objections are based on the fact that international law accepts the concept of dispositive treaties. Dispositive treaties being, in the words of one jurist,

Dispositive treaties
"--a category of instruments, variously referred to as treaties creating local rights and obligations, dispositive treaties, agreements embodying obligations and creating rights in rem or treaties establishing obligations attached to territory which survive the fact of state succession and devolve on the successor state. This category includes inter alia agreements on international rivers or waters--"

These views seem to be supported by a number of authorities including decisions of the World Court.

Uganda's repudiation of the colonial agreements was supported by:

the 1929 Nile Waters Agreement, was in principle, an agreement apportioning water between Egypt and Sudan. It attempts to impose obligations on the East African states (successors to the British East African Territories) in only one clause. This obligation made sense at the time, when seen in the context of the British Empire as a whole. However, it no longer makes sense to impose such obligations on states such as Uganda, which were not a party to them. (Vienna Convention on the Law of Treaties, Articles 34-36)

- the 1929 Agreement itself did not create permanent rights for Egypt in relation to the Nile in the East African territories. This is because the Agreement itself accepts the impermanence of the arrangement. It provides that the parties may, at a future time, change the arrangements when the status of Sudan was resolved. Indeed, all the provisions of the treaty relating to the apportionment of water between Egypt and Sudan were revised in the 1959 Agreement for the Full Utilization of Nile Waters
- the Egyptian Government, in its reply to the direct repudiation of the 1929 Agreement by Tanganyika, acknowledged the non-permanence of the treaty. Egypt accepted that the treaty could remain in force until replaced by a new treaty
- with regard to the Owen Falls Dam Agreement, it may be argued that it is breached by Egypt in some material terms. Egypt failed to pay compensation for damaged lakeside interests as agreed. The travaux preparatoires of the Agreements show the importance and material character of compensation to the Agreements. A breach of a material term of a treaty entitles the other party to withdraw from, terminate or suspend the treaty. (Vienna Convention, Article 60)

However, it must be noted that Uganda has not repudiated the Owen Falls Agreement to the extent of not honouring her obligations under the agreement. An Egyptian engineer is still resident in Jinja carrying out the agreed functions, and the operation of the dam has not conflicted with the provisions of the agreement.

With respect to water resources, Uganda has continued to consult with all basin states and has conducted herself within the requirements of customary international law.

6 CURRENT INTERNATIONAL WATER LAW AND ITS IMPLICATIONS FOR UGANDA

In the last one hundred years international law relating to the uses of non-navigable rivers has developed considerably. These developments are so fundamental that they must be considered when interpreting a treaty, such as the 1929 Nile Waters Agreement.

6.1 Rejection of the doctrine of absolute territorial sovereignty

International law rejects the doctrine of absolute territorial sovereignty over portions of an international river which may be within the territory of one state. This doctrine stresses the sovereignty of the state within its borders, its right to do in the national interest what is necessary irrespective of the effects of such acts or omissions on the territory of other states. This principle would favour the upper riparians and lead to the prejudice of the interests of the lower ones.

This doctrine has been asserted in the Nile system by Ethiopia. General state practice, however, has tended not to favour the doctrine. This has been compounded by the weight of international judicial opinion, which has tended to insist upon the equitable sharing of transboundary resources.

6.2 Rejection of the doctrine of absolute territorial integrity

International law equally rejects the opposite doctrine of absolute territorial integrity. This doctrine holds that a lower riparian has "the right to the continued, uninterrupted (or natural) flow of the water from the territory of the upper riparian". This doctrine is derived from old common law doctrines relating to riparian rights. This doctrine, if followed, would mean that all the benefits of an international river would derive to the lowermost riparian, leaving little to the upper riparians.

6.3 General acceptance of the doctrine of equitable utilization of shared water resources

Present international law favours the doctrine of equitable utilization of international rivers and other transboundary natural resources. The doctrine has both the overwhelming support of state practice, judicial writings, and decisions of international tribunals. The origin of the doctrine can be traced from the Roman Law maxim "sic utere tuo ut non alienum

laedas". The maxim makes the proposition that no person may use his property in such a manner as to injure the rights, interests and properties of others. When applied to transboundary resources, this doctrine recognises the sovereignty of the states where the resource passes and the right of those states to use the resource. At the same time the doctrine imparts an obligation on the part of the state using the resource not to harm the interests and rights of other states sharing the resource. The doctrine, therefore, refutes the doctrines of absolute sovereignty and absolute territorial integrity in favour of limited sovereignty and limited territorial integrity combined.

