



Nile Basin Initiative

Nile Equatorial Lakes Subsidiary Action Program

Kagera Transboundary Integrated Water Resources
Management and Development Project

Development of a Kagera River
Basin Transboundary Cooperative
Framework and Management
Strategy in the Four Riparian
Countries of Burundi, Rwanda,
Tanzania and Uganda

Final Report

Volume 1: Main Report and Appendices

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List of Abbreviations and Acronyms

Abbreviation / Acronym	Meaning
BCM	Billion cubic metres (m ³)
CBSIP	Confidence Building and Stakeholder Involvement Project
CEPGL (Burundi; D.R. Congo; Rwanda)	Communauté Economique Des Pays Des Grands Lacs
CSO	Civil Society Organisation
CWB	Central Water Board (Tanzania)
DGHER (French)	General Department of Water Resources and Energy
DRC	Democratic Republic of Congo
DWD	Directorate of Water Development (Uganda)
DWNR	Department of Water and Natural Resources (Rwanda)
EAC	East African Community
EANWCC	East African Nile Waters Coordinating Committee
EIA	Environmental Impact Assessment
ENCOM	Eastern Nile Council of Ministers
ENSAP	East Nile Subsidiary Action Program
ENTRO	Eastern Nile Technical Regional Office
EWURA	Energy and Water Utilities Regulatory Authority (Tanzania)
FAO	(United Nations) Food and Agriculture Organisation
GDP	Gross Domestic Product
GIRE	Gestion Intégrée de Ressources en Eau
GRE	Gestion de Ressources en Eau
Ha	Hectares
HDI	Human Development Index
HDR	Human Development Ranking / Report
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
IBA	Important Bird Area

Abbreviation / Acronym	Meaning
IBWC	International Boundary and Water Commission United States and Mexico
IGADD	Inter-Governmental Agency for Drought and Desertification
IGEBU (French)	Institut Géographique de Burundi
ILA	International Law Association
ILC	International Law Commission
IWRM	Integrated Water Resources Management
IUCN	World Conservation Union
KBO	Kagera Basin Organization
KRB	Kagera River Basin
KTIWRMDP	Kagera Transboundary Integrated Water Resources Management and Development Project
LVBC	Lake Victoria Basin Commission
LVBWO	Lake Victoria Basin Water Office (Tanzania)
LVFO	Lake Victoria Fisheries Organisation
Masl	Metres above sea level
MINECOFIN (Acronym)	Ministry of Finance and Economic Planning (Rwanda)
MINIRENA (Acronym)	Ministry of Natural Resources (Rwanda): combining the former Ministries of Energy, Water and Natural Resources and that of Land, Environment, Forests, Water and Mines
MINISANTE (Acronym)	Ministry of Health (Rwanda)
MoH	Ministry of Health (Uganda)
MoU	Memorandum of Understanding
MOWLD	Ministry of Water and Livestock Development (Tanzania)
MTEF	Medium Term Expenditure Framework
MWE	Ministry of Water and Environment (Uganda)
NATO	North Atlantic Treaty Organisation
NAWAPO (Acronym)	National Water Policy (Tanzania)
NBA	Niger Basin Authority
NBC	Nile Basin Commission
NBD	Nile Basin Discourse
NBI	Nile Basin Initiative
NEL-COM	Nile Equatorial Lakes Council of Ministers
NEL-CU	Nile Equatorial Lakes Coordination Unit
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NEL-TAC	Nile Equatorial Lakes Technical Advisory Committee
NEMA	National Environment Management Authority (Uganda)

Abbreviation / Acronym	Meaning
NEMC	National Environment Management Council (Tanzania)
NFPO	National Focal Point Office
NGO	Non-governmental Organisation
Nile-COM	Council of Ministers of Water Affairs in the Nile Basin
NPCMWR	National Policy for the Conservation and Management of Wetland Resources (Uganda)
NTDA	National Transboundary Diagnostic Analysis
NUWA	National Urban Water Authority (Tanzania)
NWSC	National Water and Sewerage Corporation (Uganda)
NWSDS	National Water Sector Development Strategy (Tanzania)
OMVS (French)	Organisation pour la Mise en Valeur du Fleuve Sénégal
PEAP	Poverty Eradication Action Plan (Uganda)
PJTC	Permanent Joint Technical Commission
PGNRE	Projet de Gestion National des Ressources en Eau (Rwanda)
PNDE (French)	National Water Master Plan (Burundi)
Ppm	Parts per million (= mg/l)
PPP	Public – Private Partnership
PRSP	Poverty Reduction Strategy Paper
REGIDESO (French)	Régie de Distribution d'Eau
REMA	Rwanda Environment Management Authority
RPSC	Regional Project Steering Committee
RTWSP	Rural Towns Water and Sanitation Programme (Uganda)
SAP	Subsidiary Action Program
SDBSP	Socio-economic Development and Benefits Sharing Project
SVP	Shared Vision Program
TAC	Technical Advisory Committee
TECCONILE	Technical Cooperation for the Promotion of the Development and Environmental Protection of the Nile River Basin
ToR	Terms of Reference
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
WMO	World Meteorological Organisation
WPC	Water Policy Committee (Uganda)
WRM	Water Resources Management

Executive Summary (English)

Introduction

Spreading over Burundi, Rwanda, Tanzania and Uganda, the Kagera River basin covers a total area of about 59,800 km² including 75% of the land area of Rwanda and 52% of Burundi. It is the principal contributor of water to Lake Victoria and is regarded by many as the source of the White Nile.

There are a number of common and transboundary water resources management issues that come with sharing of a limited resource.

This Report reviews the policies, legal and institutional frameworks of regional and national water resources management as a background for proposing a co-operative framework for managing, sharing benefits from and resolving conflicts arising from sharing the water resources of the Kagera River Basin.

Findings

It is concluded that there is a need to improve on transboundary water resource management and that a permanent institution is needed in order to maintain focus on the basin and its key development and resource issues. Consultations made it clear that such an institution should be created within existing frameworks and not as a 'standalone' organisation. This is not only much easier to implement, but also more sustainable in both the short and long terms and a better utilisation of limited resources.

Two existing regional organisations were analysed as possible anchors of the transboundary cooperative apex institution, namely the Nile Basin Initiative and the Lake Victoria Basin Commission (LVBC) of the East African Community (EAC).

The Nile Basin Initiative (NBI) is a transitional mechanism for the establishment of a cooperative Nile basin wide water resources management regime and a Nile Basin Commission (NBC) as a permanent coordinating institution. It is thus handicapped by a lack of legal recognition in all Nile riparian countries. Indeed, within the Kagera River Basin, it is only accorded legal status in Rwanda and Uganda!

The East African Community brings together the five riparian countries of the Lake Victoria Basin, namely: Burundi, Kenya, Rwanda, Tanzania and Uganda. It has a strong legal basis and, with the recent admission of **COWI Uganda**

Burundi and Rwanda, it oversees the Kagera River sub-catchment of the Nile Basin.

The EAC Protocol for the establishment of the LVBC also sets as its mandate, the management of the basin's water resources and implementation of relevant development activities. Such a mandate technically covers planned interventions under the Kagera River Basin Cooperative Framework.

Options for Cooperation on the Kagera River Basin

By considering the linkages and potential operational arrangements between these organizations, the Consultant developed four (4) possible options by which the legal framework for the proposed permanent transboundary cooperative framework for the Kagera River Basin can be structured.

Option 1: Kagera Basin Cooperative Framework within NBI/NELSAP - NBC Cooperative Framework

This option would involve the negotiation of an agreement, protocol or treaty by the four Kagera River Basin riparian countries under the NBI transitional mechanism or its successor NBC under the Nile Basin Cooperative Framework Agreement. As indicated above, Articles 31 and 32 of the draft Nile Basin Cooperative Framework recognises the importance and need of utilising sub-basin organisations or arrangements.

The Kagera Integrated Water Resources Management Project can, under the agreement, protocol or treaty made under Articles 31 and 32 of the draft Nile Basin Cooperative Framework Agreement be transformed into an institution of the NBI/NBC with corporate and legal status operating through the proposed institutional structure of the NBC.

The main disadvantage associated with this option is that it is dependent on the finalisation and ratification of the draft Nile Basin Cooperative Framework Agreement which could take many years to realise. Given the underlying differences between the upper and lower Nile Basin riparian countries due to the pre-colonial Nile River treaties that gave preference to the interests of Egypt and Sudan and the uncertainty associated with the legal status of the Nile Basin Cooperative Framework, this option does not provide the required legal certainty for the proposed permanent transboundary cooperative framework for the Kagera River Basin.

Option 2: Kagera Basin Cooperative Framework within the EAC's LVBC Protocol

The EAC Treaty and LVBC Protocol provide a permanent legal framework for regional cooperation for the entire Lake Victoria Basin including the Kagera River Basin. The LVBC under the LVBC Protocol and the LVBC Bill will have the required corporate and legal status as the EAC institution with the mandate to coordinate, regulate and oversee all management and development projects and activities within the Lake Victoria Basin.

This option involves the utilisation of the LVBC Protocol, the EAC Protocol on Environment and Natural Resources Management, the EAC Treaty and other EAC legal instruments. To the extent that the LVBC Protocol and other EAC protocols and legal instruments and institutions are already established, this option would not require the negotiation and ratification of a separate agreement, protocol or treaty for the proposed permanent transboundary cooperative framework for the Kagera River Basin. Rather, this would involve the transfer of the former KBO project office, resources and assets to the LVBC to be managed in accordance with the LVBC Protocol and other EAC legal instruments with no or little direct involvement of the NBI.

Option 3: Kagera Basin Cooperative Framework under the NBI / NBC – EAC Cooperative Partnership

The third legal option involves the operationalisation and/or implementation of the Memorandum of Understanding (MoU) between the NBI and the EAC. This involves the negotiation of an agreement under which the proposed permanent transboundary cooperative framework is based on both the Nile Basin Cooperative Framework and the existing permanent legal framework under the EAC Treaty, the LVBC Protocol and other EAC protocols and legal instruments.

Under this option, an agreement can be negotiated to provide effective linkages between the NBI and NELSAP on the one hand and the EAC and LVBC on the other by implementing Article VI of the NBI/EAC MoU. A Kagera River Basin Cooperative Framework under the LVBC and the EAC but funded and controlled by both the NBI and the EAC can be formulated thereby establishing a permanent cooperative partnership between the NBI and the EAC.

Option 4: Establishing an Autonomous Institution or Reviving the KBO

The fourth legal option would involve the establishment of a new institution or the revival of the KBO through the negotiation and ratification of a new Kagera River Basin specific agreement, protocol or treaty outside the Nile Basin Cooperative Framework and the EAC Treaty. As indicated above, this option is unlikely to get the support of the four Kagera River Basin countries because the terms of the KBO Dissolution Agreement envisaged the transfer of KBO projects and activities into either the NBI or the EAC.

Recommendations

Option 3, is the one preferred by the Consultant and is hereby recommended for adoption and implementation. The Consultant recommends that a 'Kagera Basin Management Unit' (KBMU) be formed as unit within the LVBC. It further recommends that similar units be established for the other two transboundary Lake Victoria basins (Sio-Malaba-Malakisi and Mara).

The KBMU will work closely with the national organisations, directly as well as through the national focal points already established for the LVBC. In order to be effective, it is further recommended that the functions of KBMU are focused on water resource management, including planning, monitoring, environmental impact assessments (EIA) and small water re-

sources projects. The organisation will also facilitate larger investment projects. The proposed organisation should be lean and work in the field will be carried out through national government organisations or the private sector.

Capacity Building; Stakeholder Awareness and Participation; and Gender Mainstreaming Issues

Field level consultations revealed that technical capacity on the part of WRM institutions and key stakeholders to plan, implement and monitor water resources management is a major challenge. This is further exacerbated by the near absence of adequate policy and institutional frameworks and, thereby calling for the development of a capacity building plan.

Enhancement of stakeholder participation is identified as vital in the integrated development of the Kagera basin. Stakeholders are identified to include sectoral level involvement of organized entities and utilities – such as water supply authorities, industry, agriculture, livestock, tourism, mining and hydropower– as well as local level organizations representing community groups and the private sector. Sectoral level entities and utilities are typically involved at national level (including national Governments line Ministries, Municipalities, Parastatal Agencies as well as Non-Governmental organizations), while local level organizations are involved in decisions at basin and sub-basin levels and also include special interest groups, women, farmers, households, user associations, farmers groups, local communities and the private sector. Another cadre of key stakeholders also includes multi lateral organizations, projects and programs as well as donor bodies.

Stakeholder participation is important in that the immensity of the tasks associated with integrated transboundary water resource management - require greater involvement beyond the current capacity of the riparian countries alone. Poverty and limited resources constrain achievement of Integrated Transboundary Water Resource Management objectives. Stakeholder involvement and participation is needed in the bid to mobilize resources and develop effective partnership in water resources planning and management for all water uses encompassing drinking, sanitation, agriculture, irrigation, hydropower, industries, navigation as well as environmental protection.

The Strategic and action for enhancing stakeholder participation must emphasise:

- 1 The stimulation and enhancement of the abilities of the CSOs, NGOs, CBOs and the private sector capacity to participate in water resource management planning and activity implementation within the Kagera Basin
- 2 Provision of targeted training and information to build the information base of key CSO, NGO, CBO and private sector capacity within the Kagera Basin
- 3 The enhancement of the operational capacity of local governments (as key stakeholders) in planning and effectively monitoring the

implementation of transboundary water resource management

It is further proposed that a gender mainstreaming strategy and plan be carefully executed to enable the participation of local women and men. Particular attention needs to be given to women considering their disadvantaged position besides their male counterparts. It is recognized that policy frameworks actually exist within all the four riparian countries for implementation of gender mainstreaming. These frameworks, however, need to be comprehensive enough in tackling transboundary integrated water resource management given the poverty status in the basin and the need to handle environmental degradation resulting from exceptional use of the basin resources.

It is recommended that the Strategy and plan for gender mainstreaming specifically addresses itself to the:

- 1 Development of an enabling environment¹ and technical capacity for gender mainstreaming
- 2 Inculcation of positive values and attitudes amongst women to recognize their full potential to participate in deliberate efforts towards integrated transboundary water resource management and development
- 3 Advancement and reconciliation of the triple goals of social equity and participation (by and between men and women as well as among different groups within the basin) towards environmental sustainability economic efficiency and poverty eradication. Under this is also the quest to advance equal opportunity for land ownership and the use of natural resources in the bid to promote social and economic equity.

In addition to strategies for enhancing stakeholder participation and gender mainstreaming, it is proposed that capacity building be deliberately instituted to enhance institutional development through provision of appropriate knowledge and skills amongst the human resources and institutions relevant to Water Resources Management. This is aimed at ensuring improved performance and delivery of timely and quality service in line with the overall objectives of Kagera River Basin cooperative framework, national and regional priorities.

The capacity Building plan targets key stakeholders at national, catchment, local government and community levels together with NGOs, training and research institutes relevant to IWRM in the catchment

The proposed Capacity Building Plan entails five strategic intervention measures. These include the following:

¹ Enabling environment in this context of gender mainstreaming in water resources development, management and use includes policies and laws that institutionalize the equitable participation of men and women; and steady and secure resources to support the necessary structures and programs.

Promote functional public awareness on IWRM to enhance community knowledge and appreciation of IWRM and its contribution to socio-economic development; Strengthen capacity of relevant stakeholder institutions at both national and local government levels to sustainably plan, manage and develop the shared water resources of the Kagera catchment; Support and promote collaboration with Educational, Research, and other Training institutions relevant to the Kagera Catchment to strengthen their skills/knowledge and resources in the provision of continuous training and technical support required for sustainable management and development of the Kagera River water resource.

The other intervention measures include; Strengthen capacity and promote collaboration with relevant NGOs, CBOs, and the private sector as key partners in the mobilisation and delivery of water related services to the local communities and Promote and support the collection, management and sharing of water resources management data and information to support the planning and decision-making processes in the Kagera catchment.

Structure of the Report

This Report is divided into two Volumes:

Volume 1: Main Report and Appendices (this Report)

Volume 2: Draft Cooperative Framework Agreement and Set Up of KBMU.

Sommaire Exécutif (Français)

Introduction

S'étendant sur le Burundi, le Rwanda, la Tanzanie et l'Ouganda, le bassin fluvial de Kagera couvre une superficie totale d'environ 59,800 km² comprenant 75% de la région du Rwanda et 52% du Burundi. Il est le principal fournisseur d'eau au lac Victoria et il est largement considéré comme étant la source du Nil blanc.

Il y a un certain nombre de questions communes et transfrontalières liées à la gestion de cette ressource limitée.

Ce rapport révisé les politiques, les cadres légaux et institutionnels de la gestion régionale et nationale des ressources en eau comme étant la base pour proposer un cadre coopératif de gestion, de partage des avantages et pour la résolution de conflits résultant du partage de ressources en eau du bassin fluvial de Kagera.

Résultats

Il en résulte qu'il est nécessaire d'améliorer la gestion transfrontalière de ressources en eau et qu'il faut une institution permanente pour maintenir l'accent sur le bassin et ses questions clés de développement et de gestion de ressources. D'après les consultations faites, il est clair qu'une telle institution devrait être créée à partir de cadres existants et non pas comme une organisation autonome. Ceci est non seulement plus facile à mettre en œuvre, mais c'est aussi plus durable à court et à long terme ; de plus, il y a une meilleure utilisation de ressources limitées.

Deux institutions régionales ont été analysées comme étant des ancres possibles pour l'institution sommet de coopération transfrontalière, il s'agit notamment de l'Initiative du Bassin du Nil et de la Commission du Bassin du lac Victoria (LVBC) de la communauté de l'Afrique de l'Est (CEA).

L'Initiative du Bassin du Nil est un mécanisme de transition vers l'établissement d'un régime coopératif de gestion de ressources en eau dans tout le bassin du Nil et de la Commission du Bassin du Nil (NBC) comme institution permanente de coordination. Elle est cependant limitée par le fait qu'elle ne soit pas reconnue juridiquement dans tous les pays riverains du Nil. Au fait, dans le bassin du Kagera, l'IBN n'a un statut légal reconnu qu'au Rwanda et en

Ouganda !

La communauté Est-Africaine réunit les cinq pays riverains du bassin du lac Victoria, à savoir, le Burundi, le Kenya, le Rwanda, la Tanzanie et l'Ouganda. Elle a une base juridique solide et grâce à l'entrée récente du Burundi et du Rwanda, la communauté supervise le sous bassin-versant de la fleuve Kagera du bassin du Nil.

Le protocole CEA pour l'établissement de la LVBC tient aussi comme mandat la gestion de ressources en eau du bassin et la mise en œuvre d'activités liées au développement. Un tel mandant aborde techniquement les interventions prévues dans le cadre coopératif du bassin fluvial de Kagera.

Options de coopération au bassin fluvial de Kagera

Après avoir considéré les liens et les plans possibles d'opération entre ces organisations, le consultant a développé quatre (4) options possibles par lesquelles le statut juridique du cadre permanent proposé pour la coopération transfrontalière au bassin du Kagera pourrait être structuré.

Option 1: Cadre coopératif du bassin du Kagera au sein de l'IBN/NELSAP – Cadre coopératif NBC

Cette option implique la négociation d'un accord, un protocole ou un traité par les quatre pays riverains du bassin fluvial de Kagera sous l'égide du mécanisme transitionnel de l'IBN ou de son successeur la NBC, sous l'accord du cadre coopératif du bassin du Nil. Comme il est mentionné ci-dessus, les articles 31 et 32 du cadre coopératif préliminaire du bassin du Nil reconnaissent l'importance et la nécessité même d'utiliser les organisations ou les plans du sous-bassin.

Par accord, protocole ou traité fait sous les articles 31 et 32 de l'accord préliminaire du cadre coopératif du bassin du Nil, le projet de gestion intégré de ressources en eau de Kagera peut être transformé en une institution de l'IBN/NBC au statut social et juridique, qui pratique par l'intermédiaire de la structure institutionnelle de NBC.

L'inconvénient principal de cette option c'est qu'elle dépend de la finalisation et la ratification de l'accord préliminaire du cadre coopératif du bassin du Nil, un processus qui pourrait prendre des années à se réaliser. Étant donné les différences sous-jacentes entre les pays riverains en amont et en aval, causées par les traités précoloniaux du Nil qui ont donné la préférence aux intérêts de l'Égypte et le Soudan; et l'incertitude du statut juridique du cadre coopératif du bassin du Nil, cette option ne fournit pas la certitude juridique requise pour le cadre permanent proposé vers la coopération transfrontalière dans le bassin fluvial de Kagera.

Option 2: Cadre Coopératif du bassin de Kagera au sein du protocole LVBC de la CEA

Le traité de la CEA et le protocole de la LVBC fournissent un cadre juridique permanent pour la coopération régionale pour toute la région du bassin du lac Victoria, comprenant le bassin fluvial de Kagera. La LVBC,

sous l'égide du protocole LVBC et du projet de loi pour le LVBC, aura le statut social et juridique requis en tant qu'institution de la CEA, avec le mandat pour la coordination, la régulation et la supervision de tous les projets et les activités de gestion et de développement dans le bassin du lac Victoria.

Cette option implique l'utilisation du protocole de la LVBC, le protocole de la CEA sur la gestion de l'environnement et les ressources naturelles, le traité de la CEA et d'autres instruments juridiques de la CEA. Dans la mesure où le protocole de la LVBC et d'autres protocoles et instruments juridiques de la CEA sont déjà établis, cette option n'exigerait ni la négociation ni la ratification d'un accord, protocole ou traité à part en faveur du cadre permanent proposé pour la coopération transfrontalière au bassin fluvial de Kagera. Ceci impliquerait plutôt le transfert de l'ancien bureau, des ressources et des biens du projet KBO à la LVBC, pour qu'ils soient gérés conformément au protocole de la LVBC et aux autres instruments juridiques de la CEA, avec aucune ou très peu de participation directe de l'IBN.

Option 3: Cadre coopératif du bassin de Kagera sous l'IBN / NBC – partenariat de coopération de la CEA

La troisième option juridique est de rendre opérationnel et de mettre en œuvre un protocole d'accord entre l'IBN et la CEA. Ceci implique la négociation d'un accord sous lequel le cadre permanent proposé de coopération transfrontalière est basé, à la fois, sur le cadre coopératif du bassin du Nil et sur le cadre juridique permanent existant sous le traité de la CEA, le protocole de la LVBC et d'autres protocoles et instruments juridiques de la CEA.

Sous cette option, un accord peut être négocié pour fournir des liens efficaces entre l'IBN et le NELSAP d'une part, et la CEA et la LVBC d'autre part, en mettant en œuvre l'article VI du protocole d'accord de l'IBN/CEA. Un cadre coopératif du bassin fluvial de Kagera sous la LVBC et la CEA, mais financé et dirigé par à la fois par l'IBN et la CEA, peut être formulé ; ce qui établit un partenariat de coopération permanent entre l'IBN et la CEA.

Option 4: Établir une institution autonome ou raviver la KBO

La quatrième option juridique serait d'établir une nouvelle institution ou de raviver la KBO en passant par la négociation et la ratification d'un nouvel accord, protocole et traité spécifiques au bassin fluvial de Kagera, en dehors du cadre coopératif du bassin du Nil et du traité de la CEA. Comme il est déjà mentionné ci-dessus, il est peu probable que cette option ait le soutien des quatre pays du bassin fluvial de Kagera puisque les termes de dissolution de la KBO ont envisagé le transfert des projets et des activités de la KBO soit à l'IBN ou à la CEA.

Recommandations

L'option 3 est ce qui est recommandé par le consultant; elle est ainsi recommandée pour adoption et mise en œuvre. Le consultant recommande qu'une cellule pour la gestion du bassin de Kagera ('*Kagera Basin Management Unit*' – *KBMU*) soit formée comme une section de la LVBC. De plus, que des cellules pareilles soient établies dans les deux autres bassins transfrontaliers du lac

Victoria (Sio-Malaba-Malakisi and Mara).

La KBMU travaillera étroitement avec les organisations nationales, directement et aussi par l'intermédiaire de points focaux déjà établis de la LVBC. Pour être efficace, il est recommandé que les fonctions de la KBMU soient centrées sur la gestion de ressources en eau – la planification, le suivi, l'évaluation de l'impact sur l'environnement et les petits projets ayant rapport aux ressources en eau. L'organisation va aussi favoriser des plus grands projets d'investissement. L'organisation proposée devrait être maigre et le travail sur le terrain sera effectué par l'intermédiaire des organisations publiques ou du secteur privé.

Renforcement de capacités; sensibilisation et participation de parties prenantes ; et les questions d'intégration de genres

Les consultations sur le terrain ont montré qu'il y a un défi principal de manque de capacité technique de la part des institutions GRE et des acteurs clés nécessaire pour planifier, mettre en œuvre et suivre la gestion de ressources en eau. Ceci est empiré par l'absence de cadres politique et institutionnel adéquats, et donc la nécessité de développer un plan de renforcement de capacités.

L'amélioration de la participation de parties prenantes est identifiée comme étant indispensable pour le développement intégré du bassin du Kagera. Des parties prenantes sont identifiées afin d'inclure la participation sectorielle d'entités et d'utilités organisées – des autorités d'alimentation d'eau, l'industrie, l'agriculture, l'élevage, le tourisme, l'exploitation minière et l'hydroélectricité – ainsi que les organisations au niveau local représentant des groupes communautaires et le secteur privé. Les entités et les utilités au niveau sectoriel sont typiquement impliquées au niveau national – comprenant des gouvernements, des ministères, des agences gouvernementales et des organisations non-gouvernementales. Les organisations au niveau local participent à la décision aux niveaux du bassin et du sous-bassin, et impliquent également des groupes d'intérêt spécial, des femmes, des agriculteurs, des familles, des associations bénéficiaires, des groupes d'agriculteurs, des communautés locales et le secteur privé. Une autre catégorie d'acteurs clés renferme les organisations, projets et programmes multilatéraux ainsi que des organismes donateurs.

La participation de parties prenantes est importante parce que l'immensité de tâches dans la gestion intégrée de ressources en eau transfrontalières exige une plus grande implication au delà des capacités actuelles des pays riverains. La pauvreté et les ressources limitées entravent la réalisation des objectifs de la gestion intégrée transfrontalière de ressources en eau. La participation de parties prenantes est nécessaire pour la mobilisation de ressources et le développement de partenariats efficaces dans la gestion et la planification de ressources en eau pour tous usages – l'eau potable, l'assainissement, l'agriculture, l'irrigation, l'hydroélectricité, les industries, la navigation ainsi que la protection de l'environnement.