The Helsinki Rules on the uses of the Waters of International Rivers adopted by the International Law Association at Helsinki in 1966 favour the doctrine of equitable use.

Helsinki Rules, Article 4

"Each basin state is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin."
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The concept of "reasonable and equitable share" is to be determined according to circumstances relevant to each particular case including ;

- "geography of the basin including the extent of the drainage area in the territory of each basin state
- the hydrology of the basin including the contribution of water by each basin state,
- the climate affecting the basin
- the past utilization of the waters of the basin including in particular existing utilization,
- the economic and social needs of each basin state,
- the population dependent on the waters of the basin in each basin state,
- the comparative cost of alternative means of satisfying the economic and social needs of each basin state,
- availability of other resources,
- the avoidance of unnecessary waste in the utilization of waters of the basin
- the practicability of compensation to one or more of the co-basin states as a means of adjusting conflicts among uses and;

- the degree to which the needs of a basin state may be satisfied without causing substantial injury to a co-basin state."

All these factors are to be taken together and considered.

The Helsinki Rules go further to stipulate that no use or category is to be given any greater preference to other uses or categories. They further prefer reasonable present uses to reservation of waters for future use. (Articles 6 and 7).

These concepts of equitable utilization have gained considerable acceptance in the International Community. The United Nations General Assembly has accepted this concept of equitable utilization in Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States of 1979.

Principle 1 thereof provides that:

UN Principles of Conduct, 1979
"It is necessary for states to co-operate in the field of the environment concerning conservation and harmonious utilization of natural resources shared by two or more states. Accordingly, it is necessary that consistent with the concept of equitable utilization of shared natural resources, states co-operate with a view to controlling, preventing, reducing, or eliminating adverse environmental effects which may result from the utilization of such resources. Such co-operation is to take place on an equal footing and taking into account the sovereignty rights and interests of the states concerned."

The environmental dimension of water resources is expressed in Principle 21 of the Stockholm Declaration on the Environment which provides:

Stockholm Declaration on Environment

"States have in accordance with the charter of the United Nations and the principles of international law, the sovereign right to exploit their own environmental policies and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction."

This obligation requires that however Uganda uses her water resources, it must not effect the environment of other states, and all national planning must take into account that goal.

7 UGANDAN INTERESTS

Uganda's vital interests in her water resources have to be defined in relation to her geographical position. These interests, therefore, have to be defined in the context of the interests of other states, which may have conflicting interests in the same shared resources. In relation to Egypt and Sudan, Uganda is an upper riparian, while in relation to Tanzania, Kenya, Rwanda, Burundi and Zaire, she is a lower riparian.

7.1 Uganda as an upper riparian

7.1.1 Interests of Egypt and the Sudan

Uganda is an upper riparian state when viewed in the context of the lower riparian states of Egypt and the Sudan, in relation to the Nile. The Republic of Egypt is an arid region which, in many parts, receives no or negligible rainfall, but depends both presently and historically on the Nile River for domestic needs, hydro-electric power and irrigation. Sudan, especially in the northern parts of the country, is as arid as much of Egypt. The Nile likewise plays an essential role in the national life of Sudan.

The principal interest of these lower riparians is to ensure that the river discharges are constant, both in regards to annual volume and distribution in time.

7.1.2 Uganda's interests

Uganda's interests lie in using water resources flowing through its territory for social and economic development. In relation to the lower riparians (Egypt and Sudan), Uganda may not share common interests with them if they assert, on the basis of colonial agreements, that Uganda cannot use Nile waters for further developments without their consent. In such cases, Uganda's common interests may lie with the upper riparians as they strive for greater control over the water resources originating in, or flowing through, their territories.

7.2 Uganda as a lower riparian

7.2.1 Interests of the upper riparians

Lake Victoria draws its waters, apart from rainfall, from Kenya, Tanzania, Rwanda and Burundi, who are thus upper riparians in regard to Uganda. Zaire is also an upper riparian in as far as Lake Edward, Lake Albert and the associated rivers (e.g the Semliki) are concerned.

The upper riparian states have not defined their interests or protected them as concretely and comprehensively as the lower riparians Egypt and Sudan have. However, some actions have been taken.