Le plan stratégique pour améliorer la participation de parties prenantes devrait

se concentrer sur les actions suivantes:

- 1 Stimuler et renforcer les capacités des organisations de la société civile, des ONG, des organisations communautaires et du secteur privé pour les permettre de participer à la planification et la mise en œuvre d'activités de gestion de ressources en eau au sein du bassin fluvial de Kagera.
- 2 Organiser des formations et des informations ciblées afin de créer une base de données sur les capacités d'OSC, ONG et OBC clés et le secteur privé au sein du bassin de Kagera.
- 3 Renforcer les capacités opérationnelles de gouvernements locaux (en tant qu'acteurs clés) dans la planification et le suivi efficace de la mise en œuvre de la gestion transfrontalière des ressources en eau.

En outre, il est proposé qu'une stratégie et un plan d'intégration de genre soit soigneusement exécuté afin de permettre la participation de femmes et d'hommes locaux. Une attention particulière doit être accordée aux femmes étant donné leur position défavorisée par rapport aux hommes. Il est reconnu qu'au fait, les cadres politiques pour l'intégration de genre existent dans tous les quatre pays riverains. Cependant, ces cadres doivent être suffisamment étendu pour aborder la gestion transfrontalière de ressources en eau, vue la pauvreté dans le bassin et le besoin d'atténuer la dégradation de l'environnement résultant de l'utilisation exceptionnelle de ressources du bassin.

Il est recommandé que la stratégie et le plan d'intégration de genre aborde spécifiquement les questions suivantes:

- 1 Le développement d'un environnement favorable et de la capacité technique pour l'intégration de genre
- 2 L'inculcation de valeurs et d'attitudes positives parmi les femmes pour qu'elles reconnaissent leur potentiel complet à participer dans les efforts délibérés vers la gestion et le développement intégrés de ressources en eau transfrontalières.
- 3 L'avancement et la réconciliation du triple objectifs de l'équité sociale et de la participation (par et entre les hommes et les femmes ainsi que parmi des différents groupes dans le bassin) vers la durabilité de l'environnement, l'efficacité économique et l'éradication de la pauvreté. Il Est également lié à cela, la nécessité de promouvoir l'égalité de possession de terre et l'utilisation de ressources naturelles pour promouvoir l'équité sociale et économique.

En plus des stratégies visant à améliorer la participation de parties prenantes et l'intégration de genres, il est proposé que le renforcement des capacités soit exécuté délibérément afin de promouvoir le développement institutionnel, en passant par la provision de connaissances et de compétences

appropriées au personnel et aux institutions en charge de la gestion de ressources en eau. Ceci vise à améliorer la performance et à encourager des services efficaces et de qualité, conformément aux objectifs généraux du cadre coopératif du bassin fluvial de Kagera, des priorités nationales et régionales.

Le plan de renforcement de capacités cible des acteurs clés aux niveaux – national, du bassin-versant, local, du gouvernement et de la communauté ainsi que les ONG, les instituts de formation et de recherche ayant rapport à la GIRE dans le bassin-versant.

Le plan proposé de renforcement de capacités comporte cinq mesures stratégiques d'intervention, à savoir:

La promotion de la sensibilisation fonctionnelle sur la GIRE afin d'améliorer les connaissances et l'appréciation communautaires de la GIRE et sa contribution au développement socio-économique ; le renforcement des capacités des institutions clés aux niveaux national et local afin de planifier, de gérer et de développer de façon durable les ressources en eau partagées de Kagera ; soutenir et promouvoir la collaboration avec les institutions éducationnelles, de recherche et de formation ayant rapport au bassin-versant de Kagera dans le but de renforcer leurs compétences/connaissances et ressources dans la provision de la formation continue et de soutien technique requis pour la gestion durable et le développement de ressources en eau de la fleuve de Kagera.

Les autres mesures d'intervention comprennent : le renforcement des capacités et la promotion de la collaboration avec les ONG et les OBC pertinentes et le secteur privé comme étant les partenaires clés dans la mobilisation et la livraison de services en eau aux communautés locale ; la promotion et le soutien de la collecte, la gestion et le partage de données concernant la gestion de ressources en eau dans le but de soutenir les processus de planification et de décision dans le bassin-versant de Kagera.

Structure du rapport

Ce rapport est divisé en deux volumes :

Volume 1: Rapport principal et annexes (ce rapport)

Volume 2: Accord préliminaire du cadre coopératif et l'organisation de la KBMU

1 Introduction

1.1 General

Throughout history, secure access to water has been essential to socioeconomic development and the stability of cultures and civilisations. Agriculture has depended on fortuitous combinations of good soils and predictable water supplies. Dependable sources of abundant water played a prominent role in the industrialisation of Europe and North America, while lately the realisation of development potential among developing nations and the sustenance of the economic goals of the industrialised ones are closely tied in with the availability of fresh water. But given projections of dwindling resource availability, an international consensus has been reached that efficient and sustainable use of water is required to achieve those goals.

At the United Nations Conference on Water in the Mar del Plata (1977), the concept of Integrated Water Resources Management (IWRM) was thrust onto the global political agenda as a mechanism for incorporating the multiple competing uses of water resources. Defined as ‘... a process which promotes the coordinated development and management of water, land, and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems’ (GWP, 2005), IWRM has taken centre stage in finding solutions to global water problems.

Through efforts such as the International Conference on Water and Environment in Dublin (1992); the Second World Water Forum, the Hague (2000); the International Conference on Freshwater, Bonn (2001); the World Summit on Sustainable Development, Johannesburg (2002) and the Third World Water Forum, Kyoto (2003), recommendations have been developed for action at the local, national, and international levels, based on the following four guiding principles:

- Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.
- Water development and management should be based on a participatory approach, involving users, planners and policymakers at all levels.

- Women play a central part in the provision, management and safeguarding of water.
- Water has an economic value in all its competing uses and should be recognised as an economic good as well as a social good.

The Nile River basin above stretches from Burundi just south of the equator to Egypt at the Mediterranean Sea.

As illustrated in Figure 1.1 below, the elements upon which IWRM is based have been articulated as: an enabling environment; management instruments; and institutional roles.

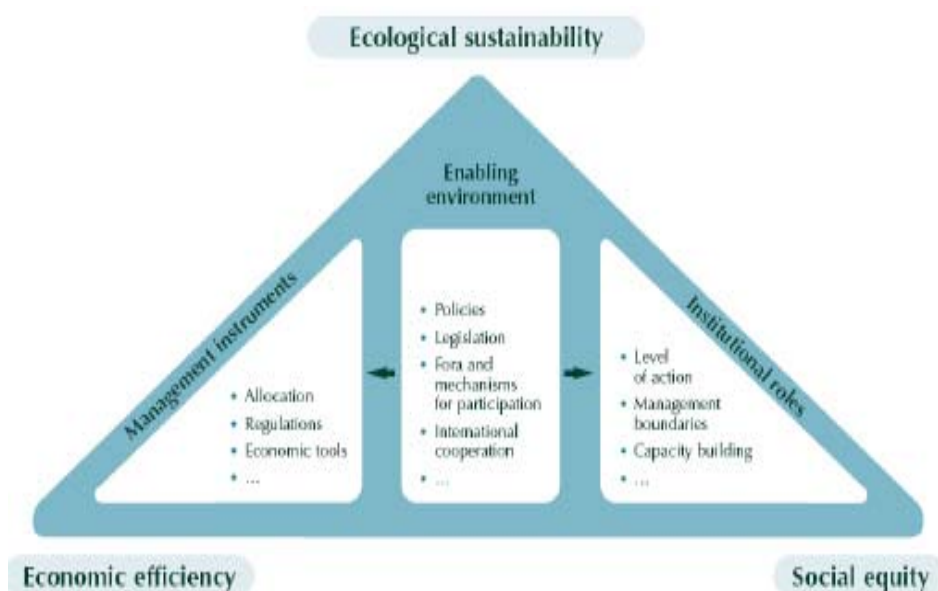


Figure 1.1: Elements of integrated water resources management (IWRM)

Following from this, efforts are currently underway in different parts of the world to reach agreements on how to put these recommendations into practice.

1.2 The Kagera Transboundary Integrated Water Resources Management and Development Project

It is against this background that the Kagera Transboundary Integrated Water Resources Management and Development project was conceived. The overarching goal was to develop tools and permanent cooperation mechanisms for the joint and sustainable management of the water resources in the Kagera River Basin in order to prepare for sustainable development-oriented investments to improve the living conditions of the people and to protect the environment.

One of the two components of this project is the Development of a Kagera River Basin Transboundary Cooperative Framework and Management Strategy in the four Riparian Countries of Burundi, Rwanda, Tanzania and Uganda, which

COWI Uganda (the Consultant) was commissioned to carry out.

This report, which presents an assessment of the policy, legal and institutional frameworks for integrated water resources management and development together with recommendations for the joint planning, development and management of the shared water resources, is prepared by the Consultant in accordance with the Terms of Reference (ToR).

1.3 Objectives of the Consultancy

According to the ToR, the primary objective of the consultancy was to ‘assess the relevant policy, legal and institutional framework of each country as background for developing a common institutional framework for transboundary cooperation in the Kagera basin’. The specific objectives were to:

- Assess the legal, policy and institutional frameworks for implementation of Kagera Transboundary Integrated Water Resources Management and Development Project;
- Review the legal, policy and institutional frameworks for integrated water resources management and development in the Kagera River Basin;
- Provide recommendations on areas for harmonisation of the legal, policy and institutional frameworks for implementation of the Kagera River Basin Project; and
- Develop and recommend a joint cooperative framework for the management and common strategy for the development of the Kagera basin (full ToR attached as Appendix 1).

1.4 The Approach and Methodology

From June 2007, the Consultant’s team was involved in a broad range of reviews, consultations, meetings, and other study activities that have collectively contributed to this Study Report.

The Kagera Transboundary Integrated Water Resources Management and Development Project (KTIWRMDP) on behalf of the Nile Basin Initiative (NBI) Secretariat (the Client) provided background material while the team collected and analysed relevant literature and research material. Documents comprising of governmental reports and steering documents from the Nile Basin Initiative / Nile Equatorial Lakes Subsidiary Action Program (NBI / NELSAP), the East African Community (EAC) and the Lake Victoria Basin Commission (LVBC); research reports; national and international NGOs reports; books; research papers and relevant excerpts from the print media, were reviewed. Details of the documents are enclosed in Appendix 2.

Interviews and consultations were conducted with relevant officials from NBI /

COWI Uganda

NELSAP, EAC and LVBC; representatives of the Funding Partners; government and elected representatives particularly at the district / local level; policy makers in the water sector and related ministries.

Academics that, in different capacities, have acted as advisors to policy makers or rendered opinions on water management issues in the basin; and members of the various stakeholder groups² have also been consulted. The list of persons met and interviewed is included in Appendix 3.

The study has addressed and concluded the key assignment tasks outlined in the terms of reference (ToR) while at the same time taking into consideration the issues raised during the Inception Workshop meeting of the Regional Project Steering Committee (RPSC) and selected representative stakeholders held in Dar es Salaam on 1 August 2007. Attention has been paid to possible ways of creating a seamless interface between national and international policy, legal and institutional environments within the relevant industry sectors. Emphasis has not only been placed on the identification of inconsistencies, overlaps and contradictions, but also on the relevance, enforcement and efficiency of the existing and required implementation arrangements vis-à-vis the transboundary nature of the shared resources.

This Report (Volume 1) and the Draft Cooperative Framework Agreement (Volume 2) are neither a finite nor conclusive document. Rather, they constitute a discussion draft of the final report which will be enriched with input from additional stakeholder consultations as well as the relevant comments and suggestions received.

1.5 Outline of the report

The report is organised into nine chapters. The second chapter discusses the geo-physical, environmental and socio-economic issues underlying the need for integrated transboundary cooperation in the development, utilisation and management of the Kagera River basin resources. Following the belief that good planning for the future is founded on a thorough understanding of the past, Chapter three reviews the history and evolution of cooperation in water resources management in the Nile basin and its Kagera sub-catchment.

A review of the pertinent principles of international water law, and their necessary conditions, on the basis of which a Kagera River Basin Cooperative Framework can be formulated follows in Chapter four. Chapters five and six examine the influence the standards set by international water law have had on

² The four stakeholder groups identified were: government institutions comprising the line ministries which prepare policies and guidelines affecting the management of transboundary water resources; professional groups responsible for detailed planning of water resource development; facilitators, including foreign consultancy firms and external support agencies active in the region, either working through, in collaboration with, or directly with national institutions in the region, and donors active in the sector; potential project beneficiaries essentially the water users.

current cooperative efforts on the Nile, and its Lake Victoria sub-basin, and on three other international watercourses. Chapter six's detailed case studies of the three international watercourses are used to draw out critical determinants of success in establishing shared resource institutions.

A situational analysis of each of the Kagera riparian countries' policy legal and institutional environments, within the context of water resources management, then follows in chapter seven with the aim of identifying weaknesses, gaps, overlaps, conflicts and areas for streamlining, strengthening and harmonization. Chapter eight discusses the available options for a permanent institution for the management of the Kagera basin resources. Chapter nine then details the implementation strategy for the best available option.

Chapter ten details out the *Plan and Strategy for Stakeholder Participation*: In this chapter, a key stakeholder inventory and analysis is provided together with recommended tasks and activities for enhancing stakeholder participation. Chapter eleven particularly addresses itself to gender, providing an overview of Challenges to Gender Equality within the Kagera basin, existing Gender Mainstreaming Policy Framework within the riparian countries together with the proposed Gender Mainstreaming Plan for the Kagera Transboundary Integrated Water Resource Management project.

Chapter twelve concentrates on looking at Capacity Building necessary in the basin. This chapter attempts to highlight capacity building required based on the policy, legal, socioeconomic and institutional recommendations made in the report. It provides recommendations on what should constitute the Capacity Building Strategy and Plan and the attendant implementation Strategies and; Monitoring and Evaluation Strategy

The second volume of this report gives details of the proposed management strategy together with the Draft Cooperative Framework Agreement as the instrument of its implementation.

2 Overview of the Kagera River Basin

2.1 Introduction

Located within the Great Lakes Region of Africa, the Kagera River Basin covers an area between Lakes Victoria, Tanganyika and Kivu. The river basin lies between 00 45' and 30 35' south latitude and 290 15' and 300 51' longitude east (Figure 2.1 below).

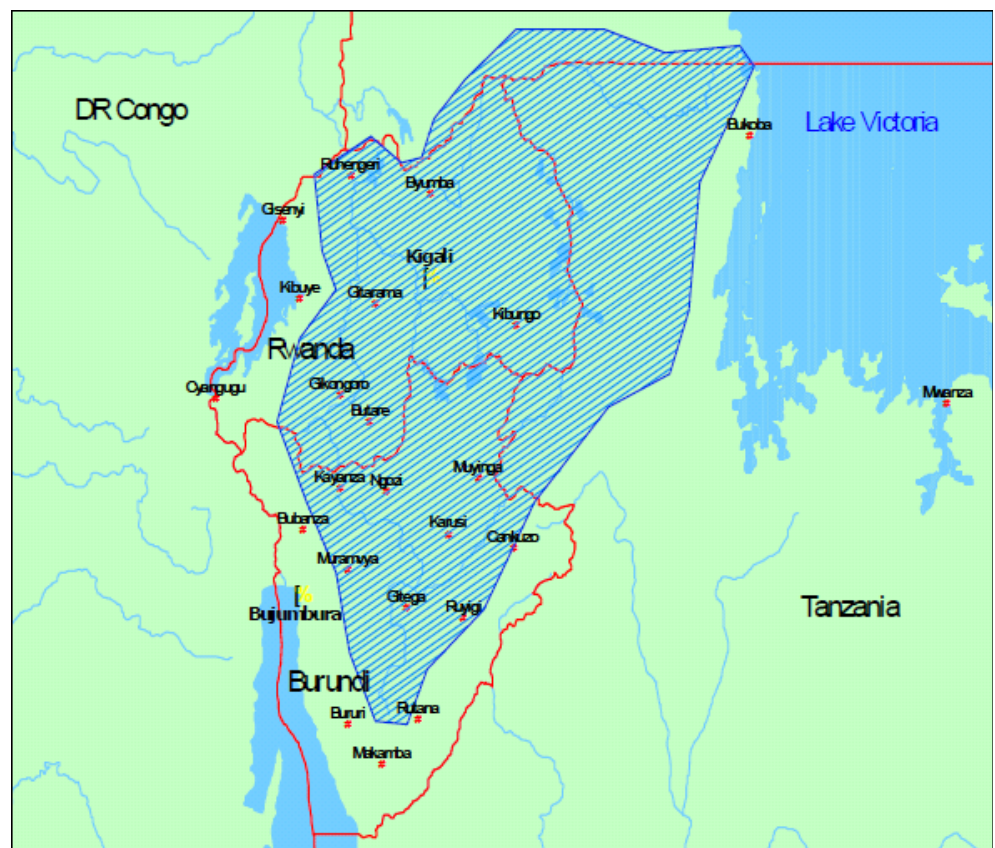


Figure 2.1: The Kagera River Basin

The Kagera River drains a basin area of 59,800 km² distributed among the countries of Burundi (22%), Rwanda (33%), Tanzania (35%) and Uganda (10%). The watershed occupies two major topographical zones namely the

West Rift Scarp and the Lake Victoria Basin.

The West Rift Scarp zone encompasses the terrain on the eastern side of the West Rift that was involved in the up-warping and associated volcanism during the development of the rift. It rises to elevations of 2,600 m above sea level (masl) in Burundi and 3,000 masl in Rwanda both located on the Congo-Nile Divide that forms the western boundary of the Kagera Basin. The highest land in the basin is in northern Rwanda where volcanic activities associated with the rift faulting produced steep sided volcanic cones rising to 1,500 masl or more and the scarp uplands to elevations above 4,000 masl. The highlands fall away to the East into the swampy lowlands of the Nyabarongo, Ruvubu and Kagera valleys where the altitude is about 1,300 masl (Prioul and Sirven, 1981).

In the Lake Victoria Basin, landforms largely reflect the lithologic environment. The Bukoba sandstone form a number of broad round topped ridges separated by long valleys that trend northerly to their outlets in the Kagera river valley. Summit levels range between 1,370 and 2,625 masl, with the high altitudes occurring in the south. To the West of the Bukoba sandstone terrain, the general northerly trend of the topography is expressed in the broad, straight, rather swamp valleys of the Mwisu River. Summit levels are rather low ranging from 1,220 masl in north to a maximum of about 1,530 masl in the south.

The soil parent materials range from extensive schist, sandstone, quartzite or granite and gneissic formations; to intrusive basic rocks and volcanic materials in the highlands; to alluvial and colluvial materials in the marshes and wetlands. The main soil types are consequently Ferralsols (red soils), Acrisols and Luvisols (sandy loam to clay loam soils), Gleysols and Planosols (clay soils), Andosols (volcanic soils) (FAO/ISRIC, 2006). Most of these soils are highly weathered and leached resulting in poor inherent fertility.

The basin vegetation includes a complex of forest and woodland, savannah shrub and grasslands and wetlands, with the majority of the land used for agriculture by farmers and herders. The diverse ecosystems and convergence of lowland (mainly western Guinea-Congolian) and highland (eastern afro-montane) species, provide an array of habitats for multiple species of high global significance. This includes remaining species of mega-fauna in protected areas (and habitats) such as the Akagera National Park, Lake Mburo and the Burigi Game Reserve, as well as the unique tropical biodiversity of the groundwater forests (Minziro, Munene and Rwasina Forest Reserves).

It also includes natural forests (such as Gishwati, Nyungwe and remnants of previously widespread riverine forest) with endemic plant and animal species (including those used in medicine, for wild foods and agroforestry, such as *Ficus toningii*, *Markhamia lutea* and *Eritrina abbyssinica*). Extensive swampy forests and grasslands, with dense tall grasses and papyrus, are important ecological components of the floodplain ecosystem of the Kagera River, providing important water flow regulation and buffering functions.

Inter-linkages between the highland and lowland ecosystems are important in terms of water regulation, also for the transfer of nutrients and sediments. These ecological processes are directly affected by human intervention which determines net losses upstream – runoff, erosion, fertility decline – and net gains downstream; where there is a fine balance between benefits in terms of productivity of aquatic and terrestrial systems and risks of sediment/nutrient loading and flooding.

The Kagera River flows north and east, forming part of Tanzania's borders with Rwanda and Uganda, before emptying into Lake Victoria and is commonly regarded as the remotest source of the White Nile (Britannica, 2003). Its main sources are in the north-eastern side of the Congo-Nile Divide in Burundi, from where the Ruvubu tributary rises, and in the western highlands of Rwanda where the headwaters of the Nyabarongo tributary are found. It stretches about 800km from its remotest source in the Virunga region in Rwanda to its outlet on the western shores of Lake Victoria in Uganda.

2.2 Climate and Hydrological Profile

2.2.1 General

An equatorial type of climate characterised by well distributed rainfall and little variation in annual temperature and humidity occurs in the region. Precipitation averages at about 1,100 mm with two peaks occurring in March-May and August-November. There is a moisture deficit during the periods December-February and June-September. The mean annual temperature over most of the region is in the range of 15°C to 28°C, while the corresponding minimum range is 8°C to 23°C. Relative humidity is high, ranging between 70% and 100% and the mean monthly evaporation rates are between 125 and 200 mm.

The runoff in the Kagera Basin responds to the rainfall. In the upper tributaries, the peak flow occurs in April which is also the peak of the major rain season. Maximum levels in the upper reach (between Kanzenze and Rusumo Falls) are attained in May and minimum levels occur between mid-August and mid-October. Throughout the Lower Reach (between Rusumo Falls to just upstream of Kagitumba) maxima occur in June and minima in January demonstrating the much longer recession period. But the absolute annual fluctuations differ greatly, especially for the Lakes of the Upper Reach, where vegetation barriers and catchment area play dominant roles.

At Lake Mugesera in the Upper Reach, papyrus barriers are sometimes breached causing great variations of levels. The maximum range of levels in the lakes is 3.5 m and average annual fluctuation is 1 m. On the Nyabarongo River the range of levels reduces downstream from a maximum of 4.10 m at Kanzenze to 1.20 m at Rusumo Falls. In the Lower Reach the annual range of levels on Lake Ihema varies from 1.0 to 1.8 m. The system is very dynamic and, owing to the growth and disappearance of vegetation, the local conditions are constantly changing. The two reaches behave in the same manner, but in the Lower

Reach the swamps and lakes are more intimately interconnected with each other and with the Kagera River.

Downstream of Rusumo, only one perennial river exists, Kagitumba, which contributes to a small extent to the Kagera flow. The Kagitumba River drains the extreme south western area of Uganda (Norconsult and Electrowatt, 1975). Near the western shore of Lake Victoria is a belt with rainfall of over 2,000 mm. The Ngono River, draining this area of heavy rainfall, contributes a highly seasonal flow to the lower Kagera (WSP Sweden et al., 2003).

The river's discharge at Rusumo has been observed to be about the same as the combined stream flows from the Nyabarongo, at Kanzenze, and the Ruvubu at Mumwendo Ferry, implying that in the upper half of the basin, rainfall and runoff are strongly related and dominant as compared to evapo-transpiration, whereas in the lower half of the Basin, the dominant hydrological factors are rainfall, evapo-transpiration and the storage in, as well as release of wetlands.

Table 2.1 below summarizes the river's discharge at various points.

2.2.2 Groundwater

No comprehensive studies have been undertaken to establish the potential of groundwater resources. Much as they have been exploited for domestic purposes in some riparian districts, too few boreholes have been drilled in the basin to give reliable information on sustainable yields.

A study by Rwanda's *Projet de Gestion National des Ressources en Eau* (PGNRE) puts the total groundwater recharge in Rwanda at $66 \text{ m}^3/\text{s}$, based on the base flow of the rivers, of which $9 \text{ m}^3/\text{s}$ is released through springs. The same study gives yields of $0\text{-}3 \text{ m}^3/\text{hr}$, $1\text{-}8 \text{ m}^3/\text{hr}$ and $2\text{-}25 \text{ m}^3/\text{hr}$ for aquifers in the granite formations in south western Rwanda; the Precambrian schists in the Karagwe – Ankole region; and the quartzites formations in the north eastern part of the basin, respectively.

Aquifers in the volcanic formation in the extreme north-western corner of the basin are characterized by high yields of up to $110 \text{ m}^3/\text{hr}$. The western lake region has a substantial unit of alluvial infill and lacustrine deposits, which produce an almost continuous aquifer. Fluvial beds within these deposits present sustainable yields in the range of 0.5 to $6 \text{ m}^3/\text{hr}$. This unit is also characterized by the presence of numerous springs. The rest of the area consists of Precambrian rocks with discontinuous aquifers (BRLi and OIEau, 2005).

Table 2.1: Summary of Kagera River Basin flows at key locations

Streamflow Station	River	Zone	Catchment area [x1000km ²]	Average monthly flow [m ³ /s]	Mean specific yield [l/s/ha]	Runoff coefficient	Minimum daily flow [m ³ /s]	Maximum daily flow [m ³ /s]	Mean yearly flow		Source of Info
									From literature [km ³ /year]	Based on mean monthly flows [km ³ /year]	
Mwaka	Nyabarongo	I	2.8	35.0	13.0		7.0	241.0	1.1	1.1	PGNRE
Gitega	Ruvuvu	I		79.0		0.0				2.5	DSS-Baseline Burundi
Kigali	Nyabarongo	II	8.9	93.0	13.0	0.0	37.0	335.0	3.6	2.9	PGNRE
Kanzenze	Nyabarongo	II	14.6	126.0	11.0	0.0	27.0	517.0	3.9	4.0	PGNRE actualised database
Muyinga	Ruvuvu	II		103.0						3.3	DSS-Baseline Burundi
Mwendo Ferry	Ruvuvu	II	12.3	121.0						3.8	Burundi LVBTDA
Rusumo Falls	Kagera	II	30.2	230.0	8.0	0.0	63.0	622.0	7.2	7.3	PGNRE
Kagitumba	Kagitumba	III	3.5	14.0	4.0		2.0	74.0		0.4	PGNRE
Nyakanyasi	Kagera	IV	48.4								no data
Ngono	Ngono	IV	3.2	22.0		0.12 - 0.15	5.0	106.0	0.7	0.7	Norconsult / Electrowatt rating curve 1970-1974
Kyaka Ferry	Kagera	IV	55.8	263.0		0.0				8.3	DSS-Baseline Tanzania
Mouth	Kagera	IV	59.8	239.0						7.5	Sutcliffe, 1999

Legend: Zone I – Congo Nile Divide Zone II – Hills and Mountain Footridges
Zone III – Swamp and Lake Terrain Zone IV – West Lake Region

Source: (BRLi, 2007).

2.2.3 Water Quality

Changes have been observed in the physical, chemical and biological properties of the water resources of the Kagera basin as a result of the intensification of human activities due to population growth. Urbanisation; deforestation; intense cultivation and animal husbandry; and overfishing are some of the factors behind the accelerated rate of delivery of nutrients and the resultant eutrophication. Increased pollution from municipal and industrial discharges and soil erosion is visible in the Akanyaru and Nyabarongo tributaries. At its entry into Lake Victoria, the Kagera is heavily laden with silt derived from eroded catchments primarily as a result of poor land use³ (Ogutu-Ohwayo, 1990; Hecky,

³ Studies put the basin's sediment yield at 21.4 ton/km²/yr and the average loss of surface soil due to erosion at 1000 ton/ km²/year. Soil losses range from 2150 ton/km²/year.

1993; Hecky et al., 1994; Hecky et al., 1996). The suspended sediment load and consequently the water turbidity are very high, notably in rainy seasons, with the highest values after rainfall events. Mining in parts of the catchment is not only leading to siltation, but also toxic and heavy metal contamination of the river (NBI, 2005).

Analyses of spring water and, to a lesser extent, borehole yield samples have revealed that groundwater quality is generally within the World Health Organization standards although bacteriological contamination was observed in 44% of the 984 spring and borehole sample sources (BRLi, 2007).

2.2.4 Potential Climatic Change Impacts

Predictions of climate change in the basin, though qualified by uncertainties over regional impacts, magnitude and rate of change, project a trend of annual and seasonal increases in temperature and precipitation; assuming rapid to very rapid economic growth by 2100, and a mix of high carbon and low carbon emitting technologies, resulting in CO₂ concentrations of between 700 ppm and 960ppm. The range on an annual basis is 4-14% by 2050 – and much larger by 2100 – for a CO₂ concentrations scenario of 700 ppm, and 11-23% by 2050 to 15-50% by 2100 for the 960 ppm scenario (SNC- Lavalin, 2007).

The analysis of potential impacts of climate change on runoff shows that the whole basin exhibits a linear relationship between temperature and runoff, and an asymmetric, non-linear relationship between precipitation and runoff. Runoff, given a +50% change in annual precipitation relative to the 1961-1990 base climate and for an increase in annual temperature from 1 to 6 degrees centigrade, is predicted to be up to 3 times the precipitation change and 1.5 for -50% precipitation change (SNC- Lavalin, 2007). One possible negative outcome from such increased runoff could be increased soil erosion.

The changes in the hydrologic system, particularly the river flows and water resources, will no doubt adversely impact farming, fishing, forestry, and many other industries that rely on weather and natural ecosystems.

2.3 Kagera River Basin Resources and their Utilisation

2.3.1 Land Resources

Land within the Kagera Basin is primarily used for agriculture, which accounts for over 75% of the productive uses of land in the basin. A study by WSP International (2003) found that the agricultural systems are characteristic of east and central Africa, notably the dry land agro-pastoral system, based on savannah grasslands rich in indigenous plant and animal species, and the intensive,

Congo-Nile divide, to 2600 ton/km²/yr in the Bugesera area (World Bank, 2005; Myanza et al, 2005, quoted by Lugomela and Sanga, 2007).

diversified cereal- and banana-based cropping systems. However, the varying ecologies provide for a range of locally-adapted cropping, livestock and fishing activities and livelihood systems that are strongly influenced by water availability and quality.

The range of farming systems and social organisation has built on local knowledge generated over its long history of domestication and resource utilisation, evolving from the prehistoric hunters and fisher folk, to sedentary agriculture based on sorghum and finger millet and, subsequently, more intensive systems to meet increasing demands of the growing human populations and their livestock.

Nonetheless, the farming system remains essentially subsistence agriculture, with low or negligible purchased inputs, high labour input and limited sale of surplus food and cash crops (banana, maize, coffee), and livestock products (meat, milk, hides, breeding stock). Limited areas are under commercial farms (sugar cane, horticulture, coffee, tea). Some of the drier areas in eastern Rwanda and the drier belt across the North West Tanzania–Uganda border were, until recently, still used for semi-nomadic pastoralism – but most pastoralists have now settled to adopt other livelihoods. More widely across the basin there is a breakdown in traditional land protocols that regulate grazing.

The farming landscapes and the socio-economic and cultural context vary widely within and among districts and countries. The land use-livelihood systems can be classified in four main types, with several sub-types according to management intensity and biological diversity:

- Livestock based systems: transhumant/free grazing, paddock/ ranch
- Mixed systems: agro-forestry, crop-livestock (tethered, zero grazing); crop-fish;
- Perennial arable/tree based systems: mainly banana and coffee, but also tea, cassava, mangoes, avocados
- Annual cropping systems – cereal based and integrated to various extents with legumes, tubers and some agroforestry species (e.g. *Grevillea*, *Cedrella* and *Calliandra*).

The livestock sector provides milk and meat to urban markets; however, many livestock products are consumed at home by farmers and herders. In mixed systems, livestock is an important source of manure, especially in densely populated areas, and cattle and small stock are a way of accumulating capital to insure the household against risk. In Rwanda and Burundi, cattle and other small stock were decimated during the genocide and wars; however, in lowland provinces, cattle herds have quickly rebuilt, as large herds were brought back by ‘old’ refugees from Tanzania and Uganda. Small stock numbers have not re-

built so fast but are an asset that is more widely owned, especially by women.

The traditional banana-based cropping system, still present in parts of Tanzania, has three typical land use types in a concentric pattern, with decreasing management intensity and hence fertility with distance from the central homestead: i) the intensive perennial banana – coffee home garden (kibanja), with multi-layers and mixed crop species and varieties (beans, maize, fruit trees) where nutrient cycling is concentrated; ii) small fields of mixed annual crops (kikamba) with lower inputs, poor soil fertility and risk of vermin damage; and iii) extensive annual crops (omusiri), such as yams and Bambara groundnut, with long fallow periods and uncontrolled burning on low quality grasslands on steep, shallow or sandy soils (rweya), these are grazed, cut for mulch in the kibanja and for house thatch and provide useful trees (e.g. *Maesopsis eminii*, *Ficus* spp, *Markhamia platcalyx*, oil palm and castor).

The resulting human-induced transfer of nutrients, in addition to variations in soil, land form and hydrology has led to large differences in soil fertility across the basin. Traditional land use systems sustained high productivity with low external resource inputs relying on rotations, fallows, shifting cultivation and transhumance / nomadic livelihoods. Increasing pressures on land resources are leading to changing land use systems, overexploitation of resources and greater reliance on poorer lands for crop and livestock production. In turn, this exacerbates poverty and vulnerability to environmental and health shocks, as well as inability to satisfy basic requirements – food, shelter clothing and access to health services, education and safe drinking water.

2.3.2 Forestry Resources

Natural forests are distributed unevenly in the Basin. They are mainly concentrated in the upper part of the Basin and less dominant in the lower part where forest cover is limited to relatively small artificial plantations and wind break strips surrounding agricultural fields.

The Rwandan part of the Basin mainly consists of unevenly distributed savannas and mixed forests occupying an area of about 90,000 hectares. It is further observed that the hilly northern and western catchments, where the drainage network originates, are facing degradation due to cultivation on very steep slopes.

The Burundian part of the Basin is dominated by savannas and pockets of forests. Important protected areas are; the Ruvubu National Park (50,000 ha); and the Kibira National Park (40,000 ha). The vegetation types in the forests are determined by altitude. The Bugesera Depression has a lower population density and hence has not been extensively degraded.

The Kagera region in Tanzania is fairly well endowed with natural forests covering 51.5% of the land area. However, Mwanza region has lost most of its tree cover and now only has about 130 km². Afforestation is being encouraged, and a four-pronged policy approach to forest cover increase is

being pursued in Tanzania. The policy areas are: forest-land management; forest-based industries and products; ecosystem conservation and management; and institutions and human resources – all for the benefit of present and future generations.

In Uganda, forest reserves cover an estimated 1.5 million ha, representing about 7% of the country. They comprise 732,000 ha of high tropical forests, 775,000 ha of savannah forests and 25,000 ha of plantation forests. Forestry contributes to about 3% of the GDP and provides for more than 95% of the country's timber requirements. About 400,000 ha of forest are available for industrial use. The major potential exports include veneer; saw wood and furniture.

2.3.3 Mineral Resources

The mining industry in the basin is a major land use activity. Artisanal exploitation of the ores exists in the Burundi and relates to alluvial gold, cassiterite, columbo-tantalite and Wolframite. The activities have a significant negative impact on the environment because they cause pollution of the rivers by solid loads and an excessive silting of bottoms of valleys, making them unsuitable for agriculture.

Similarly in Rwanda, cassiterite, coltan, wolfram and colombo tantalum and other valuable materials such as sand, gravel and stones are obtained in various parts of the basin. Mining sand and stones is, however, not well regulated and there are concerns for the destruction of other natural resources particularly wetlands and fragile hillsides. Mining activities support significant proportions of livelihoods and local economies but there are concerns that current mining activities in Rwanda are not sustainable. The Government of Rwanda has intervened by outlawing mining in some areas, but appropriate mechanisms are needed to ensure a delicate balance between environment and livelihoods.

Mining in Kabarole is a major cause of pollution in the Nwogere, a tributary of the River Kanyaru. The storage of mine waste dumps, mercury contamination resulting from artisanal mining activities and the continued pumping of saline wastewater from mines and quarries poses a major pollution threat the swamp and lake region of the basin.

2.3.4 Wildlife Resources and Tourism

Biological diversity

The Lake Victoria Basin is a unique ecosystem sustaining a rich biological diversity of both flora and fauna. It features an ecological network with a stable pattern of natural processes. The sub catchments within Lake Victoria Basin contain various interacting micro-ecosystems that play a major role in maintaining and conserving biodiversity at the national and basin level.

The Kagera River Basin, in Rwanda and Burundi, is a typical example of these

sub-ecosystems. It is here that the Akagera National Park, a nature reserve of high biological stature, is located. The basin has also been recognized to contain major wetland areas, which provide a habitat for various birds and animals. Sections of the Basin also enjoy international recognition and special protection under the United Nations Education Social Cultural Organization. Biodiversity in the basin consisted of about 500 species of fish prior to the introduction of the Nile Perch; approximately 200 bird species; a number of wild animal species and over 250 plant species.

Nature reserves and protected areas

The basin is endowed with a variety of wild life and sceneries with huge potential for nature and ecotourism. Sites for tourism include national parks, game reserves, wetlands, forests and unique physical features. The Basin has some of the best wild life areas in the world. The wider Lake Victoria Basin has been designated as an Important Bird Area (IBA) with 70 IBAs. Endangered bird species in the Lake Basin include the vulnerable Papyrus Yellow Warbler *Chrolopetta gracillostris* and Papyrus Gonolek *Laniarius mufumbiri*.

Nature reserves in the Kagera basin suffer encroachment from agricultural development, livestock grazing and human settlements, partly resulting from high population growth and increasing levels of poverty. Subsistence hunting is prevalent in some places, leading to poaching and devastating bush fires.

In Rwanda there are three protected areas namely: Nyungwe Forest National Park in the West; Akagera National Park in the East; and the Volcano National Park in the north. The three protected areas constitute critical watersheds. These ecosystems provide unique physico-geographical characteristics that support a variety of different life forms spread over different altitudinal ranges.

In addition to the economic returns from tourism, these Parks provide habitat to some of the rarest species, making them internationally important biodiversity sites. The Parks in Rwanda are a major tourist attraction, contributing substantially to the economy through tourism revenues. There is, however, the pressure of encroachment on the park areas. For example, the Akagera National Park area was reduced from 331,000 ha in 1956 to 255,000 ha in 1992 and more was lost for refugee resettlement after the 1994 civil strife leaving only about 90,000 ha of the original park area.

However, the Kagera Basin area is yet to fully develop into a tourist destination. Potential for navigation of the river has been deemed as low and therefore barely developed. Significant investment is also required to put in place utilities and facilities in the tourism industry such as increased hotel accommodation, providing travel and tour operations, professional tour guiding, tourism promotion, and capacity building and linkages with supportive institutions. Eco-tourism is an important income earner in the hospitality industry. The element of environmental conservation, community development and leisure travel is a potential area for the basin's tourism development, which should be explored and exploited.

2.3.5 Wetlands

Wetlands fringe most of the Lake and river systems found in the Lake Victoria Basin and are grouped mainly into two categories - Upland and Floodplain type wetlands. Upland Wetlands are mostly in the western mountainous areas perched in valleys along the tributaries of rivers, which originate from Rwanda and Burundi. Most of them have been converted to agricultural use for production of Irish potatoes and sweet potatoes, maize, beans, peas, tomatoes, cabbages, tea and sugar cane on a large scale.

On the other hand, flood plain wetlands are extensive in the south at the border between Rwanda and Burundi, and along the Uganda-Tanzania border. Pressure on flood plain wetlands by resident communities and large-scale developers is evident and is set to increase.

Plants and animals commonly found in wetlands are sedges, *Cyperus* spp, bulrush (*Typha* spp), date palm (*Phoenix* spp), grasses (*Pennisetum* spp., and *Hyperperhenia* spp), reeds (*Phragmites* spp), Hippopotamus, Sitatunga (*Tragelaphus spekel*) Nile crocodile (*Crocodyles niloticus*), wild boars (*Potamochoerus porcus*), snakes, fish species, amphibians and birds.

In Tanzania, there are a total of 422,000 hectares of wetlands occurring in 28 distinct sub-Basins of the Tanzanian part of the Lake Victoria Basin. Of these, 57,000 hectares is permanent swamp or (14%); seasonal swamp occupies 73% whilst three swamps occupy 8%.

Wetlands in Uganda cover 13% of total surface area and have been categorised as swamp (8,392km²), swamp forest (365km²) and zones with impeded drainage (20,392km²). They include areas of seasonally flooded grasslands and swamp forest (Sango Bay), permanently flooded papyrus, grass swamp and upland bog. Most wetlands in the country fall into two broad categories, namely those associated with lakes (lacustrine) and those that lie along rivers. These include wetlands that border the bays of Berkeley at the Kenya/Uganda border, Macdonald, Hannington and Napoleon Gulf; as well as the bays of Murchison, Waiya and Bunjako. The islands of Kalangala also have extensive fringes of wetlands. Lacustrine wetlands are often permanently flooded.

2.3.6 Fisheries

In the upstream catchment areas in Burundi and Rwanda, lakes with proven potential for commercial fisheries include lakes of southern Rwihinda and Cohoha, Rweru, Kazingiri, Gaharwa, Kirumbi and Bugesera located in the southern floodplain, Ihema, Kivumba and Rwanyakizinga located in Akagera National Park, and Bulera and Ruhondo found in Ruhengeri close to the border with Uganda. Riverine fish is being exploited for subsistence purposes. The fisheries of Lakes Rweru, Ihema and Muhazi can be commercially redeveloped as these lakes had commercial fisheries that collapsed during the civil strife in 1994.

2.4 Demographic and Socio-economic Characteristics

The basin population in 2006 was estimated to be 16.5 million people; and expected grow to 32.8 million by 2030 based on average population growth rates for the period 1999-2015 of 3% per year, see Table 2.2 below

Table 2.2: Population Distribution in the Kagera River Basin

Countries sharing the Kagera Basin	Land area km ²	% Land Area of Basin	Basin Share of National Population in millions (of total)	Basin Population Projections, in millions (growth rate)		Population Density in Kagera Basin (per km ²)	
			In 2002	in 2015	in 2030	in 2002	in 2015
Uganda	5,980	10	0.8 (of 24.4)	1.3 (3.9%)	3.3 (3.9%)	135	221
Tanzania	20,210	34	1.2 (of 34.4)	1.8 (3.1%)	2.9 (3.1%)	61 131**	- 220
Rwanda	20,550	34	7.6 (of 8.6)	10.7 (2.6%)	15.7 (2.6%)	372 <500**	519
Burundi	13,060	22	3.3 (of 6.6)	4.7 (2.9%)	7.3 (2.9%)	250	362
Totals	59,800	100	12.9	18.5	29.2	216	488

** Effective population density (excluding protected areas, etc.)

In Burundi, 46% are under 15 years of age. The river basin covers most of the surface area of Rwanda (80%) and a large share in Burundi (50%) - both among the poorest and most densely populated countries in the world with over 500 inhabitants per km² in the cultivable lands.

In Rwanda and Burundi over 90% of the populations are engaged in subsistence farming, with extremely small farms and fragmented plots (the mean area is 0.6 ha; only 2% of holdings exceed 3 ha.). In Uganda and Tanzania, some 80% of the population is rural and again the majority engaged in small-scale agriculture. Due to rural-urban migration, urban growth is significant, averaging over 4% growth/year in the largest cities, Kigali (650,000 persons), Bukoba (180,000 persons) and Mbarara (69,360 persons).

The majority of the rural population in the basin is very poor (few tools, poor housing, small land area, little disposable income); they are unable to invest in improved resources management or education (see Table 2.3).

They have limited access to improved technologies, information and services (research, credit, reliable markets, inputs and dispensaries). In upland areas, water is scarce both for domestic use and livestock as wells and watering points are mostly in lowland areas, or is sold from kiosks at prices most people cannot afford. In large areas of the basin, fuel wood is also in in-

creasing short supply and alternatives such as paraffin or electricity are only accessible in the few urban centres.

Labour is a major constraint, especially due to the severe impacts of HIV/AIDS and malaria, which particularly affects women. Sickness also diverts limited incomes from investment in land for care and medicines. Markets are limited to certain commodities and prices for most agricultural products are extremely low and unreliable, often affected by urban pro-policies and exploitation by 'middle-men'.

Insecurity of tenure restrains investment in the land and discourages youth from entering into agriculture due to delays in inheriting land and low potential incomes. As a result of HIV/AIDs and rural exodus, there is a serious generational loss in the transfer of local/ indigenous knowledge (traditional medicines, use/management of local species/ varieties, soil and water management, bio-control of pests and diseases, etc.). Many households are headed by women, and as a result of the war, in Rwanda women now comprise 60% of the total population (WSP International, 2003).

Poverty in Burundi is particularly severe, where the economy has stagnated as a result of the civil war and insecurity (agriculture provides 95% of food needs and 80% of export income - largely tea and coffee; subsistence food crops occupy 90% of cultivated land). Refugee movements in recent decades have increased pressures on resources in the basin, increasing actual and potential conflicts between interest groups and countries and pressures on protected areas. Most notably, two-thirds of the Akagera National Park was de-gazetted in response to population pressure after the civil strife in Rwanda in 1994, for use by return refugees as smallholder arable farms. Resettlement of refugees into these new areas has created major problems as the land resources are very fragile, settlers do not hold indigenous knowledge and wildlife in the park are endangered by reduced habitat area and poaching.

The highly variable biophysical conditions and varied land use-livelihood systems developed by different socio-economic and cultural groups, through local experiences, knowledge and exchange of germplasm and driven by needs and opportunities faced by the growing populations, has led to the conservation and development of characteristic highly adapted species (drought resistant plant species, mobile animal races) and high within-species diversity in the Kagera basin. However, this agro-ecosystems and biodiversity heritage is increasingly threatened by overexploitation of resources and resulting degradation which are influenced by the transboundary nature of the basin.

2.4.1 Economic Situation

A synopsis of the socio-economic situation in the basin has been compiled and is provided in Table 2.3 and Source: (UN, 2004; OECD, 2005; UN, 2005b; UNAIDS, 2005; UNESCO, 2005; WHO, 2005; World Bank, 2005)

Table 2.4 below. The riparian countries of the Kagera basin are among the poorest in the world. In the 2004 Human Development Report (HDR), they rank between 144 (Uganda) and 169 (Burundi), with regard to the Human Development Index measuring human welfare and development, among the 177 countries listed in the report. There are clear inequalities in the economies of the four countries, both in terms of gross domestic products and growth rates. These inequalities are a result of inequalities in natural resources endowment, different economic policies, political history and stability, and socio-economic crises in Burundi and Rwanda.

Table 2.3: Development Indicators - Socio-economic

Indicators		Uganda	Rwanda	Tanzania, U. Rep. of	Burundi
HDI rank	2003	144	159	164	169
Human development index (HDI) value	2003	0.508	0.450	0.418	0.378
Life expectancy at birth (years) (HDI)	2003a	47.3	43.9	46.0	43.6
GDP per capita (PPP US\$) (HDI)	2003	1,457 m	1,268 m	621	648 m
Adult illiteracy rate (% ages 15 and above)	2003b	31.1 p	36.0	30.6	41.1
Population living below \$1 a day (%)	1990-2003c	..	51.7	19.9	58.4
Urban population (% of total)	1975d	8.3	4.0	10.1	3.2
	2003e,d	12.3	18.5	35.4	10.0
	2015e,d	14.2	40.5	46.8	14.6
Physicians (per 100,000 people)	1990-2004f	5	2	2	5
Population with sustainable access to an improved water source (%)	1990	44	58	38	69
	2002	56	73	73	79
HIV prevalence (% ages 15-49)	2003g	4.1 [2.8 - 6.6]	5.1 [3.4 - 7.6]	8.8 [6.4 - 11.9]	6.0 [4.1 - 8.8]
Malaria cases (per 100,000 people)	2000h	46	6,510	1,207 r	48,098
Tuberculosis cases (per 100,000 people)	2003i	621	628	476	519
GDP per capita annual growth rate (%)	1975-2003	2.6 s	-0.5	0.8 s	-0.9
	1990-2003	3.9	0.7	1.0	-3.5
Terms of trade (1980=100)	2002j	..	133	..	58
Official development assistance (ODA) received (net disbursements) (as % of GDP)	1990k	15.5	11.3	27.5	23.3
	2003k	15.2	20.3	16.2	37.6
Total debt service (As % of GDP)	1990	3.4	0.8	4.2	3.7
	2003	1.3	1.3	0.9	4.9
Ratio of estimated female to male earned income	l	0.67	0.62	0.71	0.72

Notes:

- The HDI rank is determined using HDI values to the fifth decimal point.
- Data refer to national literacy estimates from censuses or surveys conducted between 2000 and 2004, unless otherwise noted. Due to differences in methodology and timeliness of underlying data, comparisons across countries and over time should be made with caution. For more details, see http://www.uis.unesco.org/ev.php?ID=4930_201&ID2=DO_TOPIC.
- Data refer to the most recent year available during the period specified.
- Because data are based on national definitions of what constitutes a city or metropolitan area, cross-country comparisons should be made with caution.
- Data refer to medium-variant projections.
- Data refer to the most recent year available during the period specified.

- g. Data refer to point and range estimates based on new estimation models developed by the Joint United Nations Programme on HIV/AIDS (UNAIDS). Range estimates are presented in square brackets. Regional aggregates refer to 2004.
- h. Data refer to malaria cases reported to the World Health Organization (WHO) and may represent only a fraction of the true number in a country.
- i. Data refer to the prevalence of all forms of tuberculosis.
- j. The ratio of the export price index to the import price index measured relative to the base year 1980. A value of more than 100 means that the price of exports has risen relative to the price of imports.
- k. ODA receipts are total net ODA flows from DAC countries as well as Czech Republic, Hungary, Iceland, Israel, Korea, Kuwait, Poland, Saudi Arabia, Slovak Republic, Turkey, United Arab Emirates, other small donors, including Estonia, Latvia and Lithuania, and concessional lending from multilateral organizations.
- l. Calculated on the basis of data in columns 9 and 10 in table 25. Estimates are based on data for the most recent year available during the period 1991-2003.
- m. Estimate based on regression.
- n. Data refer to a year between 1995 and 1999.
- o. UNICEF (United Nations Children's Fund). 2004. The State of the World's Children 2005. New York: Oxford University Press. Data refer to a year or period other than that specified, differ from the standard definition or refer to only part of a country.
- p. Estimate produced by UNESCO Institute for Statistics in July 2002.
- q. Estimates are based on outdated census or household survey information and should be interpreted with caution.
- r. Data refer to 1999.
- s. Data refer to a period shorter than that specified.

Source: (UN, 2004; OECD, 2005; UN, 2005b; UNAIDS, 2005; UNESCO, 2005; WHO, 2005; World Bank, 2005)

Table 2.4: Development Indicators - Infrastructure

Indicators (Infrastructure networks)		Uganda	Rwanda	Tanzania, U. Rep. of	Burundi
Population with sustainable access to improved sanitation (%)	1990	43	37	47	44
	2002	41	41	46	36
Population with sustainable access to an improved water source (%)	1990	44	58	38	69
	2002	56	73	73	79
Electricity consumption per capita (kilowatt-hours)	1980	28	32	41	12
	2004	61	23	83	25
Electricity Generation (million KWh)	2004	1,729	98	3,152	1,413
National Grid Electrification (%)	2004	5	1	10	1
Total Road Network ('000km) Paved ('000km)	2004	70.7	12.0	78.9	14.5
		16.3	1.0	6.8	1.0
Telephone lines ('000)					
Fixed	2003	71.6	23.2	14.9	2.4
Mobile		1,165	138.7	1,640	6.4

Source: (ITU, 2005; UN, 2005b; 2005a)

As shown in the preceding section, agriculture is the most common economic activity in the region, involving more than 75% of the population (FAO and AGL, 2005). The dependency on agriculture by such a large proportion of the population despite its limited contribution to the GDP (see Table 2.5) may be

the single most important factor in the prevalence of poverty in the basin.

Table 2.5: Trend of Agriculture's Contribution to GDP

Country	1960-70	1970-76	2003
Rwanda	81	52	42
Burundi	-	64	49
Tanzania	57	45	43
Uganda	52	55	33

Source: (Mbaziira, 2007)

What follows is an analysis of the other key socio-economic sectors. Unlike the analysis of the ecosystem related resources done in Section 2.3, the review of the sectors below is done within context of their economic potential and contribution to the socio-economies of the riparian countries. Issues related to shortcomings on levels of use and exploitation of the related resources are also highlighted, in addition to the threats to their sustainable exploitation.