At the national level, all the states have, without exception, repudiated the application of colonial treaties by way of state succession. Tanzania has specifically repudiated the 1929 Nile Waters Agreement. She has also advanced plans for the utilization of the waters of Lake Victoria for irrigation in central Tanzania ("Smithsound Project"). This plan, which had been drawn up by the Germans before 1918, has yet to be officially abandoned. Kenya has created the Lake Basin Development Authority, one of whose aims is to use the waters of the rivers flowing from Kenya into Lake Victoria for irrigation in its Nyanza Province, or to pump water out of the lake for irrigation elsewhere in Kenya.

On the international level, the states of the Kagera Basin have, by treaty, created the Kagera Basin Organization with the aim of promoting the orderly development of the basin, including the development of the water resources of the River Kagera. Among the projects planned or in progress are an irrigation scheme for sugarcane in Tanzania, and a hydro-electric power scheme at Rusumo falls.

One factor that unites the upper riparians' interests and those of Uganda is the common opposition to the Egyptian attempts to exclude other basin states from using the water resources of the Nile on the basis of the colonial agreements which they have all repudiated.

7.2.2 Uganda's interests

Uganda's national interest as a lower riparian of the Nile is the use of the Nile waters for hydro-electric power generation at Jinja at the Owen Falls Dam facility. Equally important is the interest relating to the water quality in Lake Victoria, which supports important human and economic interests such as fisheries and water supply. In relation to the upper riparians Uganda's interest is to ensure that the water continues flowing at the same rate, and that these riparians do nothing that will affect the water quality adversely.

7.3 Economic and environmental aspects

The conservation of water resources entails a cost. Water is, therefore, not a free good. In the Copenhagen Statement 1991 it was stated that

Quote from Copenhagen Statement, 1991
"Access to enough water of adequate quality for basic subsistence is a fundamental human need. A pre-requisite for sustainable management of water as a scarce and vulnerable resource is that its full economic cost should be identified and acknowledged. With limited funds available for water and other human development needs and competition between different sectors, priorities must be set".

Although the Copenhagen conference did not address trans-boundary water issues, the above statement is equally valid in an international context.

This view has also been echoed in the Dublin statement on water and sustainable development adopted by the International Conference on Water and the Environment held in Dublin on 26-31 January 1992. Principle 4 of the statement held that "Water has an economic value in all its competing uses and should be recognized as an economic good".

Seen in an international perspective, the principle of considering the economic value of water has a number of implications. An international drainage basin is a shared economic resource between the states of the basin. The doctrine of equitable utilization of the resource which governs the utilization of the basin should, therefore, have a corollary duty - the duty of all states to participate in the conservation of the resource notwithstanding existing national boundaries.

What is implied here is that Uganda, in attempting to conserve the quantity and quality of water resources in her drainage system, must bear in mind that this resource is a shared resource. Uganda could, therefore, insist on the duty of lower basin states to contribute to her conservation efforts. Uganda's current efforts extend to afforestation, re-forestation, conservation of wetlands and control of water pollution. Each of these initiatives require the support of the lower riparians commensurate with the benefit they derive from those efforts. Similarly, conservation and water pollution abatement in the upper riparian states may result in benefits for Uganda. In principle, Uganda might contribute to such efforts.

One method to ensure that states contribute equitably would be to create a basin-wide multi-dimensional organization for the management of the resource to which all basin states contribute in accordance with the benefits they derive from the water resources.

8 RELATED NATIONAL ISSUES**8.1 The national institutional framework on international water issues**

In its present structure, the Government of Uganda handles international water issues through various ministries and agencies. The Ministry of Foreign Affairs, being charged with the handling of Uganda's international relations, is the key agency in this regard. However, the Ministry of Natural Resources is often involved directly in these issues, in particular its Directorate of Water Development. Other Ministries concerned include Ministry of Agriculture, Animal Industries and Fisheries, Ministry of Finance and Economic Planning, and the Ministry of Justice and Attorney-General's Chambers. In practice, it is the Directorate of Water Development which is most involved in international issues in that it represents Uganda on the international bodies and conferences concerning water resources.

There appears, however, to be a gap in the policy-making field. There is no formal forum for the discussion, coordination, drafting and setting of international water policy, especially in regards to the issue of the equitable sharing of its water resources of the Nile River Basin. There is need to establish a high level Water Policy Committee, which would include in its functions the discussion, drafting and revision of an international water policy for Uganda. The Water Policy Committee proposed as part of the Water Action Plan could have an International Sub-Committee to deal with these issues.

This should enable Uganda to have a comprehensive picture of her water resources and to be in a better position to negotiate competently on water issues at the international level.

The most pressing international issue that the Water Policy Committee should tackle and follow-up is the dramatic deterioration of water quality in Lake Victoria. In addition, the high level of potential demands on the water resources of the Nile Basin, makes it imperative that there is an operating international mechanism for ensuring an equitable utilization of the resources. Uganda therefore needs a policy on how to create and or promote an existing international institution (for instance TECCONILE) to take on this task.

8.2 Implications of proposed legislation for Uganda's international obligations

A fundamental principle of international law holds that a state must abide by international law in its dealings with other states. International obligations should be honoured in good faith. Therefore, international law requires that a state cannot change its international obligations unilaterally using its own internal law. This principle of customary International Law is known as *Pacta sunt Servanda*. With respect to treaties, this principle is laid down in Articles 26 and 27 of the Vienna Convention on the Law of Treaties, and it is also applicable to obligations assumed under customary international law.

The proposed legislation regarding water resources and in particular the Draft Water Resource Statute and the Draft Water Supply and Sewerage Act is in good accordance with Uganda's international obligations as outlined elsewhere in this study. The proposed legislation goes a long way to incorporate accepted international standards for the conservation and management of water resources.

In particular, the legislation provides strong measures for the control of pollution and other misuses of water resources. The vesting of all ultimate water rights in the state (see Article 4, Draft Water Resource Statute) would enable the government to ensure that water is not used in any manner prejudicial to Uganda's international commitments. The supervisory function of the state, provided for with respect to the use of water rights and discharge of effluent into the water, are also sound provisions to the same end.