Health Sector

The major human diseases commonly afflicting people in the basin have been established through the National Transboundary Diagnostic Analysis (NTDA) Reports (2006) as Malaria, HIV/AIDS and related illnesses, tuberculosis, upper respiratory infections, meningitis, pneumonia, anaemia, vector-borne diseases (malaria, schistosomiasis, trypanosomiasis), water-borne diseases (typhoid, cholera, amoebiasis). In the recent past much media publicity has been given to the avian influenza (H5N1); however, there have not been any confirmed cases in the basin.

There is a continuous threat of outbreaks of waterborne diseases in the basin. Available data shows numerous limited outbreaks of diseases caused by exposure to or consumption of poor quality water containing disease causing and transmitting pathogens.

In Burundi, as in the other riparian countries, diarrheal diseases are a major cause of mortality in infants. Bilharzias are known around the marshes and the lakes of Bugesera. Among the other widespread waterborne diseases in the basin are typhoid fever, bacterial dysentery and variety of intestinal parasites. Sedimentation and the slowness of the water run-off in channels and rivers are also factors favourable to the propagation of waterborne diseases.

Table 2.3 shows the prevalence of HIV/AIDS in each of the riparian countries, which ranges between 4.1% and 8.8% (UNAIDS, 2005; WHO, 2005). In Tanzania, the HIV/AIDS pandemic is particularly serious in the Kagera Region where it has decimated the economically active population, aged between 15 and 45, leaving behind an estimated 200,000 orphans throughout the region. Although the national HIV/AIDS indicator Survey 2003-04 (URT, 2006) indicate very low prevalence rates for Kagera (3.7%), the National AIDS Control Program Report Number 18 showed the prevalence rates to

be 20.7% for the Kagera region in 2003 (URT, 2006). Fishing communities in particular have been identified to be potentially at risk of high transmission for HIV and other sexually transmitted diseases because of higher migration (Yanda et al., 2001).

HIV/AIDS prevalence in Rwanda is high especially in Kigali City where the prevalence rate for 2003 was reported to be about 13.2%. The incidence of HIV/AIDS in Rwanda was exacerbated by the 1994 genocide during which many women and girls were raped. As a result, there has also been increasing numbers of widows and orphans that has increased vulnerability to HIV/AIDS (Furth et al., 2006).

Malaria in Rwanda is the leading cause of morbidity accounting for 41% of reported cases of sicknesses and 8% of deaths for under five-year olds (MINISANTE, 2004). In Uganda, incidences of malaria epidemics were experienced in the highland areas of Ntungamo, Kabale and Kisoro during 1992, 1994, 1997/8 and 2000/01. This is partly due to changing environmental conditions and lifestyles, malaria has in recent times surfaced amongst populations living in mountainous regions which were previously not susceptible to malaria and therefore have little or no immunity to the disease (MoH, 2001; MINECOFIN, 2002; MINISANTE, 2004).

Municipal Utility Sector

The provision of good quality drinking water to the population has become a serious issue. There are numerous challenges of water and sanitation in the major cities and towns of the basin. The main challenges in these cities and towns include:

- The water production is far below the demand production for the main cities of the basin.
- Most of the water infrastructure is old consisting of very old machineries;
- Only a small fraction of the population of about 40% is served as at 2006;
- Most of the informal settlements are not connected to piped water;
- In most of the main cities, municipalities and towns along the river, the conventional waste water treatment systems have collapsed and raw sewage is discharged into the river and
- The situation of improved and safe drinking water supply at all levels remains poor as shown by the low percentages.

In Burundi, the northern and eastern provinces have the lowest water supply coverage in the country with Kirundo at 33.19%, Cankuzo at 36.45% and Ruyigi at 31.91%. In Rwanda, only about 5% of the population is connected to piped water, and the rest depend on nature for domestic and other uses. Massive industrial use of water is very limited. Tanzania and Uganda

also have limited potable water supply coverage of between 60% and 75% in the main towns of Kampala, Entebbe, Jinja, Masaka, Mbarara, Kabale, Mwanza, Musoma and Bukoba and of between 1% and 30% in the rural areas (NBI, 2006).

The municipal utility sector accounts for a significant proportion of the total volume of effluents received by the water bodies.

Sanitation

The surface waters of the Lake Victoria Basin receive and accumulate a substantial organic pollution load as a result of human activities; a full assessment of the magnitude of this load was made during LVEMP I. Organic pollution has a profound effect on water quality in terms of its physical, chemical, biological and sanitary-hygienic characteristics.

Similarly for the Kagera, a tremendous decline the river's water quality has been observed over the last decade of sanitary/bacteriological monitoring.

Energy sector

Generally, biomass supplies over 90% of the energy requirements in the riparian countries of the Kagera Basin. Electricity and other forms of more efficient energy are yet to be sufficiently developed. As shown in Source: (UN, 2004; OECD, 2005; UN, 2005b; UNAIDS, 2005; UNESCO, 2005; WHO, 2005; World Bank, 2005)

Table 2.4, the level of electric power development in Burundi is very low. Only the inter-connected national electrical grid network serves the principal urban centres. Many small hydroelectric dams exist but they have low power, often lower than 1,000 KW. Some of them function very badly during the dry season due to insufficient water.

In Tanzania, around 90% of its energy needs are met by biomass, particularly wood-fuel. Petroleum and electricity account for 8% of energy consumption, and coal and other sources for less than 1%. The same applies for the basin population where the majority still relies on bio fuel (wood, animal waste) as their primary fuel source. A large proportion of the rural population depends on forest resources to meet the firewood needs. In addition to other forest products, the sustainability of forest resources has increasingly become questionable. In Mwanza, a study in 2000 showed that the city consumed about 438,102 m³ of firewood and charcoal with a deforestation rate of 17,777 ha (Chamshama, 2005). In Musoma there is evidence that even forest reserves, which are supposed to be protected, have been seriously deforested as evidenced by, for example, Kyanyari Forest Reserve, which is currently devoid of trees.

Within the Kagera basin in Uganda, plans are underway to generate hydroelectric power at three sites namely: Kikagati, Kisiizi and Nshungyezi on the Kagera River and its tributaries. Outside the Kagera Basin, Uganda has significant potential for hydroelectric power generation with more than 95% of this power being generated in the Lake Victoria Basin. The Owen Falls

dam at Kiira has installed capacity of 20 megawatts. The completion of the Owen Falls dam extension provided another 120 megawatts (MW) at the same site by installing additional generation units. The Government recently approved US\$ 500 million for 250 MW hydropower plant at Bujagali Falls.

In 1999, the Government approved a national energy plan. This plan has several electricity generation units, including the Bujagali hydroelectric facility (250 MW), Karuma (200 MW), and the rehabilitation of the Nalubaale Dam (formerly the Owen Falls dam – 180 MW) and its extension (five units of 40 MW each). Additional 90 megawatts thermal plants are being planned. Other potential energy sources such as solar, geothermal, currents, wave and wind energy are not significantly developed. Wind power is used mainly to pump water in few parts of the Basin and to propel sailboats in the lake. Hot springs are present in parts of the Basin, but these have not been exploited for energy. Similarly, conversion of solar power to electric energy is limited.

Hydropower is the most important form of electrical energy in Rwanda. Within the Basin, about 30 MW is generated annually from the power stations of Ruzizi in the West, Ntaruka and Ruhondo in the north. In addition, Rwanda has 30 megawatts generated from thermal and some electricity is obtained from Uganda. Electricity connection is, however, still low considering that the numbers of subscribers are about 67,000. Of recent, peat mainly mined from wetlands is being used as an alternative to fuel wood in industrial activities. Others are biogas, solar, thermal and methane gas, which are being explored.

Trade and Industry

In Burundi industrial activities are dominated by agro-processing and food industries for coffee, cotton, rice, tobacco, sugar cane, dairies, oil mills and breweries. The other industrial activities relate to the production of consumer goods, chemicals, textile, wood, paper, as well as building materials. Most of the goods (about 70%) use the major roads, which connect Burundi to Rwanda, Uganda and Kenya and the principal axis, which joins Burundi to Tanzania. Trade between Kenya, Uganda and Tanzania has greatly increased since the integration of the East African Community. Kenyan exports to Tanzania grew at a rate of 62% annually from US \$148 million in 2000 to US \$265 million in 2005 while exports to Uganda grew at the rate of 65% annually from US \$323 million in 2000 to US \$567 million in 2005. Imports to Kenya from Tanzania also grew at the rate of 20.4% annually from US \$7.32 million in 2000 to US \$38.7 million in 2005. The Uganda imports to Kenya grew by 49.2%.

There is no data on the volume and value of transboundary trade within or across the Kagera Basin. However, judging from the movement of goods within and out of the catchments it is obvious that trade plays a very important role in the local economy both as a source of income, employment and food. Most of the trade within and across the basin is on agricultural and livestock products, fisheries products, other food products, non-agricultural household goods, farm inputs, wood and timber products, clothes and textiles and construction materials.

In Tanzania, industrial activities in the basin are characterized by small or medium sized production units based mainly on agriculture and fishing. Industries vary in scale from sawmills, tailoring marts, blacksmith, brick making and flour mills to medium sized tea and coffee factories. One sector of the local economy is the informal and normally unregulated garages, repair shops and carpentry workshops. Despite each unit's small size their sheer numbers make them an important source of industrial pollution. Most industries either do not have waste water treatment systems or the existing system is too small or does not operate properly.

In Uganda, investment is taking place in various sectors of the economy including mining, agriculture (coffee, tea, fish, milk, edible oil and fruits processing). Opportunities existing in industrial development include rehabilitating and improving the existing and closed industries. Private investment and growth have been constrained by high interest rates (20% - 30%), cost of utilities (electricity, telecommunication and water) and transport costs. Other obstacles include inadequate governance or informal practices, crime, theft and disorder, lack of skills and illiteracy of available workers, unfavourable customs and trade regulations and limited access to land.

Opportunities in trade and commerce within the basin include improvement in the economic infrastructure; expansion of trade services such as insurance, banking and financial services; trade in fish, agricultural produce, manufactured goods, mining equipment, agricultural equipment, fishnets, engines and animal drugs. Investment opportunities in fisheries development include fish processing, and adding value to fish and fishery products; boat construction; manufacture and repair of fishing gear; aquaculture and construction of cold storage and icing facilities.

Communication sector

The four Governments of the riparian countries recognize the need to rehabilitate and expand their physical infrastructure in order to stimulate investment. Currently road network, air transport, railway transport, inland water transport, pipeline transport, non-motorized transport, telecommunications, warehouses and hotels are available to some degree in each of the four countries and some of the transport systems interface among the countries. The road network is reasonably well-structured but the condition of most rural roads makes it difficult to travel or move goods within the Basin particularly during the wet season.

As shown in Source: (UN, 2004; OECD, 2005; UN, 2005b; UNAIDS, 2005; UNESCO, 2005; WHO, 2005; World Bank, 2005)

Table 2.4 above, the basin is poorly served with fixed telecommunication but this has been compensated to some extent by the remarkable growth of mobile telephony. Each of the riparian countries has several TV stations.

Non-motorized means of transport includes walking, head shoulder or back loading, use of wheelbarrows, human-drawn carts, animal transport, bicycles, tricycles, motor cycles to transport passenger and freight.

Practically every household has this means of transport and it contributes significantly to employment of young people. The bicycle taxi services “boda boda” extend to the major transboundary areas, including the official border posts and the unofficial cross-border routes in the region.

Trans-boundary public road transport vehicles include buses, mini-buses and small vans, while there are numerous smaller private cars and larger vehicles transporting goods, including oil tankers. Most roads in the area are not permanent, made mainly of murrum and gravel, which require very frequent maintenance. Many of these roads are impassable during the rainy seasons, causing serious disruption on movement of people and goods and imposing huge costs on providers of transport services.

There is presently no cross-border rail transport in the basin but there are long-term plans to revive the East African Rail network that shall eventually be joined to Rwanda and Burundi. Navigation of the Kagera has been pondered but is currently regarded as commercially unviable.

Air transport is limited to the main international airports located in Entebbe, Dar es Salaam, Kilimanjaro, Kigali and Bujumbura with connections to the inland airports in Arua, Soroti and Gulu for Uganda and Mwanza, Arusha and Zanzibar for Tanzania.

2.5 Key Transboundary Issues and Concerns

The basin’s ecosystems are generating multiple and wide-ranging benefits and services that extend beyond the river itself. The waters of the Kagera have immense potential for domestic consumption, irrigation, industry, transportation and for production of hydropower. The basin’s ecosystems provide food, fish, medicines and fuel and construction materials. Components of the ecosystems also have genetic, aesthetic, cultural and heritage significance for a wide range of stakeholders.

Developing a better understanding of the values and functions of the river’s ecosystems helps stakeholders to understand the socio-economic importance of environmental conservation and provides a basis for informed decision making concerning the use of the key environmental resources of the Kagera basin.

The major socio-economic and cross cutting transboundary issues of concern relate to demographic characteristics and these are poverty, human and live-stock diseases, water supply and sanitation, population pressure, migrations, refugees, conflicts in resource use, civil strife and regional wars.

2.5.1 Conflicts in Resource Use

Human pressures on natural resources in the basin are increasing, while many resources are deteriorating or being depleted, creating an increased potential for competition and conflict between individuals or groups within societies. The

causes of the conflicts are many and at times interrelated.

These conflicts have been exacerbated by poverty, limited water resources, environmental degradation, poor governance, poor policies, conflicting institutional interest, inadequate skilled staff in various disciplines, inadequate data bases on natural resources, population pressure, increase in livestock numbers, low education, political interference, lack of transboundary institutions, inadequate sharing of resources, scarcity of natural resources and complex land tenure systems.

Recent examples of resource use conflicts include conflicts for grazing grounds among Ugandan and Tanzanian cattle keepers in the cattle corridor between Ankole / Rakai in Uganda and Minziro / Kagera area of Tanzania; conflict in wetland fish and forest resources of Minziro / Sango Bay area. Similar conflicts are common among communities in all the riparian countries. Land use conflicts are particularly severe in Rwanda and Burundi.

2.5.2 Policy, Legal and Institutions

Despite reforms currently undertaken in the riparian countries, the respective national trans-boundary diagnostic analyses reveal that there are still problems with the respective policies, laws and institutional mandates.

The Regional Transboundary Diagnostic Analysis reveals that most of the policies have supporting legislation and institutions to implement them. Only the Land Act in Uganda and the Fisheries Act in Kenya have no written and supporting policies and are now being developed. Policy and legislative process in all four countries have been adopted from the respective colonial systems, that is, the British legal system for Tanzania and Uganda; and the Francophone systems for Burundi and Rwanda.

As will be demonstrated in Chapter 7, a cross-cutting weakness of the policy, legal and institutional environments is that they have limited capacity for legislative enforcement. This, to some extent, is as a result of inadequate financial and human resource capacity. The other areas of concern include conflicts and overlaps in sectoral provisions; inadequacy of legal provisions to address environmental issues; limited dissemination and awareness of environmental laws; and conflicts in national policies and laws for the management of shared ecosystems.

Together, the issues identified in this chapter provide compelling arguments for the development of a Kagera River Basin Cooperative Framework and Management Strategy. However, before making proposals for the framework, a review of the guiding principles of transboundary water resources management, which is the subject of Chapter 3, is necessary.

3 The History of Water Utilisation on the Nile

For millennia, one of the civilisations that depended on the Nile was that of the Egyptians who watched and studied the flow of the Nile anxiously waiting for its flood without which there would be drought and famine. Most all the other communities that lived along its banks depended on rain-fed agriculture and herding – the river played a secondary role in the sustenance of their livelihoods. Until the twentieth century, the utilisation of the waters of the Nile was usufructory. However in the period 1879 to 1906 a British campaign to secure the waters of the Nile for cotton production in Egypt resulted in a series of acts, protocols, agreements, treaties, declarations and exchanges of notes dealing with the use of the waters and demarcating boundaries and spheres of influence.

3.1 The Colonial Treaty Regime

Of particular relevance to this Study are the agreements on consumptive use and these are listed below (Hertslet, 1967; Okidi, 1990; 1991; GoSE, 1993; Said, 1995):

- The 1891 Protocol for the demarcation of the spheres of influence of Britain and Italy in Eastern Africa in which the government of Italy, in Article III of the agreement, undertook “not to construct on the Atbara any irrigation or other works which might sensibly modify its flow into the Nile”.
- Article II of the 1902 Frontiers⁴ Treaty between Ethiopia and Britain reads as follows: “His Majesty the Emperor Menelek II, King of Ethiopia, engages himself towards the Government of His Britannic Majesty not to construct or allow to be constructed any works across the Blue Nile, Lake Tana, or the Sobat, which would arrest the flow of their waters into the Nile except in agreement with his Britannic Majesty’s Government and the Government of Sudan.”
- The 1906 Agreement between His Majesty King Leopold III, of the Independent state of Congo and his Majesty Edward VII of the United Kingdom redefining their spheres of influence in Central Africa as agreed upon in 1894. Article III provided: “The government of the Independent State of Congo undertakes not to construct, or to allow being constructed, any

⁴ Anglo-Egyptian, Sudan, Ethiopia and Eritrea

works on or near the Semliki or the Isango rivers, which would diminish the volume of water entering L. Albert, except in agreement with the Sudanese Government”.

- The 1906 Tripartite agreement and declaration between Great Britain, France and Italy reconfirming the terms of the 1891 Protocol and the 1902 Frontiers agreement after Italy’s failure to establish control over Ethiopia. At Britain’s insistence, Article IV providing that “In the event of the status quo being disturbed, France, Great Britain and Italy shall make every effort to preserve the integrity of Ethiopia. In any case they shall concert together on the basis of the agreements enumerated (herein) in order to safeguard:
a) The interest of Great Britain and Egypt in the Nile Basin, more especially as regards the regulation of the waters of that river and its tributaries...” was included.
- The 1929 exchange of notes constituting the Nile Waters Agreement between Egypt and the United Kingdom, acting for the Sudan and its Eastern African dependencies, paragraph 4(b) of which reads: “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 these are in the Sudan or in the 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 1934 Kagera River Agreement between Great Britain, on behalf of Tanganyika, and Belgium, on behalf of Rwanda and Burundi Article VI of which obliges any state that wished to use the river’s waters for irrigation purposes to notify the other contracting parties six months in advance in order to allow for possible objections to be raised and studied.

It was thus that a regime favouring Egyptian uses of the Nile was created.

The other relevant treaty which was concluded with all the Nile riparian countries, except Egypt and Sudan, under British Colonial rule is the 1959 Agreement for the Full Utilisation of the Nile, details of which are provided in Section 3.2.1 below.

3.2 The Pursuit of Basinwide Cooperation on the Nile

The first attempts at cooperation on the Nile in the wake of the 1929 Egyptian / British colonial agreement that created upper riparian servitude to Egypt and Sudan was in 1950 when Egypt and Britain, on behalf of her East African territories, exchanged notes constituting an agreement for cooperation in the conduct of meteorological and hydrological surveys of Lake Victoria (UN, 1964). This led to the establishment of the East African Nile Waters Coordinating Committee (EANWCC), representation to which was supposed to be the Ministers of Water Resources in Kenya, Tanzania and Uganda,

though in the end it was the technical and administrative officers from these countries. The committee's primary function was to build consensus within the member states for a unified approach to negotiations with the Sudan and Egypt's Permanent Joint Technical Committee of the Nile on such issues as the water rights of the East African countries and Egypt's Century Water Storage Scheme.

Prompted by the climatic changes of 1961-64 that resulted in a 20% increase in the outflow at Owen Falls Dam, the Coordinating Committee appealed to the United Nations Environment Programme for aid to conduct a hydrometeorological survey of the Lake Victoria catchment. The report of the preliminary survey conducted by consultants from the World Meteorological Organisation (WMO) and the Food and Agricultural Organisation (FAO) formed the basis for the wider 1967 Agreement for the Hydro-Meteorological Survey (HydroMet) of lakes Victoria, Kyoga and Albert (then Lake Mobutu Sese Seko) (Seaton and Maliti, 1973; Fahmy, 1977).

3.2.1 The HydroMet Project

In line with the circumstances of its formation, the objectives of this project were, in the short-term, to establish a hydrometeorological network for data collection in the study of the upper Nile water balance; and, in the long-term, to lay the foundation for intergovernmental cooperation in the storage, regulation and use of the Nile (UNDP and WMO, 1974). The initial signatories were Egypt, Kenya, Sudan, Tanzania and Uganda with the United Nations Development Programme (UNDP) as the funding body and the WMO as the Executive Agency. These were later joined by Ethiopia as an observer, in 1971, and Burundi, Rwanda in 1972 and the DRC in 1978 when it became necessary to extend the project area to the lake catchments in eastern DRC and Rwanda-Urundi.

After World War II, the British government commissioned a complete hydrological study to be made of the Nile Basin as a whole. Unfortunately, the study was not able to include the Ethiopian portions of the Nile due to political problems. The rest of the Nile valley was included. The study was finally released in 1958 as the "Report on the Nile Valley Plan" (US Department of the Interior, 1964). It was the culmination of 50 years of study. The report suggested various ways to increase the amount of water which reached Egypt. The most important of these suggestions was the construction of the Jonglei canal, which would divert the flow of the Nile in southern Sudan (in the Sudd) to avoid the enormous evaporation losses which occur there. The report, however, treated the entire Nile Basin as a single unity, which was unacceptable to the newly independent African states (Ohlsson, 1999:31-34).

Furthermore, the Egyptians had already planned a major construction which would significantly improve the flow of the Nile in their territories (see ARE, 1984). They had decided to build the High Aswan Dam in order to control the yearly floods of the Nile and in order to harvest the hydroelectric power potential of the river. However, this project was to have major re-

percussions on the lands of northern Sudan. Building this dam would mean that whole sections of northern Sudan would be inundated by what was to be Lake Nasser. There were also severe environmental concerns as to how the dam would change life on the banks of the Nile.

To deal with this problem, the two nations signed an agreement on the "full utilisation of the Nile waters" in 1959. This agreement stipulated that Sudan's yearly water allotment would rise from the 4 billion cubic meters stipulated in the 1929 agreement to 18.5 billion cubic meters. The Sudan would also be allowed to undertake a series of Nile development projects, such as the Rosieres Dam and the Jonglei Canal. In exchange, Egypt would be allowed to build a huge dam near the Sudanese border which would regulate the flow of the river into Egypt and provide water during droughts. The result of this dam, however, would be the inundation of over 6,500 km² of mainly Sudanese land. The Treaty also formed a joint committee which would be in charge of supervising and directing all development projects which affected the flow of the river (Ohlsson, 1999:35-40).

The utility of the Hydromet Project as a vehicle for cooperation was undermined by a Permanent Joint Technical Commission (PJTC) proposal for establishing a Nile Basin Planning Commission charged with the total planning for the water resources of the Nile Basin (Collins, 1994). Of course this immediately played into the fears of Ethiopia and the East African States of this being yet another attempt by the two downstream states to exercise their so called "right to the total flow of the Nile". The proposal was thus resisted on grounds that the Hydromet Project lacked the basic structure and orientation to be taken as a central body for the integrated development of the Nile basin.

In any case, the primary concern of the East African States was to deal with the damage caused by the floods and not to plan for storage of additional flood waters for Egypt and Sudan. With Ethiopia insisting on retaining her status as an observer, and thus limiting the scope of the survey information gathering to only areas that contributed 15% of the Nile's discharge, the Hydromet dragged on for 25 years without sparking cooperation among the member states who invariably regarded it as a technical body with neither authority nor acceptability and, therefore, had little interest in it.

3.2.2 The Kagera Basin Organisation

In nearly the same period, the countries at the headwaters of the White Nile came together to form a regional body named the Kagera Basin Organisation (KBO). The KBO was established in 1977 as a result of diplomatic initiatives to operationalise the concept of regional and basinwide planning in the Kagera Basin.

The first step was taken in 1969 when a UNDP fact finding mission, in consultation with the governments of Burundi, Rwanda, Tanzania and Uganda, recommended that a technical committee be established to coordinate orderly regional planning. The committee was established between

Burundi, Rwanda and Tanzania; Uganda preferring to participate in an observer role. In 1970, the committee submitted a successful funding proposal to the UNDP for the Kagera Basin Development studies, which were launched in 1971.

The first phase, which lasted up to 1973, consisted largely of data collection and analysis, with emphasis on tourism; hydropower potential; fisheries; and institutional arrangements. This data, together with the national priorities of the three States, then formed the basis for the preparation of the Indicative Basin Plan that was submitted in 1976 at the end of Phase II. The committee also commissioned a separate study on harnessing hydroelectric power at Rusomo Falls on the Kagera, and the environmental and commercial implications of such a development.

From the initial findings of these studies, it was clear that all riparian States shared common problems in most fields of economic and social development; and that a medium was required through which the basin's development potential could be realised by jointly coordinating the planning and exploitation of the sub-region's resources. And so it was that on August 24, 1977 the Agreement establishing the Organisation for the Development and Management of the Kagera River Basin, commonly known as the KBO, was signed between Burundi, Rwanda and Tanzania at Rusomo. Uganda acceded to it in 1981 (Okidi, 1994; FAO, 1997b).

At its inception, it was envisaged that the KBO would deal with "all questions relevant to the activities to be carried out in the Kagera Basin" (FAO, 1997b: 37). This was an ambiguous statement. The ambiguity of this statement was not helped by the list of activities for the KBO to perform. These included: water and hydropower resources development; the furnishing of water and water related activities for mining and industrial operations and portable water supplies for other needs; agricultural and livestock development; forestry and land reclamation; mineral exploration and exploitation; disease and pest control; transport and communication; trade; tourism; wildlife conservation and development; fisheries and agricultural development; industrial development, including fertiliser production, exploration and exploitation of peat; and environmental protection.

The overriding need was to disenclave its landlocked hinterland and, in the process, provide opportunities to exploit the region's hitherto untapped natural resources, which best explains why the KBO's Indicative Basin Plan reflected an agenda expected more of a regional development agency than a River Basin Organisation (RBO). But from the onset, the KBO's development agenda captured neither the interest of the donor community, on whose support the organisation was to rely, nor the commitment of the member States. Its 27-year history is dominated more by the political and ethnic tensions between member States than by achievements in bringing them together to jointly harness the basin's development potential.

President Julius Nyerere of Tanzania, the KBO's chief architect and whose personal dislike of President Idi Amin of Uganda played a key role in the collapse of the East African Community (EAC), sought to fill the void left by the collapse of the EAC with the KBO as an avenue for attaining regional socio-economic development. It was also due to these personal differences that Uganda, the downstream riparian, did not fully participate in the organisation until 1981. Uganda's accession only widened the cracks that had started to develop in the organisation due to Franco – Anglo competition; Hutu – Tutsi tension; and intra and interstate political conflicts (Mbaziira, 2007).

Tanzania's and, later, Uganda's domination of an organisation that brought together former British (Tanzania and Uganda) and Belgian (Burundi and Rwanda) colonies soon played into French and Belgian fears of an Anglo – Saxon erosion of their position on the continent leading to their reluctance to support the KBO. The rest of the donor community did not warm up to the organisation in part due to Tanzania's lean towards the Communist camp in Cold War politics. The result was that the organisation could not raise the funds to implement its rather ambitious project portfolio.

Hutu – Tutsi ethnic tensions between the dominant political groups in Rwanda and Burundi; Tanzania's role in the invasion of Uganda and ousting of President Idi Amin; Uganda's role in the 1994 Rwandese Patriotic Front invasion of Rwanda; and the bloody clashes between Uganda People's Defence Force and the Rwanda Patriotic Front in the DRC all contributed to an environment of deep seated suspicion and lack of internal cohesion that did little to instil confidence in the donor community that the KBO was the right vehicle for cooperation in the region.

3.2.3 The Undugu Initiative

The Undugu initiative rose out of the ashes of Egypt and Sudan's rebuffed Nile Basin Planning Commission, proposed by the PJTC to carry on the work of the Hydromet Project. This initiative initially brought together the Central African Republic, Egypt, Sudan, Uganda and the DRC with the stated objective of cooperating among themselves in the fields of infrastructure, energy and water resources development; as well as the promotion of trade and cultural exchange.

In 1989, they requested the UNDP to undertake a comprehensive technical and economic feasibility study which could serve as a master plan for regional cooperation among the member States. But because Ethiopia, Kenya and Tanzania, which together contribute over 90% of the Nile discharge, only participated as observers, practically nothing could be gained from the conferences and meetings that took place. Without the full participation of these three countries, there was little prospect for Nile Basin cooperation and, indeed, one of the recommendations of a meeting of experts in 1990 was for the deferment of the issue of shared water resources to a forum other than the Undugu.

Having reached such a conclusion, the Undugu Group was no more useful as a catalytic agent for cooperation on the Nile than a talking shop. It thus passed the mantle to the Technical Cooperation Committee for Promotion of the Development and Environmental Protection of the Nile Basin (TECCONILE) in 1992, with nothing but rhetoric to show for the 66 meetings held at technical and ministerial level since 1977 (UNECA, 1995; Collins, 2000; Yacob, 2004).

3.2.4 TECCONILE

Established as the forum for addressing the contentious matter of equitable use of the Nile waters, its objectives were defined as follows:

- In the short-term: developing national water master plans and their integration into a Nile Basin Development Action Plan; and developing the infrastructure, capacity and techniques required for the management of the Nile basin water resources.
- In the long-term, assist member states in the development, conservation and use of the Nile basin water resources in an integrated and sustainable manner through basin wide cooperation; and in the determination of equitable entitlement for each riparian country to use the Nile waters.

Ethiopia, Kenya and Burundi neither endorsed nor signed the agreement, choosing to remain as observers. And true to form, TECCONILE produced a Nile River Basin Action Plan, containing 22 environmental protection projects with a funding requirement of US \$100 million, which was never implemented.

TECCONILE was like the Hydromet project in everything but the name and, thus suffered the backlash of the upper riparian states' suspicions of Egyptian and Sudanese motives. After 71 meetings, in a space of 5 years, it became clear that TECCONILE lacked the credibility to act as the medium for integration of the Nile with the full participation of all the Nile riparian countries. All indications were that there was a better chance of member countries supporting a newly established central basin organisation that was under the auspices of such international organisations as the UN than carrying on with TECCONILE and, thus, emerged the Nile Basin Initiative (UNECA, 1995).

3.3 Conclusion on the History of the Utilisation of the Nile

Colonial treaties and agreements were driven more by the water security and other interests of Great Britain, Egypt and Sudan than the need to establish permanent frameworks for the sustainable and equitable utilization of the Nile River Water resources by all the Nile River riparian countries. As a result, these treaties and agreements favoured the interests of Egypt and Sudan over those of the other Nile River riparian countries. After independence, other Nile River riparian countries announced that they were not bound by these treaties and agreements, hence the need to formulate a Nile River basin-wide cooperative

framework for all Nile River basin countries.

Some of the colonial treaties and agreements were structured as projects with limited duration and funding. Such treaties and agreements, therefore, failed to establish permanent cooperative frameworks for the sustainable and equitable development, utilization and management of the Nile River basin water resources.

A crosscutting, but hardly insignificant, factor in all the above efforts to bring about cooperation on the Nile was the failure to engage in anything more than data collection, which on its own fell far short of providing a sound framework for development and of overcoming differences and disputes between states. Consequently, Ethiopia, Kenya, Tanzania and Burundi, which together occupy the headwaters of the Nile, consistently chose to remain observers rather than full participants – arguing that these efforts were little more than a distraction from key water allocation issues (Mbaziira, 2007).

At the heart of the conflict are the colonial protocols and boundary agreements establishing the historic rights of the downstream riparian states. This treaty regime not only excluded the upstream riparian states' but also prohibited any use in their territories that would interrupt the flow of the Nile to Egypt and Sudan (Mageed, 1994). Though vigorously disputed by upstream riparian states, the downstream riparian states still considered the treaties as legally binding, non-amendable and the basis for their acquired rights. In sharp contrast to this, the upper riparian states' position has always been that formal cooperation be preceded by a fair and equitable redistribution of the Nile waters. These conflicting riparian positions are rooted in the Customary Laws governing the management of shared watercourses, which are discussed in the next Chapter.

4 The International Water Law Perspective

The 1978 United Nations Convention on the Law of Non-navigational Uses of International Watercourses (hereinafter referred to as the ‘UN Convention’), though yet to be ratified by all member states, represents the international legal and policy framework for dealing with co-management issues of shared water resources in a comprehensive and effective manner.

It is the product of over 25 years of work by the International Law Commission (ILC) after a failed attempt in the late 1960s to pass the International Law Association’s (ILA) Helsinki Rules on the Uses of the Waters of International Rivers (1966) as a framework for international law. Twenty years after the 1970 UN resolution initiating work on the new framework, the ILC presented a draft document in 1991, the debate over which was soon embroiled in the upstream – downstream rivalries that can best be understood by going over the evolution of the principles by which basin States and individuals have utilised the waters of shared streams. These principles are:

- The Doctrine of Absolute Territorial Sovereignty.
- The Doctrine of Absolute Riverain Integrity.
- The Doctrines of Acquired Rights and Prior Appropriations.
- The Doctrines of Limited Sovereignty and Integrity: Equitable Utilisation and No Significant Harm.

These principles are discussed in the following sections in order to inform the formulation of the proposed cooperative framework for the Kagera River Basin.

4.1 The Doctrine of Absolute Territorial Sovereignty

The Harmon Doctrine, as absolute territorial sovereignty is sometimes referred to in memory of Judson Harmon who is credited with coining the phrase (Saddoff et al., 2002:48), regards any transboundary watercourse originating in or traversing a given territory or jurisdiction as the property of that State to harness in any way suitable to its national interest irrespective of their effects beyond its borders (Menon, 1975:445).

This theory was brought to prominence in 1895 by Attorney General Judson Harmon's legal opinion on the position of the USA in a dispute with Mexico over the waters of the Rio Grande. He denied any legal liability on the part of the USA to the Government of Mexico asserting that while Mexico could freely dispose of the waters flowing on her territory she could not claim uninterrupted flow of the waters from the USA. And despite reaching an amicable settlement to the dispute, the US still maintained, in the 1906 Treaty of Washington that the grant of a certain quantity of the water to Mexico was not in recognition of the validity of Mexico's claims but rather an act of good neighbourliness (Moore, 1906; Berber, 1959; UN, 1964).

A cruder version of this theory is attributed to Kluber who, as far back as 1821, is quoted by Wolfrom (1964:31) as having held the view that:

... a State may not only possess and use territory but also increase it by accession and that it has the right to use its territory for the attainment of its own objectives, notably by changing the course of rivers even though this may have prejudicial effects on other States.

In the 100 years since its development, the Harmon doctrine has elicited all reactions but indifference. Its sympathisers have used the absence of any international law limiting the right of a State to divert the waters of a transboundary watercourse as the rallying point for their argument (Simsarian, 1938). They argue that in the absence of a regime of internationalism, no general principle of law could prevent a State from diverting or polluting its own waters (Briggs, 1952; Sevette, 1952). A recent example of this assertion was made by Turkey's President Suleiman Demirel, in 1992, when he likened the waters of the Euphrates within Turkey's territory to Saudi Arabia's oil,

... to be done with as Turkey saw fit and with no more international displeasure than was exhibited towards Saudi Arabia after 1973⁵ (Waterbury, 1994: 57).

The doctrine has also carried favour among other upper basin States outside North America⁶. In 1913, an Austrian tribunal rejected Hungary's complaints against Austria's use of it portions of their shared rivers basing on the absence of international laws obliging upper riparian states to refrain from interfering with the use of a river by a downstream State (AJIL, 1913).

For example, in 1947, the Indian State of East Punjab cut off irrigation water flow to the Pakistani State of West Punjab demanding the latter's acquiescence to any rights over the waters of the Indus system before the water could be restored (Fowler, 1955; Agrawal, 1958; Fowler, 1960; Rousseau, 1961). In another incident, India in 1975 constructed the Farraka Barrage, depriving Bangladesh of the dry season flow of the Ganges by diverting it into the Hogli River

⁵ Obviously referring to Saudi Arabia's engineering of the enormous increases in the price of petroleum.

⁶ As was the case with Mexico, in the 1909 Boundary Waters Treaty with Canada, the United States of America asserted the Harmon Doctrine.

to flush the port of Culcatta (Salman, 1998; Crow and Singh, 2000). Similarly China has found no reason to consult Laos, Thailand and Vietnam, the downstream riparian states of the Mekong, before diverting the river for hydroelectric power generation.

The above notwithstanding, criticism of the doctrine has been far reaching and has relied on the Latin maxim *sic utere tuo ut alienum non laedas* that one may not injure one's neighbour unreasonably. The general consensus is that it is intolerable and radically unsound, and that its application would throw the utilisation of international rivers into anarchy (Smith, 1931; Sauser-Hall, 1955). Even the USA, which brought it to prominence, repudiated the doctrine in the late 1950s after a dispute with Canada over the utilisation of the Columbia River. The then Secretary of State, Dean Acheson, is quoted as remarking that it was 'hardly the kind of legal doctrine that can be seriously argued in these times' (Lipper, 1967: 27).

The view that territorial sovereignty begets rights without obligations, especially if the exercise of those rights causes injury to the territory of others has emphatically been rejected. The theory's demise in the international arena was marked in 1957 by the ruling of the International Court of Arbitration, in the Lake Lanoux case between France and Spain, obliging an upstream State to reconcile the interests of other riparian states with its own (AJIL, 1959).

4.2 The Doctrine of Absolute Riverain Integrity

Absolute riverain integrity is to downstream riparian states what absolute territorial integrity is to upper basin States. It holds that a riparian State cannot harness a river traversing its territory if in so doing it would interrupt, artificially increase or diminish its flow and thus cause injury to the interests of other basin States (Huber, 1907; Lauterpacht, 1955; Berber, 1959).

The theory has however found little favour internationally, largely because it carries the inevitable consequence of giving downstream riparian states a monopoly over the utilisation of shared waters.

4.3 The Doctrines of Acquired Rights and Prior Appropriations

The foundation of these doctrines can be traced to Roman law principles. Under the Doctrine of Acquired Rights, the owner of land contiguous to a stream had proprietary rights over it, but the first user of the water acquired priority rights regardless of whether his own land, on which use of the water took place, was contiguous to the stream or not. The rule was developed and incorporated into early English civil and common law, and thus it spread with the growth of the British Empire. Although it has, on occasion, been invoked in international disputes, its application has largely been restricted to the quasi-international level of water disputes between units of a federal system, most notably in the western

parts of the United States of America.

The Doctrine of Prior Appropriation became the water law of western United States largely because it granted perpetual rights of water use to any riparian who was able to demonstrate beneficial use of the rivers, and late claimants could not diminish these rights. So whoever was able to harness the waters of a stream first, regardless of the nature of use or whether this was upstream or downstream, got the right to utilise the same quantity of water annually in perpetuity. Reliance on chronological priority was an acknowledgement of the fact that the water in the rivers would not be sufficient to meet the needs of all riparian states, so he who first invested labour in the stream deserved its benefits (Agrawal, 1958: 167).

But since topology dictates the ease with which a river may be harnessed and, as such, rivers are usually more developed downstream than upstream, strict application of the doctrine would be a denial that a riparian utilisation of a river could be influenced more by accident of physical location than by their present or future necessities for the use of the river. Also, the grant of absolute quantities of water annually is not an incentive for the improvement of technologies of utilisation and so results in wastage of water that could otherwise have been freed up for other use(s) (Godana, 1985; Waterbury, 2002). Among the few occasions that it has been invoked in the international arena is the 1929 Nile Waters Agreement which conceded absolute protection to Egypt's 'natural and historic rights in the waters of the Nile' (Okidi, 1990).

4.4 The Doctrines of Limited Sovereignty and Integrity: Equitable Utilisation and No Significant Harm

The Doctrine of Limited Sovereignty and Integrity cannot be better summarised than in the opinion of Justice Holmes of the United States Supreme Court in a water-sharing dispute between New Jersey and New York:

Water offers a necessity of life that must be rationed among those who have power over it. New York has the physical power to cut off all the water within its jurisdiction. But clearly the exercise of such a power to the detriment of interest of lower States could not be tolerated. And, on the other hand, equally little could New Jersey be permitted to require New York to give up its power altogether in order that the river might come down to it undiminished. Both States have real and substantial interests in the River that must be reconciled as best they may be (New Jersey V. New York, 1931: 342-3)

The central tenet of this doctrine is the assertion that the sovereignty of a State over the waters flowing on its territory is limited by the obligation not to prejudice the territory or interests of other riparian States. It recognises the freedom of any State to act upon its interests in the waters of a river that traverses or demarcates its territory but qualifies this freedom with the responsibility of not depriving co-riparian states of the benefits of the river. As such, control or diversionary measures to be undertaken by a riparian at any

point on a river, which might occasion interference with its utilisation by other riparian states, are subject to their consent.

Because it provided a middle ground for the rejectionists of both theories of territorial sovereignty and riverain integrity, its development has taken two distinct courses namely: the concept of Equality of Right; and the principle of No Significant Harm.

The absurdity of the notion that a State could do as it pleased with the waters in its territory without recognising the negative impact such actions may have on neighbouring States, and the obstacles to river basin development presented by the requirement of natural flow laid bare the inadequacies of the theories of territorial sovereignty and riverain integrity (Godana, 1985; McCaffrey, 2001). A middle ground that recognised the interdependencies between basin States was established in the concept of Equality of Rights based on the principle of sovereign equality of States (Bourne, 1996).

Adherents of the theory argue that shared waters would never be enough for every State to exercise absolute sovereignty over the portions in its territory yet every State had an equal right to exploit this water in accordance with its needs. As such, each State must respect the rights of the other States and no one State may claim the right to use the waters in such a way as to cause harm to the interests of another or to oppose another State's utilisation of the water unless it was to their detriment (Smith, 1931; Brierly, 1955; Lipper, 1967).

Its adoption into international law began at the 1911 Madrid Session of the Institute of International Law where it was resolved that in the utilisation of contiguous or successive watercourses, none of the riparian States:

... may, without the consent of the other, and without special and valid legal title, make or allow individuals, corporations, etc., to make alterations therein detrimental to the bank of the other State. On the other hand, neither State may, on its own territory, utilise or allow the utilisation of the water in such a way as seriously to interfere with its utilisation by the other or by individuals, corporations, etc., thereof⁷ (IIL, 1911: 365; Whiteman, 1964: 921-2).

This was followed up in 1961 at the Salzburg Session with the declaration that:

Every State has the right to utilise waters which border or traverse its territory subject to the limits imposed by international law and, in particular, those resulting from the provisions which follow. This right is limited by the right of

⁷ Article I of the resolution adopted by the International Law at Madrid on 20 April 1911 on International Regulations Regarding the Use of International Rivers for Purposes other than Navigation.

utilisation of other States interested in the same watercourse or hydrographic basin⁸ (IIL, 1961: 381-2; Whiteman, 1964: 922-4).

In 1966, the International Law Association published the Helsinki Rules on the uses of the waters of international rivers Article IV of which provides that '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' (ILA, 1966: 56). These rules formed the basis for the 1997 UN Convention on the Law of the Non-navigable Uses of International Watercourses, which has brought to prominence the joint concepts of equitable utilisation and the duty not to cause harm (UN, 1997).

The Principle of Equitable Utilisation

By this principle, it is recognised that any State whose territory or portion thereof lies in an international drainage basin has a right to a reasonable and equitable share in the beneficial uses of the waters of the basin. The concept was developed, though not initiated, by the US Supreme Court, which, while arbitrating disputes between States where the water law was based on the Principle of Prior Appropriation, rejected the literal application of the priority rules. Its argument was that if an allocation between prior appropriation States was to be just and equitable, strict adherence to the priority rule may not be possible and thus suggesting that other relevant factors be considered (Kansas V. Colorado, 1907; Wyoming V. Colorado, 1922; New Jersey V. New York, 1931; Connecticut V. Massachusetts, 1931). And it is this idea of balancing relevant factors that has become the hallmark of equitable utilisation.

The Principle of Equitable Utilisation seeks to maximise the benefit derived by each Basin State from the use of shared waters by taking into account economic and social requirements during the distribution of the waters. Ideally, the distribution should satisfy these needs to the greatest extent possible and factors unrelated to the utilisation of the waters to meet these needs are irrelevant to the determination of the appropriations (Lipper, 1967; Beaumont, 2000).

Paragraph 1 of Article 6 of the 1997 UN Convention reads:

Utilisation of an international watercourse in an equitable and reasonable manner within the meaning of Article 5 requires taking into account all relevant factors and circumstances, including:

- Geographic, hydrographic, hydrological, climatic, ecological and other factors of natural character;
- The social and economic needs of the watercourse States concerned;
- The population dependent on the watercourse in each watercourse State;

⁸ Article II of the resolution adopted by the Institute of International Law at Salzburg on 11 September 1961 on Utilisation of International Waters (Except for Navigation) **COWI Uganda**

- The effects of the use or uses of the watercourses in one watercourse State on other watercourse States;
- Existing and potential uses of the watercourse;
- Conservation, protection, development and economy of use of the water resources of the watercourse and the cost of measures taken to that effect;
- The availability of alternatives, of comparable value, to a particular planned or existing use (UN, 1997: 3).

Commentators on the Convention decry the usefulness of the Article in advancing the concept of equitable utilisation on the following grounds. First, the factors enumerated as relevant to the determination of equitable and reasonable utilisation lack specificity of meaning, which (Mbaziira, 2007) illustrates by taking land area and water quantity, the two sub-factors pertaining to the natural attributes of watercourses that are prominent in equitable utilisation lists, as the bases of an allocation and raises the question of which riparian should be awarded greater quantities of water.

Take for instance Sudan and Ethiopia on the Nile. Should Sudan be allocated a larger quantity of the water on the basis of its territory forming 64% of the Nile basin, or should Ethiopia from which up to 85% of the Nile's flow originates be awarded the bigger share? And what would be the rationale behind either allocation especially considering that while the former lies almost entirely in the basin its contribution to the flow of the river is only a third of the latter's contribution yet only a third of Ethiopia's territory lies within the basin (see Table 4.1)? This type of question could be asked about the rest of the sub-factors and could lead to an early impasse.

Table 4.1: Key Repartition Characteristics of the Nile

Country	Total area (km ²)	% area in basin	% of basin area	Internal renewable water resources –from endogenous precipitation (billion m ³)	Actual annual renewable water resources, including trans-boundary (billion m ³)	Dependency ratio (%)
Sudan	2,505,810	79	64	35	88.5	77.3
Ethiopia	1,100,100	33	12	110	110	0
Egypt	1,001,450	33	10	1.8	58.3	96.9
Uganda	235,880	99	7	39.2	66	40.9
Tanzania	945,090	9	3	80	89	10.1
Rwanda	26,340	75	1	6.3	6.3	0
Eritrea	121,890	20	1	2.8	8.8	68.2
DRC	2,344,860	1	1	935	1,019	8.2
Kenya	580,370	8	1	20.2	30.2	33.1
Burundi	27,834	48	< 1	3.6	3.6	0
Total	8,889,624			1,234	1,480	

Sources: (Bricheri-Colombi, 1997; FAO, 1997a)

Secondly, while the effort to demonstrate that the given list of factors is by no means exhaustive can be applauded as one of the strengths of the framework, its weakness is that it provides a loophole for any riparian state that is not keen on reaching an agreement to drag negotiations by introducing an endless array of items for debate (Beaumont, 2000).

The third weakness of the Article is to be found in paragraph 3 which states that “The weight to be given to each factor is to be determined by its importance in comparison with other relevant factors”. There is, however, no guidance on how this ‘importance’ is to be assessed which indirectly renders the article inapplicable in a conflict situation (Beaumont, 2000). The ultimate effect of not giving these factors specific weight or a hierarchical order is that the settlement of conflicting claims is likely to be informed more by power politics and other factors than by the factors enumerated in the article (Chazournes, 1998). However, basins are unique in terms of geographical, ecological, historical, cultural and political variables. It therefore follows that the utilitarian value of each factor varies from one basin to another and, as such, an abstract ranking or weighting of the factors would run counter to the main feature of the principle of equitable use: flexibility.

The Principle of Equitable Utilisation as stated in the UN Convention, and even in the Helsinki rules before it, has been criticised as vague, inoperable and amounting to no more than an appeal to the international conscience (Hayton, 1982; Godana, 1985; Chazournes, 1998; Waterbury, 2002; Mbaziira, 2007). The criticism stemming from, among other things, the reduction of two sub-factors – existing uses and potential uses – that form the core of water disputes into a mere factor e), in Article 6 of the UN Convention, to be considered in the determination of equitable use.

The Principle of No Significant Harm

The principle of No Significant Harm is the expression of the *maxim sic utere tuo*, which has conventionally been interpreted as a warning to second in time users to avoid any use that might cause harm to established uses elsewhere in the basin. It is dealt with in Article 7 of the 1997 UN Convention, and, according to (McCaffrey, 2001), was perhaps the most controversial provision during the negotiations of the Convention. The controversy revolving around the issue of whether the equitable utilisation obligation of Article 5 should prevail over the no harm obligation of Article 7 in the event they are not interpreted as being compatible and come into conflict. In essence, does the no harm principle protect a riparian against harmful consequences of a use by a co-riparian that is otherwise equitable and reasonable? In other words, does the fact that a use may have harmful consequences make it inherently inequitable and unreasonable (Mbaziira, 2007)?

In McCaffrey’s opinion, the debate rests on the definition of what constitutes harm. Harm can be factual, and therefore manifested as a diminution in quantity or quality, obstruction of a watercourse or negative impacts on the riverine ecosystem the effects of which are transmitted by or sustained in relation to the watercourse. On the other hand, harm or damage may be le-

gal in nature where for instance the new uses of a lower riparian have no factual impacts on an upper State but alter the equitable balance of uses by constraining the scope of subsequent new uses the upper State can make consistent with the obligation of equitable utilisation. By obliging what can be described as reasonable use vis-à-vis co-riparians instead of drawing a bright-line threshold of prohibited harm, it is apparent that Article 7 proscribes legal injury rather than factual injury per se (McCaffrey, 2001).

Reconciling the Contradictory Principles

From a legal injury perspective, the law may permit causing of factual harm if it is within the actor's right of equitable utilisation. In such a case, causing harm would not infringe the equitable utilisation rights of the one harmed. The conventional interpretation of the *sic utere tuo maxim* has in fact been rejected on grounds that a strict prohibition of causing harm to others would in effect 'harm' the prohibited party by depriving him or her of the legitimate use of his or her property (Caflisch, 1993). This is equivalent to treating harm as but one factor in an equitable utilisation determination (Mbaziira, 2007).

While the no harm principle qualifies as an independent norm, it neither embodies an absolute standard nor supersedes the Principle of Equitable Utilisation where the two appear to conflict. Instead it plays a complimentary role and, as emphasised by the phrase "take all appropriate measures, having due regard for the provisions of Articles 5 and 6, in consultation with the affected States" in paragraph 2 of Article 7, trigger discussion between the States concerned in the context of an overall regime of equitable and reasonable utilisation (UN, 1997: 3).

4.5 Integrated Management: The Theory of Community Interests

One alternative to the unilateral claims and counter-claims has been suggested as institutional management of the watercourse. A derivative element that was suggested by the International Court of Justice's (ICJ) vision of a more holistic regime for international watercourses is the consideration of the Principle of Equitable Utilisation in the broader context of sustainable development and management (Gleick, 1993; Hungary V. Slovakia, 1997). This is echoed in Article 8 of the 1997 UN Convention, which reads as follows:

- Watercourse States shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilisation and adequate protection of an international watercourse.
- In determining the manner of such cooperation, watercourse States may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing joint mechanisms and commissions in various regions (UN, 1997: 4).

The Theory of Community Interests regards a drainage basin as a single hydrological unit commonly owned by the community of riparian states and as such none of them may independently utilise the waters. It derives from the ‘vital nature of water to all life, the unity of a watercourse, and the importance of watercourses as means of transportation, communication and socio-economic development’ (McCaffrey, 2001: 164). This grants a collective right of action to all riparian states in such a manner as to ensure the most beneficial development of the basin, an approach that calls for joint management and the integration of the environmental, ecological, economic and social interests of the community as a whole.

The idea may have caught on as recently as the 1960s (Marty, 1997: 23; Bernauer, 2002), but its fundamentals can be traced to Roman Law and have been applied in treaties that date back as far as 1792 in the Decree of the Provisional Executive Council of the French Republic, which opened the Scheldt River to navigation by asserting that the ‘watercourse of a river is the common inalienable property of all countries watered by it’ (Le Fur and Chklaver, 1934: 67; McCaffrey, 2001). Similar views are echoed in the report of the then Secretary of State of the US, Thomas Jefferson, concerning the navigation rights on the Spanish controlled portion of the Mississippi River. The report submitted to President George Washington in March 1792 read in part:

The ocean is free to all men, and their rivers to all inhabitants ... accordingly, ... we find this natural right universally acknowledged and protected by laying the navigable rivers open to all their inhabitants. ... The Roman law, which like other municipal laws, placed navigation of their rivers on the footing of nature, as to their citizens, by declaring them public ..., declared also the right to the use of the shores was incident to that of the water (Vitanyi, 1949: 31).