APPENDIX 1.1

WATER ACTION PLAN DOCUMENTS

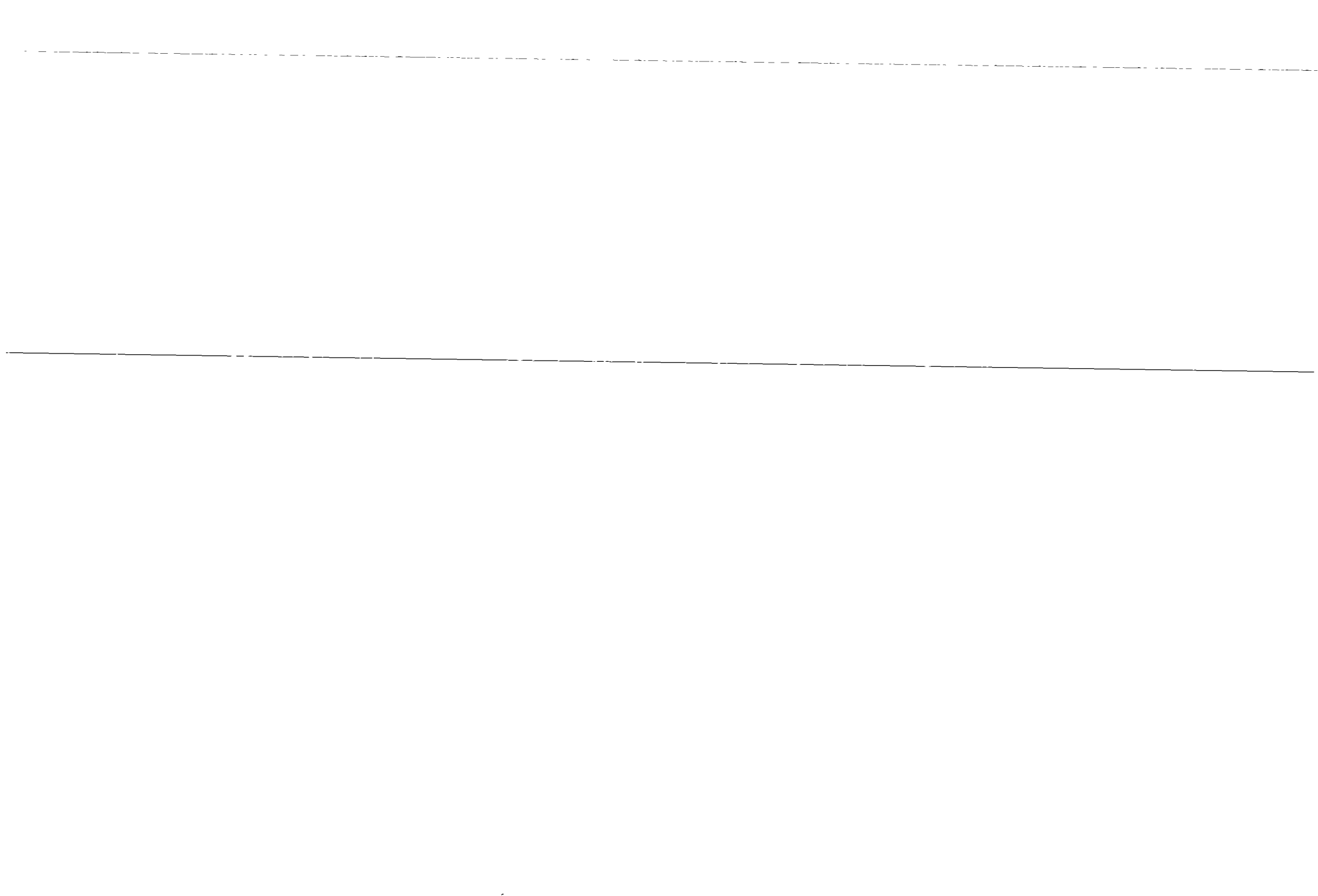
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UGANDA WATER ACTION PLAN (WAP)		
DOCUMENT	TITLE	DATE
001	WATER ACTION PLAN PHASE I - PROJECT DOCUMENT Description of the background and requirements to the work in WAP Phase I including budget.	Jan 1993
002	REHABILITATION OF WATER RESOURCES MONITORING AND ASSESSMENT SERVICES IN UGANDA - PROJECT IDENTIFICATION REPORT Background and proposal for a water resources monitoring project including budget.	Feb 1994
003	REGIONAL WATER QUALITY MANAGEMENT IN THE UPPER NILE BASIN - PROJECT IDENTIFICATION REPORT Background and proposal for a water quality management project including budget.	Feb 1994
004	WATER ACTION PLAN PHASE II - PROJECT DOCUMENT Description of the background and requirements to the work in WAP Phase II including budget.	Oct 1993
005	WATER ACTION PLAN - MAIN REPORT Synthesis of the key points of the Water Action Plan comprising the water resources management framework, the action programme and guidance for the implementation and monitoring of the plan.	Jul 1994
006	WATER RESOURCES POLICY Policy document defining a water resources policy with associated management strategies. Outline of areas for further policy development and actions. Preliminary discussion draft of a water supply and sanitation policy.	Jul 1994
007	RAPID WATER RESOURCES ASSESSMENT An assessment of the surface water and groundwater resources occurrence in time and place and a tentative estimate of the water requirements and water resources development trends.	Jul 1994
008	INSTITUTIONAL AND MANAGEMENT ASPECTS An assessment of water resources management functions, structures and tools. Proposals for a future management strategy and corresponding capacity building.	Jul 1994
009	INTERNATIONAL ASPECTS An assessment of the international aspects and implications of Uganda's position in the Upper Nile Basin in relation to water resources.	Jul 1994
010	ANNEX REPORT - VOLUME 1 - DISTRICT STUDIES Collation of district studies for Arua, Mbale, Mbarara, Moroto, Mukono and special studies for Hoima, Kabale and Tororo.	Jul 1994
011	ANNEX REPORT - VOLUME 2 - GROUNDWATER DATABASE Groundwater database development description, specification and manual.	Jul 1994
012	ANNEX REPORT - VOLUME 3 - MANAGEMENT ASPECTS Background for preparation of regulations supporting the Water Resource Statute, guidelines for district water resources management and management procedures for issuing of permits.	Jul 1994
013	ANNEX REPORT - VOLUME 4 - PROJECTS AND ACTIONS Description of water resources development plans and projects giving guidelines for prioritization, impact assessments, updating and coordination. Catalogue of water resources related projects and actions.	Jul 1994
014	WATER ACTION PLAN - EXECUTIVE SUMMARY A concise short version of the set of strategies, actions and guidelines constituting the Water Action Plan also giving a key to the documentation.	Jul 1994



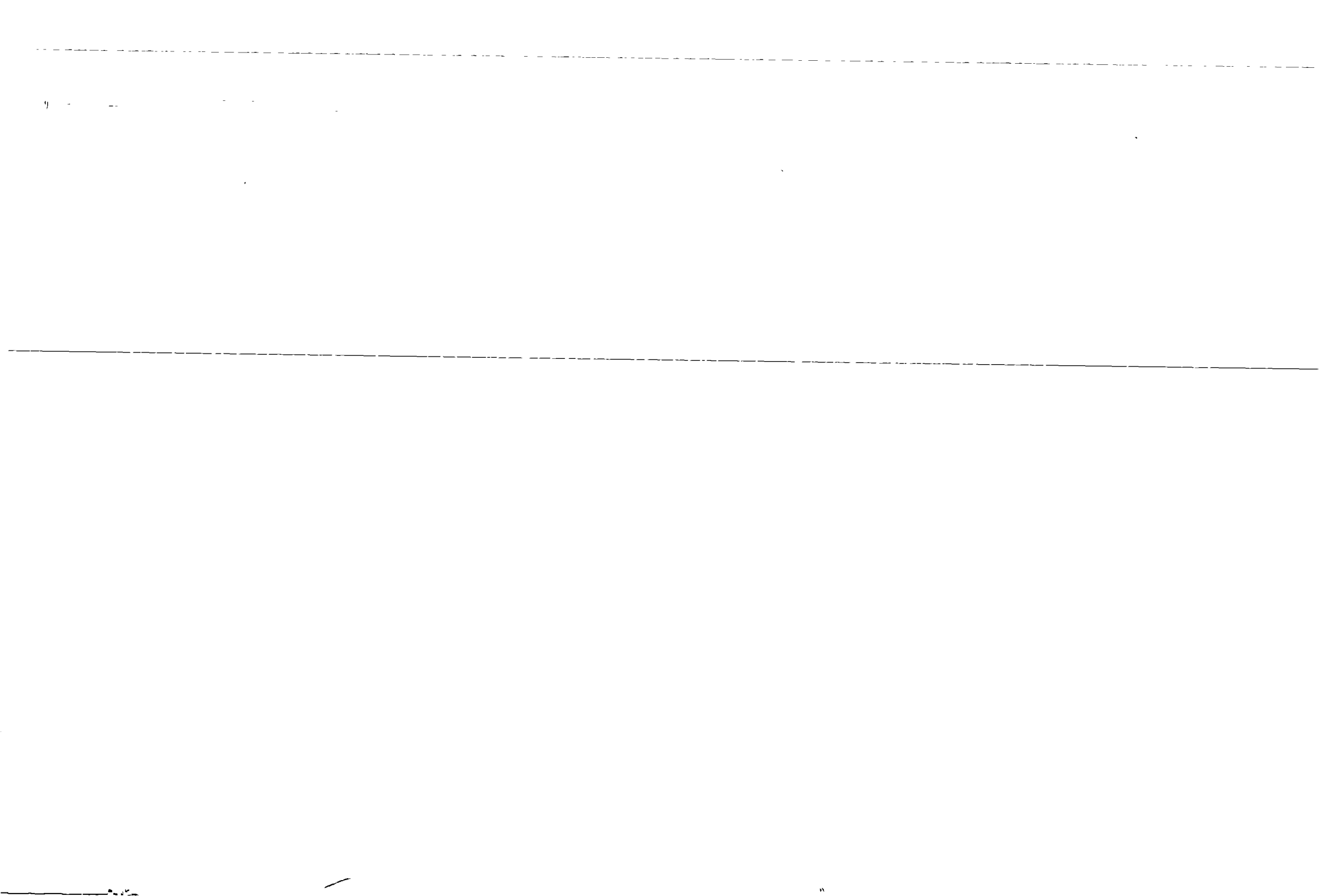
APPENDIX 2.1

TRANSBOUNDARY POLLUTION



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1 TRANSBOUNDARY POLLUTION CONTROL UNDER EXISTING TREATIES

Colonial treaties relating to the Nile waters were not concerned with the problem of the control of transboundary pollution. This is even the case in the "Agreement for the Full Utilization of the Nile Waters" of 8 November 1959, signed between Egypt and the Sudan. This agreement dealt with issues of apportionment of water rights including the establishment of the Permanent Joint Technical Commission (PJTC) for the collaborative efforts of both states towards that end.