Proponents of the theory argue that the water sharing theories advanced to-date are either economically wasteful⁹ or cannot ensure the most beneficial development of the basin¹⁰. Optimum development of a water system can only be achieved by using the natural, physical unity of a watercourse, heedless of political boundaries, as the unit of analysis. Early writers on the subject used natural law to advance the notion on international watercourses as common property and although the typical conflicts between riparian states were centred on navigational rights, the arguments can still be applied to non-navigational use rights.

Henry Farnham’s submission that:

A river which flows through the territory of several States or nations is their common property. ... It is a great natural highway conferring, besides the facilities of navigation, certain incidental advantages, such as fishery and the right to use the water for power and irrigation. Neither nation can do any act

⁹ In reference to the doctrines of Absolute Sovereignty, Absolute Riverain Integrity and Prior Appropriations.

¹⁰ Referring to Equitable Utilisation.

which will deprive the other of the benefits of those rights and advantages. ... The gifts of nature are for the benefit of mankind, and no aggregation of men can assert and exercise such right and ownership of them as will deprive others of equal rights, and means of enjoyment ... [T]he common right to enjoy the bountiful provisions of Providence must be preserved (Farham, 1904 as quoted by McCaffrey, 2001: 161)

greatly influenced Mexico's position in its 1895 dispute with the US over the Rio Grande (Berber, 1959; Menon, 1972; McCaffrey, 2001). Similarly, the German jurist J.A. Schlettwein commenting on the controversy over navigation on the Scheldt wrote in 1785:

A river is ... destined by God himself to be the common property of all States riparian to it. ... None of these States can arrogate to itself an exclusive right to the use of such a river, and none can deprive others of their right to use or navigate upon it. Even if one of them compelled another with force to cease navigation on the river, this would have no binding effect upon the other. For it is and will always remain contrary to fundamental justice to deprive another of the right to use a thing that nature, or its creator, God, has intended as common property (as quoted by McCaffrey, 2001: 160).

Hartig (1955) in the development of his coherence principle took an international drainage basin as a single hydrological unit and linked its riparians to co-owners of a single *res [communis]*¹¹ who could no more acquire an exclusive right to the part of the *res* in their territory than a 'farmer could acquire an exclusive property right in just one leg of a live cow' (Seidl-Hahenveldern, 1962: 193). Unilateral action on any portion of the river that prejudiced uses in the rest of the basin would amount to a claim to the *res* as a whole. Thus, he considered a river as a single inseverable coherent *res* co-owned by its riparian states.

Indeed a perfectly equitable apportionment of shared waters does not necessarily translate into optimising the development of the water system. The level of integration required to bring about 'common patrimony' can only be achieved by denationalising international watercourses and transferring their management from individual States to a joint organisation (Caflisch, 1993).

A major weakness of the concept of common ownership is that it does not necessarily entail the duty to act jointly with regard to the watercourse (Huber, 1907 in Berber, 1959). Common ownership can neither mean a condominium in the territory nor a duty to use something jointly but rather an entitlement to use. It would thus be possible for a co-owner to freely dispose of his conceptual share in so far as this did not interfere with the uses of other co-owners.

It goes without saying that the theory of Community Interests draws a lot of parallels with the Doctrine of Limited Sovereignty. Indeed, it not only rein-

¹¹ Literally, *res communis* is communal property. It is a legal concept that underpins the law of international waters.

forces this doctrine, it also better describes the relationships that exist between riparian states. It alludes to shared governance and collective action where Limited Sovereignty urges unilateral restraint (Mbaziira, 2007).

4.6 Other Important Standards of International Water Law

The most important standards set by the recognised sources of international water law¹² are:

- the obligation to protect and preserve the ecosystems of international rivers;
- the obligation to carry out reasonable compensation measures if the interests of states have been violated;
- the consideration of all relevant technical, economic and financial factors while planning and carrying out a project;
- the requirement to inform all riparians of a pending project;
- the observation of an appropriate waiting period before the construction of a project is started;
- the collection and open exchange of data;
- the arbitration of objections by means of consultative committees and arbitration commissions;
- the rejection of all absolute utilisation restrictions or requirements;
- mandatory public participation of all stakeholders in the planning and information gathering process; and
- sustainable development.

4.7 Implications of International Water Law for the Nile and the Kagera Basins

It is natural for a country whose territory is the main feeder of a watercourse to feel proprietary about it, which explains why the Equatorial Lakes sub-basin riparian countries and Ethiopia which are the main contributors of the flow of the Nile regard the status quo as a travesty of the principle of Sovereign Equality of States. They thus invoke Article 5.2 of the UN Convention, which calls

¹² The main sources of international law are generally accepted as Treaties, Custom and General Principles of Law. Apart from this, decisions made by international institutions such as the International Court of Justice, also constitute sources of international law.

on co-riparian countries “in their respective territories [to] utilise an international watercourse in an equitable and reasonable manner”, to back their ‘natural right’ to utilise the water and to demand for a change in the water allocation. In their defence, Egypt and Sudan argue that they have utilised the current allocations to create economic and social structures, and even cultures that will negatively be impacted by reallocation and therefore stress the no harm obligation of Article 7 as paramount. Moreover, they argue that taken in the context of relevant factors and circumstances as stipulated in Article 6, particularly factors (c), (e) and (g), the allocations are justified.

The point being made here is not whether these opposing claims are legitimate or not. Rather, it is to illustrate the fluidity of international law with regard to resolving the major obstacle to cooperation on the Nile.

According to (Mbaziira, 2007), the intent of the Principle of No Significant Harm was to protect weak downstream States from injury arising out of the unilateral development of watercourses by more powerful upstream States such as the U.S. and Mexico on the Colorado and Rio Grande rivers; India and Bangladesh on the Ganges River; and Turkey and Syria on the Euphrates River. It was also targeted more at structural integrity of the water system, the externalities of which follow the flow of the watercourse, than at water quantity. It thus failed to recognise that downstream States can be more powerful than the upstream States and, as a result, can prevent them from achieving equitable access to the resource as is the case on the Nile and the Jordan.

The lack of recognition of such asymmetry of power encourages the perpetuation of the prior use of the more powerful riparian States. The powerful riparian will have the means to not only unilaterally execute projects on the shared watercourse but also block co-riparian projects on the river by raising the spectre of significant harm to its agriculture, industry and other water related activities.

He further argues that in such circumstances, one option would be to appeal, as the upstream States have done, to the Principle of Equitable Use, which thanks to the multiplicity of the determining factors, fails in its mission of diminishing the arbitrariness of power in the allocation of shared water resources. The other would be to engage in basin-wide integrated management of the resource. This has been interpreted as recognition of cooperation and co-management as essential elements for efficient utilisation and protection of watercourses and, as discussed in the Introduction, is presently being attempted in the Kagera sub-basin through the basinwide NBI and the Lake Victoria Basin Commission (LVBC) within the EAC. These cooperative arrangements form the subject of discussion in Chapter 5.

5 Current Efforts at Cooperation in the Basin: the NBI and LVBC

Continuing with Chapter 4's discussion of the elements of efficient utilisation and protection of watercourses, this chapter reviews the current efforts to apply these principles to institutionalise cooperation in the Nile basin through the NBI and the LVBC/EAC. There is no doubt that the proposed mechanisms of cooperation not only mark a bold step towards overcoming the complex mosaic of river management challenges that date back to the colonial period, but they also hold the promise for maximising welfare, in a sustainable and equitable manner, for all who inhabit the basin.

5.1 The Nile Basin Initiative (NBI)

Launched in 1999, the NBI is a transitional mechanism for cooperation in the pursuit of sustainable development and management of the Nile waters. The launch was a major step in the general direction of implementing Ethiopia's proposition, at the third TECCONILE ministerial meeting in Arusha - Tanzania, for the elaboration of a framework for cooperation as a precursor to the implementation of the Nile River Basin Action Plan (Alemu, 1995). It called for the formation of a Panel of Experts comprising three person teams of legal and water specialists from each country to formulate a users' code, based on the Principle of Equitable Utilisation, by which a new allocation of the Nile waters could be made.

The panel was constituted in 1997 and the dialogue for the Cooperative Framework, commonly referred to as Project D3, was set in motion by the Agreed Minutes¹³ of the September 1998 TECCONILE meeting in Arusha. In the same Minutes, it was announced that the countries of the basin were embarking on cooperation "without prejudice to all rights and obligation each riparian State has under international law to the equitable use of the waters of the Nile"; a process that was officially named the Nile Basin Initiative in May 1999 (NBI, 2002).

¹³ Signed by all but Eritrea; her first Council of Ministers meeting was in Addis Ababa, 1999.

5.1.1 Structure

At its pinnacle is the Council of Ministers of Water Affairs of the Nile Basin (Nile-COM). Nile-COM is the main policy and guidance forum for cooperation. It also serves as the highest decision-making body of the NBI. It is assisted in this role by a Technical Advisory Committee (Nile-TAC) comprising of two senior officials from each member country. Nile-TAC is the transitional institutional mechanism for coordinating joint activities relevant to the Strategic Action Program pending completion of the Cooperative Framework. In this role, Nile-TAC advises Nile-COM on technical matters regarding principles, procedures and projects within the overall basinwide framework. It is also empowered to appoint and define the tasks of the Subsidiary Advisory Committees.

National Focal Point Institutions in each riparian country bear responsibility for preparing and implementing the Subsidiary Action Programs at the sub-basin level. This responsibility also extends to harmonising national policies with the basinwide policies.

The administrative function is provided by a Secretariat (Nile-SEC) which is based at Entebbe, Uganda. The framework also includes an ‘international discourse’ to promote broad based discussion on the sustainable development and management of the basin’s water resources. A Nile Basin Discourse Desk used to be operated at the Secretariat but was closed in 2004. The international discourse is now being developed under the auspices of the World Wildlife Fund, the World Conservation Union (IUCN) and the World Bank.

5.1.2 The Strategic Action Program

Despite the extraordinary natural endowments and rich cultural history of the Nile Basin, it is known more for its extreme poverty, relentless conflict, famine and disease than anything else. Yet in the Nile, the riparian countries have an unparalleled opportunity for development that could enhance food production, energy availability, transportation, industrial development, environmental conservation, and other related development activities in the region. The potential for achieving regional harmony and economic development through collaboration in the management of the resources is such that it justifies any cost to attain it. The challenge is, and has always been, how to institute cooperation amidst the sovereignty driven contest for shares of the Nile’s waters.

The NBI’s Strategic Action Program takes this as the point of departure to set an agenda for achieving “sustainable socio-economic development through the equitable utilisation of, and benefit from, the common Nile Basin water resources”(NBI and World Bank, 2001:2). Pursuant to this, the primary objectives of the NBI are:

- to develop the water resources of the Nile Basin in a sustainable and equitable way to ensure prosperity, security and peace for all its peoples;

- to ensure efficient water management and the optimal use of the resources;
- to ensure cooperation and joint action between the riparian countries, seeking win-win gains;
- to target poverty eradication and promote economic integration; and
- to ensure that the program results in a move from planning to action.

They are to be achieved through a two-tier Strategic Action Program comprising of the Shared Vision Program (SVP) and the Subsidiary Action Program (SAP). The SVP comprises a limited range of essential but effective activities to create a coordination mechanism and an enabling environment for collaboration, while the SAP is to be the implementing arm of the SVP and, basing on the principle of subsidiarity, will be organised at the lowest appropriate level.

5.1.3 Shared Vision Program

The SVP is to act as the catalyst for basin-wide cooperation; building trust, capacity and ensuring a comprehensive approach to the management and development of water resources for the greater goal of achieving sustainable basin-wide socio-economic development. The Shared Vision Program project portfolio includes seven projects that are designed to build a strong foundation for regional cooperation through support to basin-wide engagement and dialogue, developing common strategic and analytical frameworks, building practical tools and demonstrations, and strengthening human and institutional capacity.

A major component of the SVP is the development of a Legal and Institutional Framework for Cooperation, which is now almost ready for adoption by the member states.

5.1.4 Subsidiary Action Programs

The Subsidiary Action Program (SAP) is the implementing arm of the SVP. It comprises of actual development projects organised at two sub-basin levels, namely: the Eastern Nile Subsidiary Action Program (ENSAP) bringing together Egypt, Eritrea, Ethiopia and Sudan; and the Nile Equatorial Lakes Subsidiary Action Program (NELSAP) consisting of Burundi, the DRC, Kenya, Rwanda, Tanzania and Uganda. Egypt and Sudan participate as observers. The idea is to take full advantage of the opportunities in the different geographical areas to address the unique nature of the needs in each sub-basin. Working within a basin-wide framework of principles of equitable utilisation, No Significant Harm and cooperation, the implementation of the development projects will be in such a manner as to counterbalance the positive and negative impacts of the different projects such that the net impact optimises the benefits for all

.The two units have a similar structure to that of the NBI, with a Council of Ministers of Water Affairs being the supreme authority in each sub-basin, respectively referred to as EN-COM and NEL-COM. Simi-

larly, technical support is provided by an ENSAP Team (ENSAPT), which replaced EN-TAC after a recent restructuring exercise, and NEL-TAC.

At country level, responsibility for the individual investment projects falls on National Coordinators and Working Groups while overall coordination and liaison is done by the National Focal Point Institutions. The two subsidiary programs are respectively run through the Eastern Nile Technical Regional Office (ENTRO) in Addis Ababa, and the NEL Coordination Unit (NEL-CU) in Kigali.

The Nile Equatorial Lakes Subsidiary Action Program (NELSAP)

The water resources of the Equatorial Plateau and the unique ecosystems and biodiversity supported by this great complex of lakes, rivers and wetlands are of world renown. They are also central to the sustenance of the livelihoods of the over 158 million inhabitants of the Nile Equatorial Lakes sub-basin who depend on them for energy, fishing, industrial and municipal water needs as well as farming the fertile lands bordering them.

But as the basin population continues to grow, so too has uncontrolled development along the lake shores and riverbanks; waste management problems; removal of vegetation cover; and land degradation. These changes have led to soil erosion, the application of agricultural chemicals to improve land productivity, and increased flooding and surface runoff causing siltation and excessive nutrient loads as a consequence of which the equatorial lakes are being choked by the water hyacinth. Ironically, the increased economic activity and improved welfare spawned by the resources has also increased the prevalence of water-borne diseases, malaria and HIV/AIDS.

However, the potential for the resources to underpin strong economic growth in this sub-basin, which is home to two of the world's five least developed countries, and where none of the riparian states has a GNP per capita of more than US \$350 (UNDP, 2003), is undeniable. It is just that it must be preceded by a better resources management system.

In recognition of this, the riparian countries agreed on a project portfolio that places Water Resources Management at the centre of NELSAP's objective to contribute to the eradication of poverty; promote economic growth; and to reverse environmental degradation.

The Eastern Nile Subsidiary Action Program (ENSAP)

The Eastern Nile region is one of varied landscapes, spanning the rugged highlands of Ethiopia in the east; the wetland areas of Sudan and Ethiopia in the south; and the deserts of Sudan and Egypt in the north. It is also in this region that three major tributaries of the Nile – the Abbay (Blue Nile), the Tekeze (Atbara), and the Baro-Akobo (Sobat) Rivers – have their headwaters.

Rainfall is highly variable across the region, from season to season, and from year to year. This high climatic variability renders the region subject to frequent droughts and floods. High population growth has increased

the pressure on the land resulting in its degradation and consequently poor agricultural production. This, in turn, has led to use of marginal lands, and deforestation. Coupled with overgrazing, this has exacerbated the problem of erosion, which due to downstream sedimentation, not only reduces the efficiency of hydropower production and irrigation but also degrades the environment. And although there is a large, untapped potential for hydropower production, access to electricity is less than 15% in Ethiopia and Sudan and, therefore, a constraint on economic growth.

It is against this background that the Eastern Nile riparian states embarked on the Integrated Development of the Eastern Nile project. The goal is to use this project as a means of initiating a regional, integrated, multi-purpose development program that will not only maximise the benefits they derive from the Nile's resources, but also demonstrate collaboration.

5.1.5 The Draft Nile River Basin Cooperative Framework

The NBI's key achievements so far have been the development of basin wide action programmes as well as the co-ordination of the ongoing negotiations by the Nile River riparian states of a draft agreement intended to establish a permanent basin wide legal and institutional framework for the Nile River Basin. While a co-operative framework agreement is yet to be finalised and signed, negotiations are at an advanced stage and most of the substantive provisions of the draft agreement have been agreed by NBI member states.

The most recent draft Agreement on the Nile River Basin Cooperative Framework ("the Framework Agreement") is that presented and considered by the Nile River Basin Council of Ministers ("Nile-COM") at its annual general meeting held at Entebbe, Uganda during 22nd – 25th June 2007. The key provisions of the Framework Agreement are summarised below.

Scope of the Nile Basin Cooperative Framework Agreement

The Framework Agreement will, when adopted, regulate the use, development, protection, conservation and management of the entire Nile River Basin and its resources. It proposes to establish a basin wide legal and institutional framework for cooperation among the Nile River Basin states.

The key terms under the Framework Agreement are the "Nile River Basin" and the "Nile River System". Both are defined widely in accordance with accepted international law principles in terms of the geographical area determined by the watershed limits of the surface and ground waters related to the Nile River. It is clear from Articles 1 and 2 of the Framework Agreement that the Kagera River Basin forms part of the "Nile River System" and so constitutes part of the wider "Nile River Basin". The Framework Agreement will, therefore, when concluded and adopted by the NBI member states regulate the use, development, protection, conservation and management of the Kagera River Basin.

General Principles

The Framework Agreement sets out fifteen general principles that will guide the protection, use, conservation and development of the Nile River Basin.

These include the following:

- co-operation on the basis of sovereign equality, territorial integrity, mutual benefit and good faith;
- sustainable development;
- subsidiarity whereby development and protection of the River Nile Basin is planned and implemented at the lowest appropriate level;
- equitable and reasonable *utilisation* of waters of the Nile River System;
- the right of each Nile Basin State to use, within its territory, the waters of the Nile River Basin;
- each state to take appropriate measures individually, and where appropriate jointly for the protection and conservation of the Nile River Basin and its ecosystem;
- exchange of information on planned measures through the Nile Basin Commission;
- regular and reciprocal exchange of relevant data and information; and
- environmental impact assessment and audits.

Rights and Obligations

Articles 4 – 14 of the Framework Agreement set out the rights and obligations of the Nile River Basin states. Each Nile River Basin state will have the following rights and obligations in relation to national projects utilising the Nile River waters:

- the right to utilise water resources of the Nile River System and Basin in its territory in an equitable and reasonable manner;
- an obligation not to cause significant harm to other basin states;
- an obligation to take appropriate measures to protect, conserve and where necessary to rehabilitate the Nile River Basin and its eco systems;
- an obligation to exchange on a regular basis readily available and relevant data and information on existing measures and on the condition of water resources of the Basin;
- an obligation to exchange information on planned measures through the Nile Basin Commission;
- an obligation to undertake environmental impact assessments for any planned measures that have significant adverse environmental impacts –

applies to both national and transboundary projects;

- an obligation to allow affected stakeholders to participate in the planning and implementation of projects consistent with the basin – wide framework;
- an obligation to take all appropriate measures to prevent or mitigate conditions harmful to other basin states such as floods, invasive weeds, water-borne diseases, siltation, erosion, drought or desertification;
- an obligation to promptly notify other potentially affected and competent basin states of any emergency situations originating in its territory and to take all practicable measures to prevent, mitigate and eliminate harmful effects of the emergency; and
- an obligation to protect Nile River Basin and related installations in times of armed conflict.

The text for the water security being the most contentious due to colonial Nile River Basin treaties and agreements that favour Egypt and Sudan is yet to be agreed.

Institutional Framework

The Framework Agreement proposes the establishment of the Nile Basin Commission (NBC) as an apex institution for the implementation of the Agreement. Under Article 17 of the Framework Agreement, the NBC will be composed of the following organs:

- the Conference of Heads of State and Government;
- the Council of Ministers;
- the Technical Advisory Committee;
- the Sectoral Advisory Committees; and
- the Secretariat.

Legal Status of the NBC

The NBC will be established as an intergovernmental organisation with international legal status including the capacity to enter into agreements, to incur obligations, to receive donations, to sue and be sued in its own name. The Framework Agreement envisages the negotiation of a separate protocol setting out detailed privileges and immunities of the NBC (see Article 19).

Conference of Heads of State and Government

Under Articles 20-21 of the Framework Agreement, the Conference of Heads of State and Government of NBI member states will be the supreme policy-making organ of the NBC. Its rules and procedures will be established by the Conference.

Council of Ministers Articles 22-24 of the Framework Agreement deal with the composition, powers and functions of the NBC Council of Ministers (“the Council”). The Council will be composed of Ministers for Water Affairs of each Nile River Basin state, and “other ministers according to the agenda of the NBC”.

The Council is required to meet at least once a year. Decisions by the Council must be by consensus and are binding on all Nile River Basin states. Under Article 24, the Council is charged with the key function of overseeing the effective implementation of the Framework Agreement. Its powers and functions are wide and include addressing any disputes concerning the Framework Agreement.

Technical Advisory Committee

A Technical Advisory Committee (TAC) will be established under Article 25 of the Nile Basin Cooperative Framework Agreement. It will be composed of two members from each Nile River Basin State “who shall be senior officials”. The Technical Advisory Committee has power to establish specialized Working Groups. It is required to meet at least twice a year.

The key function of the Technical Advisory Committee is the preparation for the consideration of the Council co-operative programs for the integrated, sustainable management and development of the Nile River Basin – see Article 26 (1). Another key function of TAC is to advise the Council on technical matters relating to the use, development, protection, conservation and management of the Nile River Basin.

Sector Advisory Committees

These are committees which can be established by the Council under Articles 27 and 28 to deal with sector specific matters within the competence of the NBC. Each Sector Advisory Committee is composed of one member from each NBI member state who is an expert in the field or activity of the committee.

Under Articles 27 (4), the Council is given power to establish a Sector Advisory Committee charged with establishing linkages between sub-basin organisations and the NBC. The functions of each Sector Advisory Committee are those specified in the terms of reference determined by the Council.

The Secretariat

The Secretariat is headed by the Executive Secretary who is accountable to the Council through the TAC. The Secretariat’s key function is to assist the TAC with the preparation of a plan for the coordinated, integrated and sustainable management and development of the Nile River Basin. Other functions of the Secretariat are set out in Article 30 (8) – (ii) and include the following:

- provision of other assistance to all NBC organs upon request concerning matters related to the discharge of their functions; and
- compilation, coordination and monitoring of information related to the Nile River Basin as well as review of such information for the purpose of integrating it into basin-wide databases, standards formulation and infor-

mation exchange.

Subsidiary Institutions	Institutions	<p>The Framework Agreement recognises the importance of utilising sub-basin organisations and arrangements. This is implemented through Articles 31 and 32 of the Agreement.</p> <p>Article 31 (2) obliges Nile River Basin member states which are members of sub-basin organisations or arrangements to ensure that such organisations and arrangements are consistent with those of the NBC and the principles of the framework. Such member states must also ensure that sub-basin organisations to which they belong work in close cooperation with the NBC, which is mandated to maintain regular contact, and is required to cooperate closely, with sub-basin organisations or arrangements.</p>
National Nile Focal Point Institutions	Focal Point Institutions	<p>Each Nile River Basin State is required to establish or designate a National Nile Focal Point institution and to notify the NBC. The function of a National Focal Point Institution is to serve as the national institution through which all NBI related matters in that state can be coordinated by NBC.</p>
Dispute Settlement		<p>Disputes under the Framework Agreement are to be settled by peaceful means by negotiation between individual states.</p> <p>If unable to resolve the dispute(s) the states can seek the intervention of the NBC through mediation or conciliation or arbitration.</p> <p>If the parties are unable to settle dispute within six (6) months from the time of request for negotiations, the dispute is to be submitted at the request of any of the parties to an impartial fact – finding commission in accordance with the terms of the Annex to the Framework Agreement.</p>
Supplementary Instruments	Instruments	<p>Article 34 (1) allows Nile River Basin states to adopt bilateral or multilateral instruments concerning positions of the Nile River Basin or system such as sub-basins or tributaries as long as those instruments supplement and apply the principles of the framework.</p>
Ratification or Accession	Accession	<p>The Framework Agreement is subject to ratification and accession by all Nile River Basin states. It will not come into force until it is ratified by all basin states.</p> <p>The process of developing and establishing the Commission is being greatly hindered by bureaucracy and divergent interests of member states. The large number of countries has necessitated that the structure be broad to insure inclusion and participation of all the member states. As a result, the process of decision making can sometimes be very bureaucratic. The lack of legal status, has curtailed NBI's effectiveness and capacity to enforce decisions and policies. Until the Nile Basin Framework Agreement has been ratified by all Nile River Basin states, it cannot provide a permanent legal basis for the proposed Kagera River Basin Cooperative Framework.</p>

5.2 The Lake Victoria Basin Commission

The LVBC derives its mandate from the EAC and, as a means of setting the background, a review of the LVBC is preceded here by a review of the EAC treaty.

5.2.1 The EAC Treaty

Establishment	<p>The East African Community (EAC) is a regional group of countries in the East African region comprising Tanzania, Kenya, Uganda, Rwanda and Burundi. The EAC was set up under the Treaty for the Establishment of the East African Community (“the EAC Treaty”) which was signed on 30th November 1999 and came into force on 7th July 2000. It re-established the East African Community, the earlier treaty having collapsed in 1977.</p> <p>The EAC was originally established by and comprised of Tanzania, Kenya and Uganda, but on the 18th June 2007, Burundi and Rwanda signed treaties of accession to the EAC and became full members of the EAC effective from 1st July 2007. Both Rwanda and Burundi are now bound by the EAC Treaty, EAC legislation, EAC protocols and instruments and memoranda of understanding.</p>
Legal Status	<p>Article 4 of the EAC Treaty gives the EAC legal capacity and status of a body corporate. In that corporate capacity, the EAC has perpetual succession, and powers to acquire, hold, manage and dispose of land and other property as well as to sue or be sued in its own corporate name.</p>
EAC Objectives	<p>The key objectives of the EAC are set out in Articles 5 of the EAC. They include the development of policies and programmes aimed at the widening and deepening of regional co-operation in political, economic, social and cultural fields, research and technology, defence, security and legal and judicial affairs. For purposes of implementing its objectives, the EAC is required to ensure, amongst other areas of cooperation, the “promotion of sustainable utilisation of natural resources of the EAC member states and the taking of measures that would effectively protect the natural environment” (see Article 15 (3) (c).</p>
EAC Operational Principles	<p>Article 7 of the EAC Treaty sets out the operational principles of the EAC. Such principles include the principle of subsidiarity with emphasis on multi-level participation and involvement of a wide range of stake-holders in the process of integration. They also include the principle of equitable distribution of benefits.</p>
Implementation	<p>Each EAC partner state is, under the EAC Treaty (Article 8 (2) (b)), required to confer upon EAC legislation, regulations and directives and its institutions the force of law within its territory. EAC organs, institutions and laws take precedence over similar national ones on matters pertaining to the implementation of the EAC Treaty.</p>
Institutional Framework	<p>The EAC institutional framework comprises the following organs:</p>

- the Summit;
- the Council;
- the Coordination Committee;
- Sectoral Committees;
- the East African Court of Justice;
- the East African Legislative Assembly; and
- the Secretariat.