After Uganda's independence, however, and with the emergence of international environmental consciousness, the states of the Nile Basin have included the obligation not to pollute shared resources in recent international agreements. The Kagera Basin Agreement is one such example.

The TECCONILE Agreement makes "the review of water quality and quantity data and regional databases" one of the activity areas of its programme. This agreement, although it identifies water quality as an area of research, does not make conservation or improvement of water quality an obligation.

In the proposed Tripartite Agreement on the Preparation of an Environmental Management Programme for Lake Victoria (June 1993, draft), the proposed parties (Kenya, Tanzania, and Uganda), have gone further to create an obligation to prevent the pollution of Lake Victoria. In the preamble the parties share among others, the concern that "increased agricultural run-offs, discharge of sewage and industrial waste, adversely effect fisheries and sanitary conditions in the lake basin".

Article 1(1) provides that:

"The parties agree to embark upon the preparation of a five year program to strengthen regional co-ordination in the management of fisheries and water hyacinth control, and in the management of water quality and land use, including wetlands in the lake basin covering program components and tasks set out in Attachment 1."

Under Attachment 1, component 2 which deals with water quality, the tasks for the parties include the establishment of a regional task force for water quality (pollution) land use and wetlands. Establishment of water quality objectives, strengthening of national institutional and regulatory frameworks, monitoring and enforcement of standards as well as identifying and programming of investment needs are tasks to be carried out.

While the draft Agreement concerns itself at length with means and measures for combating pollution, it does not specifically lay down an obligation to avoid transboundary pollution. The draft Agreement also does not specify the responsibility of states in matters of transboundary pollution.

Seen from the perspective of the existing international agreements relating to the Nile Basin, there is thus no clearly stated obligation to prevent transboundary pollution of waters nor

statements on the responsibility of states in this respect. Thus, obligations must be derived from the rules of general or customary international law.

2 GENERAL INTERNATIONAL CONVENTIONS

The African Convention on the Conservation of Nature and Natural Resources (Algiers 15 September 1968) includes, among other areas, the Nile Basin and has a bearing on the question of water quality. This convention has been ratified or acceded to by 30 African states. Out of these states, 14 have signed, but have not yet ratified its agreements. Besides Uganda, the other Nile Basin states which are parties to the convention are Egypt, Kenya, Rwanda, Sudan, Tanzania and Zaire. Although Burundi and Ethiopia signed the Convention, they have not yet ratified it. The operative provisions of this convention with regard to water quality are:

Article II - Fundamental Principle

"The contracting parties shall undertake to adopt the measures necessary to ensure conservation, utilization and development of soil, water, flora, and faunal resources in accordance with scientific principles and with due regard to the best interests of the people"

The fundamental principle is followed by statements relating to management of shared water resources including references to water pollution.

Article V - Water

"The Contracting states shall establish policies for conservation, utilization and development of underground and surface water, and shall endeavour to guarantee for their populations a sufficient and continuous supply of suitable water, taking appropriate measures with due regard to:

- the study of water cycles and the investigation of each catchment area,
- the co-ordination and planning of water resources development projects
- the administration and control of all water utilization, and
- prevention and control of water pollution

Where surface or underground water resources are shared by two or more of the contracting states, the latter shall act in consultation, and if the need arises, set up inter-state commissions to study and resolve the problems arising from the joint use of these resources arising for the joint development and conservation thereof."

The provisions above with regard to water quality and especially its transboundary aspects are quite general.

International treaties of a global character exist in the field of water resources. These treaties, however, do not contain provisions on water quality or the need to prevent transboundary pollution. The proposed Convention on the Non-Navigable uses of Rivers, which is being prepared by the International Law Commission of the United Nations contains various provisions on the control of transboundary pollution and on the states' responsibilities in

this respect. The work of the International Law Commission, however, centres upon the codification of accepted rules of customary international law.

In conclusion, general international conventions do not offer sufficient legal background for distribution of obligations and responsibilities towards the prevention or mitigation of transboundary pollution. Therefore recourse must be made to customary international law discussed in Chapter 3.

3 CUSTOMARY INTERNATIONAL LAW

General rules of customary international law bind all states. In some specific instances rules of particular customary law may evolve to bind states forming a region or even in dealings between two states. Rules of customary international law derive from the practice of state in their day to day relations. This practice, which should be consistent and of sufficient duration, must be based on the premise that the states are acting pursuant to rules of law.