The composition and functions of above organs are detailed in Articles 10 -71 of the EAC Treaty.

Areas of Cooperation Articles 74 – 131 of the EAC Treaty set out areas of cooperation agreed by EAC partner states. These include cooperation in environment and natural resources management (see Articles 111-114).

Article 112 requires the partner states to develop a common environmental policy, to develop special environmental strategies and to take measures to control transboundary air, land and water pollution. Article 113 enjoins the partner states to adopt common policies and positions against illegal dumping of toxic and hazardous waste, and to harmonize their legal and regulatory framework in this regard.

Articles 114 (1) (c), and (2) (b) specifically oblige EAC member states to cooperate in relation to water and marine resources and for this purpose to establish and adopt common policies and regulations for the conservation, management and development of marine parks, reserves, wetlands, fisheries resources, inland and marine waters.

The EAC partner states are also under an obligation to establish a body for the management of Lake Victoria.

Treaties of Accession into the EAC

Both Rwanda and Burundi have been admitted as, and are now, full members of the EAC. Each country signed a separate but identical Treaty of Accession into the EAC at the EAC Summit held in Kampala on the 18th June 2007. The date of admission of both countries into the EAC is 1st July 2007.

Article 1 of the Treaties of Accession signed by both Rwanda and Burundi confirm that both countries are parties to the “EAC Treaty, all Protocols to the Treaty, Tripartite Agreements and Memoranda of Understanding by which the Treaty is supplemented”. The conditions of admission, levels of cooperation and EAC legislation, policies, protocols, agreements, projects, programmes, agreed positions and actions by which Rwanda and Burundi

as new EAC members are bound are set out in the Annexes to the respective Treaties of Accession signed by the two countries.

Item 1.2 (i) and (k) of the said Annex confirm that both Rwanda and Burundi are bound by the EAC Protocol for the Sustainable Development of Lake Victoria Basin and the Protocol on Environment and Natural Resources. Articles 6 and 7 of the Treaties of Accession specifically oblige Rwanda and Burundi to cooperate with other EAC partner states in the “Productive and Social Sectors” which include natural resources management.

Article 8 of the Treaties of Accession entitles both Rwanda and Burundi to participate in EAC institutions, projects and programmes which include:

- investment and industrial development;
- infrastructure and services;
- agriculture and food security;
- environment and natural resources management;
- tourism and wildlife; and
- health, social, cultural activities and gender development.

The Treaties of Accession into the EAC entered into by both Rwanda and Burundi bring both countries under EAC legislation, parliament and judicial system as well as entitle both countries to participate in EAC institutions, projects and programmes. To the extent that the four Kagera River riparian countries are now full members of the EAC, the proposed Kagera River Basin Cooperative Framework can be formulated under the EAC Treaty and Protocols and implemented through either existing EAC institutions such as the Lake Victoria Basin Commission (LVBC) or new EAC institutions specific to the Kagera River Basin.

5.2.2 Protocol for Sustainable Development of Lake Victoria Basin

As indicated above, EAC partner states agreed under Article 114 of the EAC Treaty to establish a body for the management of Lake Victoria. This was implemented by the EAC through the adoption of the Protocol for Sustainable Development of Lake Victoria Basin on 29th November 2003 (“the LVBC Protocol”). Since 2006 the Secretariat has been based in Kisumu, Kenya. The salient features of the LVBC Protocol are summarised below.

Coverage

The Protocol governs EAC member states’ cooperation in relation to the sustainable development of the “Lake Victoria Basin” – see Article 2. The term “Lake Victoria Basin” is defined widely under Article 1 in accordance with generally accepted principles of international law as being

the geographical area “determined by the watershed limits of the system of waters, including surface and underground waters flowing into” Lake Victoria. This means that all rivers and tributaries of rivers wholly draining into Lake Victoria including the Kagera River Basin form part of the wider “Lake Victoria Basin” and so are regulated by the LVBC Protocol.

Scope of Cooperation

Article 3 obliges all EAC partner states to cooperate in relation to the conservation and sustainable utilisation of the resources of the Lake Victoria Basin. Areas of cooperation include:

- sustainable development, management and equitable utilisation of water resources; and
- environmental protection and management of the basin.

Management Principles

The LVBC Protocols sets out in Article 4 the general principles to guide the management of the Lake Victoria Basin. These principles are drawn from accepted rules of international law regarding waterways. Key principles include:

- equitable and reasonable utilisation of water resources;
- sustainable development;
- prevention to cause harm to EAC members which oblige EAC partner states to individually and jointly take appropriate measures to prevent environmental harm;
- environmental impact assessment and audit;
- prevention, minimization and control of pollution of water courses so as to minimize adverse effects on fresh water resources and their ecosystems and on human health;
- the protection and preservation of the ecosystems of international water courses whereby ecosystems are treated as units, all of whose components are necessary to their proper functioning;
- the principle of community of interests in an international watercourse whereby all states sharing an international watercourse system have an interest in the unitary whole of the system;
- water is a social and economic good and a finite resource; and
- the principle of subsidiarity.

Article 5 of the Protocol obliges all EAC partner states to utilise the water resources of the Basin in an equitable and reasonable manner.

Lake Victoria Basin / Nile River Basin Linkages

Article 5 (7) of the LVBC Protocol recognises the fact that the Lake Victoria Basin forms part of the wider Nile River Basin. It requires EAC partner states to “cooperate with other interested parties, regional or international bodies and programmes”. It is important to note that in any cooperative arrangements entered into with any interested parties, EAC partner states are required to “negotiate as a bloc”.

This means that in any cooperative arrangements between the EAC and the NBI in relation to the proposed Kagera River Basin Cooperative framework all EAC member states are required to negotiate as one bloc i.e. adopt a common agreed position. Considering that;

- all of the four Kagera River Basin riparian states are members of the EAC;
- the Kagera River Basin drains wholly into, and forms part of, the Lake Victoria Basin and is therefore subject to the LVBC Protocol; and
- under the LVBC Protocol, the Lake Victoria Basin Commission (“LVBC”) is the management institution charged with the responsibility of regulating and overseeing the development and management of the Lake Victoria Basin.

Any proposed cooperative framework for the Kagera River Basin outside the LVBC Protocol and EAC Treaty is unlikely to get the support of the four riparian countries since they are now all EAC member states.

Environmental Protection

Articles 12 and 14 impose an obligation on each EAC member state to develop national laws and regulations requiring project developers to undertake environmental impact assessments and audits of planned and existing activities that are likely or have a significant impact on the environment and resources of the Lake Victoria Basin.

In particular, if a project’s environmental impact assessment (EIA) determines that the project is likely to have “a significant transboundary effect on the resources of the Basin”, the concerned state is required to avail other EAC partner states and the EAC Secretariat the EIA for comments (see Article 12 (3)). If a partner state’s views on an EIA for a project with significant transboundary effects are not taken into account, the state can invoke the dispute settlement procedure under Article 46 of the LVBC Protocol.

Lake Victoria Basin Management Plans

Under Article 27 of the LVBC Protocol, each EAC partner state is required to:

- develop a national strategies, plans and programmes for conservation and sustainable use of the resources of the Lake Victoria Basin; and
- integrate the conservation and sustainable use of the resources of the Lake Victoria Basin into relevant sectoral or cross-sectoral plans, programmes and policies.

The LVBC has the mandate to develop a management plan for the conservation and sustainable utilisation of the resources of the Lake Victoria Basin. LVBC has developed a management plan and is currently formulating an operational strategy for the Lake Victoria Basin.

Lake Victoria Basin Commission

Article 33 of the LVBC Protocol establishes the Lake Victoria Basin Commission (LVBC) as the EAC institution mandated to regulate and oversee the sustainable development and management of the Lake Victoria Basin. The objectives and functions of the LVBC are set out Article 33 and include the following:

- promotion of equitable economic growth;
- promotion of measures aimed at eradicating poverty;
- promotion of sustainable utilisation and management of natural resources;
- promotion of the protection of the environment within the Lake Victoria Basin;
- harmonization of policies, laws, regulations and standards;
- guidance on implementation of sectoral projects and programmes; and
- preparation and harmonization of the negotiating positions for EAC partner states against any other state on matters concerning the Lake Victoria Basin.

LVBC operates through the following EAC organs:

- The Sectoral Council on Lake Victoria;
- The Coordination Committee;
- The Sectoral Committees; and
- The LVBC Secretariat.

The Sectoral Council on Lake Victoria

Article 35 of the LVBC Protocol establishes a Sectoral Council on Lake Victoria. Its main function is to provide overall policy direction for project and programme implementation. The Sectoral Council on Lake Victoria is also mandated to guide the implementation of development projects in the Lake Victoria Basin. It also has powers to make regulations, issue directives and make recommendations in accordance with the LVBC Protocol.

The Coordination Committee

This is provided for under Article 36 of the LVBC Protocol. Its main functions

are:

- to submit reports and recommendations to the Sectoral Council on the LVBC Protocol implementation;
- to implement decisions of the Sectoral Council;
- to receive and consider reports from Sectoral Committees; and
- to deal with matters relevant to the Lake Victoria Basin.

The Sectoral Committees

Article 37 of the LVBC Protocol gives the Coordination Committee powers to recommend to the Council of EAC Ministers the establishment of sectoral committees. EAC partner states are required to establish National Focal Points to co-ordinate national initiatives of the Lake Victoria Basin and share information with the LVBC. The functions of Sectoral Committees are set out in Article 38 and include the following:

- co-ordination of regional activities and those of national focal points;
- preparation of comprehensive programmes and priorities for the Lake Victoria Basin;
- monitoring and review of implementation programmes; and
- submission of reports and recommendations to working groups and national focal points.

The LVBC Secretariat

Article 39 of the LVBC Protocol provides for the establishment of the LVBC Secretariat headed by the Executive Secretary. The functions of the LVBC Executive Secretary and the Secretariat include the following:

- implementation of the work of the LVBC in accordance with the policy and decisions of the Sectoral Council;
- submit reports on the work of the LVBC;
- co-ordination and harmonization of the policies and strategies of the LVBC;
- establishment of a regional database, sharing of information and development of information systems and data exchange;
- submit reports to the Sectoral Council through the Co-ordination Committee;
- mobilization of resources for the implementation of LVBC projects and

programmes;

- development of a sustainable funding mechanism for facilitating sustainable development of the Lake Victoria Basin; and
- implementation of the decisions of the Sectoral Council.

Other Lake Victoria Agreements

Article 48 (1) of the LVBC Protocol states that the Protocol takes precedence over any other existing agreements relating to Lake Victoria. It provides that in cases of any inconsistency any other agreement “shall be null and void to the extent of its inconsistency”. This suggests that to the extent that the Kagera River Basin forms part of the wider Lake Victoria Basin, any agreement or other legal instrument for the proposed Kagera River transboundary co-operative framework based on the Framework Agreement or other non-EAC framework would be null and void under the LVBC Protocol and EAC Treaty and would not be endorsed by EAC partner states.

5.2.3 The Lake Victoria Basin Bill

The Lake Victoria Basin Commission Bill is currently before the East African Legislative Assembly. The Bill provides for the establishment of the same institutional framework and organs of the LVBC as those under the LVBC Protocol. Its main purpose appears to be intended to give the LVBC corporate legal status. The LVBC Protocol did not address the legal status of the LVBC and this Bill seeks to remedy the anomaly by providing in Clause 3 that the LVBC as established by the Council under Article 33 of the LVBC Protocol shall be a body corporate with perpetual succession and a common seal and may ‘acquire, hold and dispose of moveable and immovable property, sue or be sued in its corporate name and do any other thing that a body corporate may lawfully do.’

When the Bill is passed, the LVBC established under the Bill will be the successor to the LVBC existing immediately prior to the enactment of the LVBC Bill (Clause 3 (2)).

5.2.4 EAC Protocol on Environment and Resources Management

The EAC Protocol on Environment and Natural Resources Management was signed on 3rd April 2006 by the EAC Council of Ministers. Key features of the Protocol are outlined below:

Scope

The Protocol is intended to spell out the scope of cooperation for all EAC member states in the management of the environment and natural resources including transboundary ecosystems and natural resources – see Article 2. It is of general application but specific areas covered by the Protocol are set out in Article 3 and include the following:

- management of transboundary resources;

- management of water resources;
- sustainable environment and natural resources management;
- management of energy resources;
- management of fisheries resources;
- management of wastes and hazardous wastes;
- pollution control and management;
- environmental impact assessment and environmental audits; and
- environmental standards.

General Principles and Objectives

The general principles and objectives that guide the Protocol's implementation are set out in Articles 4 and 5 and are broadly similar to the principles generally accepted under international law and those set out in the draft Nile Basin Cooperative Framework Agreement.

Management of Transboundary Resources

Management of transboundary resources is covered under Article 9 of the Protocol. EAC member states are required to:

- develop mechanisms to ensure sustainable utilisation of transboundary ecosystems; and
- jointly develop and adopt harmonized common policies and strategies for the sustainable management of transboundary natural resources.

Management of Water Resources

Article 13 requires EAC member states to “develop, harmonise and adopt common national policies, laws and programmes relating to the management and sustainable use of water resources”.

Environmental Impact Assessment and Audit

Article 31 imposes the following obligations on EAC member states:

- an obligation to harmonise and adopt common policies, laws and programmes requiring the conduct of environmental impact assessments for planned activities and projects which are likely to have significant adverse impacts;
- an obligation to plan at an early stage for transboundary activities and projects that may have significant adverse environmental impacts and to undertake comprehensive EIAs;
- an obligation to adopt common guidelines on EIAs in shared ecosystems; and

- an obligation to develop and adopt common guidelines and procedures for periodic project environmental audits.
- Environmental Standards EAC partner states are under an obligation to develop and harmonise common environmental standards and laws to control pollution.
- EAC Sectoral Committee on Environment and National Resources Article 36 establishes in accordance with Article 20 of the EAC Treaty, a Sectoral Committee on Environment and Natural Resources.
- Its functions are as follows:
- preparation of a comprehensive implementation programme and setting of priorities in relation to the environment sector;
 - monitoring and review of implementation of EAC environment programmes; and
 - submission of regular reports and recommendations to the Co-ordination Committee concerning the implementation of the EAC Treaty and its effect on the environment sector.
- National Focal Points Each EAC member state is required in consultation with the EAC Secretariat to designate a “national focal point” for coordination of the implementation of the Protocol at national level – see Article 38.
- EAC Environmental Laws Article 41 of the Protocol provides that EAC environmental laws shall consist of the following:
- the relevant provisions of the EAC Treaty;
 - the Protocol for Sustainable Development of Lake Victoria Basin;
 - the EAC Protocol on Environment and Natural Resources Management;
 - the Regulations and Directives made by the Council of Ministers;
 - EAC Acts enacted by the EAC Legislative Assembly; and
 - relevant principles of international environmental law.

The above laws must apply uniformly in each EAC member state.

5.2.5 Draft Lake Victoria Transport Bill, 2007

The Bill mandates the LVBC to regulate, coordinate and oversee maritime safety and security, search and rescue, aids to navigation, hydrography and charting, meteorology, communications and to prevent pollution on Lake Victoria for the benefit of EAC member states.

5.2.6 Tripartite Agreement on Inland Waterways Transport

The purpose and objective of this Agreement is to promote and facilitate the safe and efficient use of inland waterways for transport of transit and inter-state traffic in goods, luggage, animals and passengers - See Article 1. It provides for free and open navigation on inland waterways to inter-state and transit traffic for vessels of EAC member states – see Article 3.

It also provides that EAC member states' laws and regulations relating to navigation on inland waters shall apply equally and without discrimination to the vessels and crews employed in interstate and transit transport – see Article 4.

EAC member states are under an obligation under the Agreement to harmonise and simplify their respective rules, regulations and administrative procedures governing inland waterway transport in accordance with the Agreement.

5.2.7 Lake Victoria Fisheries Organisation

The Convention for the Establishment of the Lake Victoria Fisheries Organisation was signed on 30th June 1994. It commenced operation on 24th May 1996. The LVFO was officially launched on 19th December 1996. Upon the entry into force of the EAC Treaty, the LVFO became a specialized institution of the EAC (see Article 9 (3) of the EAC Treaty).

Objectives and Functions of the LVFO

The main objective of the LVFO is to foster regional cooperation and harmonise national measures for the sustainable utilisation of fisheries and other resources of Lake Victoria including the conservation and management of fisheries resources.

Institutional Structure

LVFO organs are as follows:

- the Council of Ministers;
- the Policy Steering Committee;
- the Executive Committee;
- the Fisheries Management Committee, the Scientific Committee and other committees and working groups established by the Council of Ministers, and
- the Permanent Secretariat.

The LVFO Convention only applies to fisheries related matters on Lake Victoria. It does not purport to cover the entire Lake Victoria Basin. Accordingly, it does not apply to the Kagera River Basin.

5.2.8 East African Community WRM Policies

The EAC Water Resources Policy underlying objective is the importance of addressing the management, conservation and development of water resources in an integrated and holistic approach based on institutionalised gender and economic principles. The main objective of EAC Water Resources Strategic Action Programme is to ensure that the Partner States freshwater, coastal related ecosystems are protected, that every person has access to safe water at affordable cost to lead a healthy and productive life and that the communities are protected from risks of water related hazards.

Regional cooperation's objectives and areas of policy priorities

The East African cooperation's objectives as stated in the EAC Development Strategies (1997-2000 and 2006-2010) are to: (i) strengthen and consolidate cooperation in agreed fields with a view to bringing about equitable development among the Member States and thereby uplift the living standards and quality of life of the people; (ii) promote sustainable utilization of the region's natural resources and put in place measures for effective protection of the environment; (iii) enhance the role of women in development; and (iv) promote peace, security and good neighbourliness in the region.

EAC Development Strategies 1997-2000, 2001-2005, and 2006-2010

Each Development Strategy sets out the priority programmes to be implemented during a particular period. The First EAC Development Strategy (1997-2000) launched on 29th April 1997 by the three Heads of Partner States aimed to:

- promote the spirit of regional co-operation which was deeply rooted in the history of the region;
- support the existing forces which have major interest in the strengthening of regional institutions and in the free movement of people, capital, goods, as well as services and information within the region;
- place immediate emphasis on economic co-operation with a view to promoting enhanced political co-operation, and integration in the long run; and
- reinforce institutional capacities for regional co-operation.

Areas of Policy and Programme of Action (1997-2000)

In the Policy Action Matrix, the first strategy earmarked twelve policy and programme areas of action for implementation by Partner States: (i) easing of border crossing; (ii) free movement of capital; (iii) harmonization of fiscal and monetary policies; (iv) facilitation of inter-State transport and improvement of communication links between Partner States; (v) development of adequate, reliable and affordable energy supply in the region; (vi) development of areas of common interests (e.g. environment); (vii) sector policies to facilitate trade and investment; (viii) preparation of EAC region for the technological challenge of the 21st Century; (ix) strengthening institutions of coopera-

tion; (x) legal and judicial framework to support economic integration; (xi) attainment of satisfactory co-operation; and (xii) facilitation and strengthening of regional joint programs to sustain agricultural and livestock development.

The 12 areas of cooperation in 2001-2005 cooperation strategy:

- Macroeconomic policies including monetary and fiscal policies;
- Trade liberalization and development;
- Productive sectors consisting of agriculture and food security, investment and industrial development, tourism and wildlife and environment and natural resources;
- Infrastructure and supportive services;
- Human resource development and science and technology;
- Social sectors, immigration and labour policies;
- Legal and judicial affairs;
- Political matters including peace, security and defence;
- Broad participation of women, private sector and the civil society;
- Relations with other regional and international organizations;
- Institutional arrangements at the level of the Partner States and the EAC Secretariat;
- Managing distribution of benefits and costs as a cross-cutting issue.

Cooperation in environment and natural resources

The strategy commits Partner States to co-operating in environmental and natural resource conservation activities. Much emphasis has however, been accorded in areas of common interest such as the Lake Victoria and its Basin and other shared ecosystems e.g. the major watershed/catchment areas of Mt. Elgon, Mt. Kilimanjaro, Ewaso Ngiro and the Pemba Channel. It recognizes the need to harmonise management programmes in these areas by the Partner States in order to achieve the maximum benefits possible and to reverse environmental degradation. Institutions to manage resource exploitation are to be identified.

Cooperation in Environmental Management

Management programmes for transboundary eco-system already identified by Environment Committee of EAC, such as Mt. Kilimanjaro and Mt. Elgon are meant to be harmonised and co-ordinated. The following are included for har-

monization or attention:

- Exchange of research findings in forest management in tree breeding;
- Joint forest/bush fire surveillance and fighting programmes;
- Joint position as regards international issues touching on forests;
- Cross-border trade in forest products;
- Restoration of degraded common forest resources;
- Formalisation of meetings between Directors of forest, training and research heads of forest institutions and other interested stakeholders;
- Conservation of forest endemic species, assessment documentation and sustainable use of medicinal plants;
- Joint pest and disease monitoring and management programmes;
- Completion of work on harmonisation of Environmental Regulations that had been on-going, along with the Environmental Impact Assessment System;
- Partnership in capacity building in the sector; and
- Exploitation of the potentials in the coastal zone.

Co-operation in sustainable development of Lake Victoria Basin

The development strategy in this area focuses on establishing an institutional and legal framework that will coordinate the regional aspects of the activities of the different actors and interest groups in the Lake Victoria basin, based on the outcome of the legal and institutional study.

East African Community Development Strategy 2001-2005

The East African Community Development Strategy aims to do the following:

- Prepare and implement a comprehensive Development Strategy and Action Plan for the Sustainable Development of Lake Victoria Basin that shall focus on economic growth, poverty reduction, and protection of the environment. The recommendations of completed and on-going studies shall be incorporated in the comprehensive development strategy.
- Implement the Strategic Partnership Agreement between the Partner States and the Development Partners supporting sustainable development of Lake Victoria Basin.

Co-operation in integrated water resources management and development

Water is highly recognized and is at the heart of sustainable development. Every human being now and in the future, should have access to safe water for drinking, appropriate sanitation, and enough food and energy at reasonable cost. Water is the basis for all living ecosystem and habitats and part of an immutable hydrological cycle that must be respected if the development of human activity and well being is to be sustainable.

Partner States are therefore committed to developing the following:

- A shared Water Resources Vision;
- A common Water Resources Policy;
- A comprehensive Water Resources Strategic Action Programme.

The strategic interventions that have been proposed in the current strategy (2006-2010) have been driven by, among other things, the link between regional and national plans and long term visions; operationalising areas of common economic interests; greater involvement of the key stakeholders; equitable sharing of benefits of the integration process. The vision of regional integration in East Africa is to create wealth, raise the living standards of all people of East Africa and enhance international competitiveness of the region. These are expected to be achieved through increased production, trade and investments in the region.

The provisions of the EAC Treaty guide this Development Strategy. The Development Strategy identifies twelve areas of co-operation. Focus, in the implementation of the strategy is mainly on achieving a Customs Union and a Common Market.

Policy-oriented programs

Implementation of policy-oriented activities (in order of priority) has included the following (1997-2000):

- Policy harmonization and rationalization (macroeconomic policies and sectoral policies – e.g. trade and industry, tourism, investment, transport and communications, energy, agriculture and animal husbandry, environment, etc.);
- Development of technological capacity;
- Development and harmonization of institutional, legal and judicial framework; and
- Ensuring safety and security in the region.

Some of these challenges and lessons since the implementation of these strate-

gies are as follows:

The past, the feasibility for implementing various policy and programme actions based on country specific conditions were not determined. Policy actions, which required negotiation (protocol), such as free movement of capital, reduction of internal tariffs, and the like, lagged behind schedule.

Slow decision making processes at national levels raised some concern. Country specific modes of operation were not fully considered. Decision making often involved several statutory steps. The process involved development of Cabinet Paper by the respective Ministry whereby the Paper had to be submitted to the Cabinet Secretariat for discussion by the Inter-Ministerial Technical Committee, and from there to the Cabinet. If the issue requires approval from the higher level it had to be passed to the Parliament for final approval. Issues, which required amendment of the Law and other sensitive issues had to pass all this process. The time taken could be quite substantial.

This fact was not always taken into account in preparing time frame for activities. The decision making processes and prioritization at national level had not adapted to the new situation of the existence of EAC. The need to harmonize regional level priorities and national level priorities was not always recognized or appreciated. In spite of the decisions made at regional level, national level decisions and prioritization tended not to be coordinated with decisions made at EAC level. It is also possible that the speed of implementation may have been limited by the absence of a legally binding agreement, like the Treaty.

There was a time lag between changes made and change of attitudes and modalities of operation on the part of the operational staff on the ground. In future, awareness campaigns and public education may be required to reduce the gravity of this problem.

Sequencing of certain activities was sometimes inappropriate. For instance, the Policy action that required development of adequate and reliable energy supply in the region demanded for further inter-grid connection by Jan.1997. In order to have this task undertaken, national power master plan should have been in place first.

Resource constraints caused delays in implementation. For those activities whose implementation required additional finances from governments, timing for inclusion in the budget process was crucial. With the flow of international resources not forthcoming at the required time, programmes that were tied to the goodwill of the international community were not implemented on time. The implementation of large regional projects was constrained by the narrow resource base. The lesson to be drawn from this experience is that ways of broadening the sources of finance should be sought. Concerted effort need to be placed on increasing the sources of finance and broadening the resource base for implementation of projects.

While the large public institutions in particular were stuck in restructuring and privatization, new actors were emerging in the respective industries (e.g. in telecommunications, airlines, banking and insurance). Yet the EAC programmes did not adjust to these changes as expected under the principle of subsidiarity which the EAC has endorsed. The lesson to be drawn from this experience is that in future the EAC programmes will need to take fuller account of actors outside government for implementation of programmes.