On the whole, customary international law, derived from accepted practices, has generated a number of rules governing the utilization and conservation of shared water resources and also regarding transboundary pollution.

The principle that a state does not have the right to pollute shared waters to the detriment of co-riparians is a natural derivation of the principle of equitable sharing of water resources. This equitable sharing entails the principle that a state should bear the costs of the pollution caused by its activities. It also follows that it would be inequitable to expect a state to bear the cost of cleaning the pollution originating in another state.

The two principles have been accepted by the International Law Commission in its codification of the rules relating to "Non-Navigational uses of International Water courses" in its Report of 1988. Article 8 of the Draft Articles provides as follows:

Article 8: Obligation not to cause Appreciable Harm

"Water course states shall utilize an international water course [system] in such a way as not to cause appreciable harm to other watercourse states."

Article 6 of the Draft Articles restates the principle of equitable utilization of the shared watercourse by the co-riparians. The Commission in adopting Article 8, accepted that the duty to avoid pollution was complementary to the principle of equitable sharing of the resources of the watercourse. It was recognized, therefore, that any use of an international watercourse, which would result in causing appreciable harm to other riparians could not be equitable, unless agreed upon by the states that will incur the damage.

Articles V and VI impose liability for pollution and the duty to compensate the injured party. Article V in particular is instructive and provides that:

"States shall incur international liability under international law for any breach of their international obligations with respect to pollution of rivers and lakes."

In conclusion, there is ample provision in customary international law that a state does not have the right to pollute shared water to the detriment of co-riparians and that a state should bear the cost of the pollution caused by its activities ("polluter pays").

4 OPPORTUNITIES AND CONSTRAINTS OF THE EXISTING CUSTOMARY LAW ON TRANSBOUNDARY POLLUTION

Despite the continuing development of customary international law in the field of transboundary pollution there exist a number of constraints:

- **Generality of customary law.**
The customary international law in the field of transboundary water pollution is general. It states broad norms of law leaving the details to be determined according to circumstances. This means that the law is not necessarily in accord with the particular problems of each basin.
- **Lack of systematic identification of targets.**
Despite the development of new norms of pollution prevention, customary international law remains largely litigatory, that is, directed at the determination of the wrong-doing party and compensating the injured party. Customary international law is, therefore, not anticipatory in character but is rather aimed at determining issues after the event has taken place. However, modern natural resources law is moving towards anticipation and prevention as the two major components of a management strategy.
- **Lack of specific measures appropriate to targets.**
An active approach to the control of pollution demands not only an effort to identify the targets but also to devise remedial measures towards that target. Customary international law on transboundary water pollution is not appropriate in that task.

As it stands, customary international law relating to pollution, and owing to its generality, does not identify specific offending activities which ought to be controlled. This, therefore, weakens the pollution control regime.

The above assessments lead inescapably to the conclusion that it is necessary to create, a specific regional regime to deal with transboundary water pollution by identifying the specific targets and the appropriate measures and response strategies.

5 SUGGESTED APPROACHES TO TRANSBOUNDARY POLLUTION CONTROL FOR UGANDA

In order to address issues of transboundary pollution facing Uganda, it is necessary to adopt a basin wide approach to control pollution especially with respect to the Upper Nile Basin. The reason for this suggestion is based on the reality of the unity of the Upper Nile Basin. The following concrete actions would be proposed as necessary in this regard:

- an existing international organisation of basin-wide character, such as TECCONILE, should be strengthened to take into account the issues relating to water quality and the management of transboundary pollution
- studies should be promoted to identify the key pollutants which need to be addressed and controlled in the various riparian states. The sources of these pollutants should also be identified along with the principal activities that lead to pollution
- measures for the prevention of new pollution should be identified including, where possible, the identification of substitute materials and alternative approaches to the various offending activities
- measures for abating existing water pollution need to be identified

When the information on which to base control measures has been assembled and an institutional framework established, then it will be necessary to create binding control measures in the form of conventions aiming at firm commitments towards the following elements:

- identifying the pollutants, sources, and offending activities
- specifying control measures such as those relating to pollution prevention and pollution abatement
- harmonizing legislation, policy and standards on pollution control
- exchange of information on control measures and notification procedures in cases of emergencies.

The approach to creating this legal regime need not be along the lines of a single treaty that incorporates all aspects. Instead, the approach could be gradual, with separate treaties being formulated on each issue when consensus is attained and the means to implement are available.

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