Managing distribution of costs and benefits. Partner States are not equally developed. The perception of unequal development and unequal sharing of benefits and costs of integration has contributed to delaying the process of negotiations. However, these factors can be viewed as challenges for effective participation in the Community. The delays experienced during implementation of various policy and programme actions was in some cases a subsequent result of lack of awareness of implications of the actions.

Negotiations have taken long in some areas because the benefits were not obvious. More comprehensive identification of benefits and costs and analysis of options available were not always carried out by the respective Partner States. The lesson to be drawn from this experience is that there is need to develop the institutional and human capacity to manage regional co-operation in the context of unequal levels of development of Partner States.

6 Insights from Successful and Failed Transboundary River Basin Organisations

6.1 Introduction

As we develop a Kagera River Basin Transboundary Cooperative Framework, it is useful to critically consider, especially given the foregoing discussion of the characteristics of the basin, the history of, and the current efforts at cooperation in the basin and the standards set by international water law, the following questions:

- What are the conditions under which riparian states form institutions to manage the rivers they share?
- What are the determinants of effectiveness of those institutions?
- What are the pathways to success in managing transboundary water-courses?

To find answers to the above fundamental questions, this chapter reviews in detail four cases of institutionalised cooperation in the management of shared water resources from around the world. These are:

- The International Boundary and Water Commission United States and Mexico (IBWC), on the Colorado River;
- The Mahakali River Commission (MRC – India and Nepal), on the Mahakali River; and
- The Niger Basin Authority (NBA – Guinea, Benin, Cameroon, Chad, Ivory Cost, Mali, Niger, Nigeria and Burkina Faso), on the Niger.
- The Kagera Basin Organization

6.2 The International Boundary and Water Commission United States and Mexico

The Colorado River basin covers an area of about 627,000 km², in the United States (US), and 5,200 km² in Mexico. It rises in the Wyo-

ming and Colorado, in the US, and flows for about 2,340 km – 32 km of which forms the border between the US and Mexico – before emptying into the Gulf of California in the Mexican state of Baja California (Microsoft Encarta, 2000).

In the US, the Colorado is treated as having two sub-basins namely the Upper Basin (Colorado, New Mexico, Utah and Wyoming) from where the bulk of the river flow rises and is characterised by a low population; and the Lower Basin (Arizona, California and Nevada), which has a much larger aggregate population and rich agricultural lands that are entirely dependent on irrigation. In Mexico it flows through the states of Sonora and Baja California where its waters are used for irrigation in the fertile Mexicali Valley.

6.2.1 Evolution of the IBWC

International instruments regulating the river's development date as far back as 1889 when a Boundary Convention between the two countries established the International Boundary Commission (IBC) for purposes of territorial demarcation.

But, as the populations on both sides of the border grew, so too did the demands on the river waters, which include domestic and industrial supplies for the metropolises in the basin and irrigation of farmlands. It also became necessary to develop water control structures not only to serve as flood mitigation measures but also overcome the challenges posed by the intensiveness of use of the Colorado in the US, particularly the high levels of salinity and seepage losses. In the ensuing negotiations, a technical commission formed by the Government of Mexico to prepare recommendations for a treaty on her international watercourses advised with regard to the lower Colorado River:

‘... that both Governments should recognise the area as a single agricultural region with similar interests, closely linked and interdependent; that taking these considerations into account, both States should agree upon considering the problem as referring to a geographical unity, with common interests to be protected through a settlement that guarantees, according to a reasonable and equitable apportionment, the agricultural and industrial development of both bordering zones’ (Secretaria de Relaciones Exteriores, 1933: 30, emphasis added).

Although these eminently sensible recommendations, which accord with both modern approaches to the management of shared watercourses and current international law, were not explicitly incorporated into the 1944 Treaty concerning the Colorado, Tijuana and a portion of the Rio Grande (UN, 2006), by establishing a bi-national commission to oversee the utilisation of their shared watercourses, the parties may be said to have had them in mind.

Article 2 of the 1944 Treaty renamed and expanded the functions of the IBC that had been established under the 1889 Treaty. It became the International Boundary and Water Commission United States and Mexico (IBWC) now responsible for “the application of the present Treaty [1944],

the regulation and exercise of the rights and obligations [of the parties] thereunder, and the settlement of all disputes” arising from the treaty.

The treaty had sound provisions for dealing with issues of water quality and quantity which facilitated the negotiation and subsequent agreement in 1973 of Minute 242 of the IBWC setting forth a ‘Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River’ (IBWC, 1973). Minute 242 also established a procedure designed to avoid similar problems by making it a requirement for the two countries “to consult with each other prior to undertaking any new development of either the surface or groundwater resources, or undertaking substantial modifications of present developments, in its own territory in the border area that might adversely affect the other country” (IBWC, 1973).

6.2.2 Institutional Assessment

The IBWC has faced numerous challenges since its inception particularly with regard to water quantity entitlements among both parties and mutually beneficial development, but continues to function effectively primarily due to:

- a complete de-linkage of the commission’s work from politics;
- continuous political commitment at high levels;
- building on existing institutions;
- well focussed and technically sound objectives;
- openness and transparency;
- sound technical and financial capabilities;
- flexibility of arrangements for the execution of its functions; and
- sound mechanisms for the commission to interact with its social environment and coping with relevant changes.

6.3 The Mahakali River Commission

The Mahakali, which is called Sarada in India, rises high up in the Eastern Himalayas flowing into the plain of the Ganges River. Along the way it forms the boundary between Nepal and India and, once into the plains, it flows back and forth in Indian and Nepalese territory eventually meeting the Karnali River (Ghagra in India) which is one of Nepal’s major rivers and a tributary of the Ganges. Of its total catchment area of 12,000 km², 9,700 km² lie in India and 2,400 km² is in Nepal.

6.3.1 Evolution of the Mahakali River Commission (MRC)

In 1956, the Indian Central Water and Power Commission carried out a survey of locations on the Mahakali River suitable for the construction of storage dams for power generation. It identified a high and narrow gorge known as Pancheshwar as a possible dam site. Further studies of that site were carried out after 1962 by the Irrigation Department of Uttar Pradesh. The subsequent study report recommended the construction of a 262 m high storage dam across the river together with a power plant with a capacity of 1 gigawatt.

Subsequently, the Indian government submitted this proposal to the government of Nepal. In late 1977, and again in December 1978, Nepal agreed, in principle, to study the scheme, and two years later, in October 1980, a bi-national planning group was formed – the Joint Group of Experts – to decide about the course of future investigations and project studies.

In November 1995, negotiations started on a treaty for the Mahakali River, the Pancheshwar Project being part of the negotiations. Negotiations concluded on 12 January 1996, the with the Treaty Between His Majesty's Government of Nepal and the Government of India Concerning the Integrated Development of the Mahakali River including Sarada Barrage, Tanakpur Barrage and Pancheshwar Project, which was officially signed on 12 February 1996. As indicated in the title, the treaty covers three main subjects:

- Sarada Barrage (Article 1), which, according to a 1920 Agreement between British India and Nepal, was constructed in 1928 to divert river water into the Sarada Canal to supply the farmlands of the Indian Sarada Irrigation Project and supply the territories of Nepal with water. The Mahakali Treaty confirmed the water rights established by the 1920 Agreement and commits India to secure them in future.
- Tanakpur Barrage (Article 2) was constructed by India upstream of the Sarada Barrage at a point where the Mahakali is wholly Indian. The structure guides the river flow into the Tanakpur Power Canal and further to the Tanakpur Power Station, after which the water is turned back to the Mahakali River upstream of the Sarada Barrage. The Mahakali Treaty, which replaces two previous agreements covering the subject, permits India to extend the left end of the Tanakpur Barrage across the border and fix it to the Nepalese river bank. In exchange, Nepal is entitled to a certain amount of power from the plant and the supply of some water from the flow diverted from the barrage.
- Article 3 pertains to the Pancheshwar Project, setting down the principles and general rules regarding the sharing of the water of the Mahakali River and the design and implementation of the Pancheshwar Project. It provides for a project design that would optimise the total net benefits from power production, irrigation and flood control; the installation of the power plants; and the sharing of both the costs and the benefits. It also stipulates the terms of power trading between the two countries.

The remaining 9 articles of the treaty refer to several topics related to the utilisation and development of the water resources of the Mahakali River. Article 9 provides for the establishment of a bilateral Mahakali River Commission (MRC). The remaining articles pertain to the joint management of the Pancheshwar Project (Article 10); the arbitration procedures (Article 11); and the validity period of the treaty as well as review process (Article 12) (Thepa, 1998).

6.3.2 Institutional Assessment

The Mahakali Treaty is yet to be fully implemented; however the process of its negotiation provides valuable lessons on strategies parties may employ to, as is the case with current efforts to establish a Nile Basin Commission, successfully conclude parallel processes of institution-building and negotiating management instruments to handle largely positive externality problems. Similarly, success in this respect is attributed, in a large part, to:

- Strong and long-term commitment by member countries.
- Active involvement of third parties as Nepal did by utilising international consultants who she argued would ensure impartiality, contribute a wealth of world class experience and, in so doing, provide legitimacy to the outcome.
- Closed negotiations and consensus-building.
- Emphasis on the construction of works rather than on planning; and
- Emphasis on both equal participation and distributive equity.

6.4 Niger Basin Authority

With a catchment area of about 2,200,000 km², the Niger River Basin spreads across Benin, Burkina Faso, Cameroon, Chad, Guinea, Ivory Coast, Mali, Niger and Nigeria.

6.4.1 Evolution of the Niger Basin Authority (NBA)

With the hope of attracting international funding, the riparian states of the Niger River established the Niger River Commission (NBC) in 1964 the mandate of which was to promote inter-state cooperation for integrated development of natural resources of the river basin and harmonisation of national development policies. It was also to identify and construct works for land development, prevention and control of drought and desertification and regulation of the flow and drainage of the main water way. But failing to justify, to the funding agencies, the need for the projects let alone how they would fit into the overall plans for basin development, the NBC was forced to overhaul its mandate.

As a result, the NBC was replaced by a convention creating the Niger Basin Authority (NBA) in November 1980. The NBA's primary objectives were to raise funds and promote the study and implementation of works. Furthermore, the NBA was to run the Hydro Niger project involving 65 data collection platforms for the measurement and retrieval of real time hydro-meteorological data.

6.4.2 Institutional Assessment

Like the NBC, the NBA's failure has been blamed on its institutional weaknesses particularly its lack of effective decision making powers and the riparian countries' over-assertion of their national sovereignty. Other factors include:

- the large number of member states (9);
- the ambiguity in objectives which failed to clearly identify real beneficial targets;
- lack of support from member states;
- inadequate management and leadership;
- divergent interests of the member states, some of which had no interest in the Niger Basin and thus scuppered any joint action or decisions; and
- Failure to enlist sufficient donor support.

6.5 Kagera Basin Organization (KBO)

The Kagera River is acceptably recognized to provide the main single source of inflow to Lake Victoria (6.4 billion cubic meters a year) which is 28% of the net outflow from the lake at the Owen Falls dam. Any pollution or weed infestation to the river is considered to have significant impact on Lake Victoria. This highlights the importance of cooperation in the management of the Kagera basin.

6.5.1 Evolution of the KBO

The political history of the establishment of the KBO has already been discussed in Chapter 3 of this Final Report. Suffice it to mention here that the objective of the KBO was to strengthen the existing economic cooperation of member countries in the joint planning and development of the sub region's potential in the development of almost all the resources and sectors.

The sectors included, transport, agriculture, forestry, fisheries, industry, mining, tourism and education with priority for energy transport, agriculture and training. Equally, the area of activity was flexible covering the entire Kagera basin (59,000m²) and any other geographical area that was assigned to the KBO.

The governance and management of the KBO comprised of a Conference of Heads of State who provided the Supreme Authority. Below this was the council of ministers guided by a council of international experts. The secretariat was divided simply into two departments - one for project planning, preparation and execution and the other for administration. The total staff of the secretariat was about thirty nine.

6.5.2 Institutional Assessment

The KBO developed an Indicative Basin Development Plan in 1978 that attracted the evaluation of a large multi - donor mission in 1979. The mission produced an action program of ten projects in agriculture, hydro power, transport, communications and environment all with pre investment costs of about US\$ 40 million and a capital cost of US\$ 3 billion (in 1979). Following the presentation of the action program, a start was made on a pre feasibility study of the transport system, but it was not followed up in its second phase owing to lack of donor support.

In 1980, the KBO continued to pursue a program of large projects that called for much preparatory work much beyond the resource capacity of the organization.

The KBO was able to successfully establish and execute the following projects:

- The telecommunications project - financed by the AfDB and developed to establish international radio links between the domestic networks of member countries
- The tsetse fly control project
- The Rusumo Falls hydro power electric dam

A further project was the railway project to connect Rwanda and Burundi through two branch lines with the port of Bukoba in the west shore of Lake Victoria (This project was, however, not pursued further until the collapse of the KBO).

The KBO faced three challenges which adversely affected its smooth operations leading to a formal dissolution on the 7th July 2004.

The first one was the dispute on assessments of the proportion of contribution payable by the member states. While some member states wanted the contribution towards the running of the organization to be divided equally, others preferred to have this based on the members' GDP. The second issue was the payment for the national projects. Whereas some members wanted the projects to be financed exclusively by the domicile state (i.e. where projects were located) others wanted them to be financed from a common pool of financial resources. Incidentally, these issues were not fully resolved by the time the KBO

was dissolved.

According to the KBO Charter, funds for running the secretariat were to be voted annually and to be contributed by the four member states in equal parts. For example the 1983 budget was US\$4,227 million of which each member contributed US\$1,057 million. However, funds for financing development projects were solicited separately for each individual project.

The third challenge related to very ambitious plan – with limited resources. For example the estimated cost of agricultural projects (which included rain - fed agriculture, irrigation, swamp drainage, etc) was put at US\$74.6 million in 1982; energy project (e.g. the Rusumo Dam Hydro Power Station in Tanzania was estimated in 1982 to cost US\$684.6 million; *Railways*, which included the construction of a 1,500km railway network linking the Kagera Basin to the Northern Corridor i.e. Mombasa – Kasese line, the Central line i.e. Musoma – Arusha – Tanga, and Southern route, i.e. Dar-es-Salaam – Kigoma line – was estimated in 1982 to cost US\$1,96.0 million; the Roads project which was planned to cover a distance of 1,277 km initially, and distance 811 km was estimated in 1982 to cost US\$ 363.0 million.

6.6 Lessons Learnt

Factors similar to those identified in the Case Studies above were also found to be a major influence on the performance of the Lake Tanganyika Authority; the Lake Chad Basin Commission; the Mekong River Basin Commission; and the Organisation pour la Mise en Valeur du Fleuve Sénégal (OMVS), which are outlined in Appendix 5. Five principal lessons can be deduced from the experiences of the reviewed institutions. They are concretised with propositions from extant literature on the political and institutional aspects of international river management.

These lessons may broadly be articulated as:

- Long-term Commitment and Flexibility.
- Utilising Integrative Potential and Existing Frameworks.
- Specific and Narrow Functional Scope.
- Realistic and Sound Objectives.
- Adequacy of Organisational Capacities.

6.6.1 Long-term Commitment and Flexibility

Cooperative arrangements and their institutions do not appear overnight. It requires a long time to negotiate and conclude treaties governing international watercourses and even longer periods for the riparian states to experiment with various implementation options before establishing a func-

tional regime (Bingham et al., 1994). To allow for such experiments and learning processes, negotiating bodies and decision-making procedures have to be flexible and open to new ideas otherwise an institution's performance will be impaired.

Also, because river management often involves a host of difficult resource problems and possible solutions, it is often useful to pursue multiple options that actively involve the principal stakeholders. As such, an institution's effectiveness will benefit from mechanisms that provide for coping with relevant changes (Marty, 2001).

But much as the commitment of the political leadership is crucial, the institutions should have autonomy from the political establishments and the execution of their functions should be driven by objectivity and impartiality.

6.6.2 Utilising Integrative Potential and Existing Frameworks

Institutional arrangements are likely to be more successful if there is a high degree of social, economic and political integration between riparian States. Pre-existing collaborative frameworks mitigate against the influence of collateral issues, such as defining transferable property rights on river management efforts, which in turn reduces the transaction costs of negotiating agreements. Secondly, iterated interactions enable actors to make more credible commitments to one another because of reduced concerns about the relative gains of cooperation and their distribution.

It also provides opportunities for inter-temporal and cross-issue trading, which are powerful incentives for cooperation. Thirdly, in an integrated setting, notions of equity and justice are more likely to be congruent and information more complete and evenly distributed. These factors have a significant impact on not only the likelihood of cooperation but also on the possible forms of cooperation and the effectiveness of river management efforts (Bernauer, 1997; Wolf, 1997).

6.6.3 Specific and Narrow Functional Scope

Specificity as to exactly how member countries should go about implementing the mandate of an institution is a key determinant of effectiveness which can only be met if there is consensus among the actors on the gravity and core of the problem (Chayes and Chayes, 1993; Andresen and Wettstad, 1995). Ambiguities in institutional solutions are usually the product of an ill-defined scope of a regime's functions and objectives. The matter here is one of information and intellectual capacity. The higher the number of issues to be dealt with, the broader the functional scope; the more complex the planning and design processes will be; and the more information and problem solving capacities that will be needed to develop detailed solutions. The likelihood that information is not adequate and intellectual capacities are insufficient increases with the scope of issues (Haggard and Simmons, 1987). As such, parties are more likely to design

specific regimes while dealing with a narrow scope of issues.

6.6.4 Realistic and Sound Objectives

Rangley et al (1994:17) advise that “the objectives should be well focused. A wide ambitious mandate, extending across non-water related sectors and into areas outside the river basin should be avoided”. The Niger Basin Authority and the Kagera Basin Organization discussed above are good examples of how such ambiguities can constrain performance. Another example is the Lake Chad Basin Commission. These were less successful than the Lesotho Highlands Development Authority the mandate of which was restricted to hydroelectric power generation and water transfer works.

Also, a limited scale of objectives would reduce the chances that there are inconsistencies between the means and ends and thus improve the likelihood of success (Andresen and Wettestad, 1995).

6.6.5 Adequacy of Organisational Capacities

Engaging in the process of international environmental regime formation and sustenance dictates a level of administrative, technological and financial capacity that is dependent on economic development. It has been observed that countries with a low capacity will be more reluctant to commit to environmental cooperation and resources management and where they do, the arrangements usually only exist on paper.

6.6.6 Other Relevant Determinants

There is also consensus that collaboration between and among riparian states is facilitated if:

- There is real demand for cooperation and consensus exists on both the substantive issues to be addressed and the principles of cooperation. The mutual interest in addressing the problem and minimising perceived costs acts as an incentive to establish collaborative arrangements.
- There is commensurate social adaptive capacity;
- The arrangements are fair, equitable or reciprocal and solutions that benefit all the parties involved are developed.
- The number of states participating in the institution is small.
- Horizontal forms of integration, such as empowering non-governmental actors, are actively pursued; and
- There is third-party assistance.

6.7 Relevance to the Study

The experiences of the basin organisations reviewed above, and those of the others that have been outlined in Appendix 4, have been used as practical guides in this study. The development of the proposed Cooperative Framework and Implementation Strategy (Chapters 8 and 9) has been made in cognisance of the lessons deduced from the case studies above.

7 Review of National WRM Frameworks

This chapter reviews the national policies and legal and institutional frameworks for water resources management. After a review country-by-country, the similarities and differences are analysed in relation to transboundary cooperation on IWRM. Special attention is given to potential national partners for a transboundary organisation.

7.1 National WRM Framework for Burundi

7.1.1 National Priorities

The national priorities are stated in the Poverty Reduction Strategy Paper (PRSP) as:

- Improving governance and security;
- Promoting sustainable and equitable economic growth – including revitalisation of sectors with growth potential, revising private sector, diversifying employment and income opportunities for rural communities;
- Developing human capital – targeting health and education sector; and
- Combating HIV/AIDS.

The priority areas are indicated in the figure below.

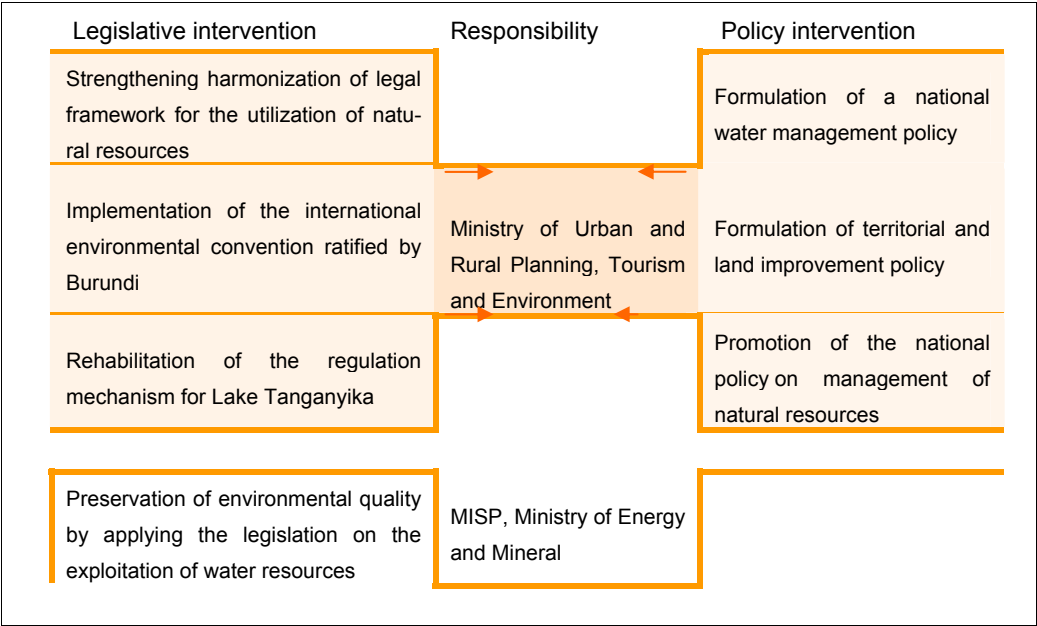


Figure 7.1: Priority areas of public intervention under the Burundi’s PRSP

7.1.2 Review of the Policy, Legal and Institutional IWRM Framework of Burundi

Water Policy

The National Policy on Water (2001) covers the following areas with regards to water resources management: access to domestic water supplies, rural hydro-power development, increasing the use of water to provide for productive sectors (agriculture and pastoral production in particular), sustainable development of the resources, and better mechanisms for coordination and capacity building in the sector.

The Strategic Action Plan for implementation covers indicators of performance, institutional roles and responsibilities and estimated budgets and timelines for implementation. However, implementation of the plan is hampered by a lack of legislation institutionalising the implementation structure. The action plan envisages the participation of the public sector and municipal authorities, but leaves out the private sector and civil society. Even if the institution in charge of the coordination of the policy had been created, implementation would still have been hampered by lack of financial resources.



Figure 7.2: Policies and strategies for water resources management in Burundi

Environmental protection

The strategy on natural resource management comes under environmental protection. Government strategy on environmental protection comprises: (i) upgrading institutional, technical, and financial capacities; (ii) promoting national resources management; and (iii) promoting the sustainable use of natural resources – which include maintenance of the water treatment in Buteera, construction of a waste water treatment station in Kanyosha, control of public dumping and protection of lake water against pollution.

Natural resources

Other policy focus concerns the strengthening and harmonisation of the legal framework for the utilisation of natural resources; promotion of the national policy on management of natural resources; formulation of a national water management policy; formulation of territorial and land improvement policy; restoring the dynamism of the National Commission on Environment; implementation of the international environmental conventions ratified by Burundi.

Unlike in Rwanda, Tanzania and Uganda, in the case of Burundi, water does not appear as a sector in the development strategy and has no specific budget line in the government recurrent and development budgets. Unlike Tanzania and Uganda, Burundi does not follow a sector-wide approach in implementation of water development programmes and projects.

A national water master plan (Plan Directeur National de l'eau, PDNE) was developed in 1993 with the principal objective of ensuring the rational management of the country's water resources and optimizing development of the resource. It outlines the resource base, the structure of demand by sector, and assesses demands against supplies against data supplied in GIS format. However, the plan has never been implemented. The data from the PDNE is not currently utilised within the sector.

In 1999, the government with the assistance of the United Nations Food and Agriculture Organisation (FAO) set up a multi-sector working group to develop a policy for water resources management. This policy was adopted in September 2001. It is based on basic fundamental principles and lays down the main trends as well as the strategies of development of the water resources in the various socio-economic fields of the country. Whilst other ministerial interests were involved in the formulation process the private sector, NGOs and donors were largely not consulted.

Water Legislation

The principal legislation for water sector regulation and management in Burundi is the Order of Council dated 26th November 1992 on the institutions and organisation of water in the public domain. However, according to the Baseline Study Report of Water Policy Processes in Nile Basin Countries of 2005, this law remains unimplemented. Burundi, therefore, currently lacks a functional water sector law.

Environment Regulation

In 2000 Burundi enacted an Environmental Code. Chapter III of the Environmental Code provides for an environmental impact assessment process for projects or activities likely to effect the environment. Under the Environmental Code, environmental impact studies in respect of such projects or activities must be carried out. Article 23 sets out the mandatory content of the environmental impact study and Article 34 specifically identifies dams as works that are subject to this procedure.

The Environmental Code also sets out the principles of enhancement of natural resources. Under Article 27, the Ministry of Land-use Management, Tourism and the Environment is given the power of enforcement of the Environmental Code in respect of the protection and enhancement of natural resources. The Environmental Code also regulates the use of natural resources including licensing, water management plans and water quality standards.

IWRM Policy

Coordination among the ministries still presents a challenge, partly because the National Water and Energy Commission, which is mandated to coordinate water activities has not been operational since its creation in 1993. There is a need for institutional consolidation and reactivation of the national coordination for better planning and coordination.

A National team, composed of representatives of all relevant Ministries and coordinated by Institut Géographique du Burundi (IGEBU), prepared the current National Water Policy and Action Plan, dated August 2001. This plan emphasises the need for a central coordination organisation, institutional capacity building, data collection, planning of hydropower, small and large scale irrigation, expanded water supply, control of industrial pollution and enforcement of water laws. It also proposes that Burundi should profit from water exported (in rivers) by negotiation with co-riparian states. However, little emphasis is placed on participative and local level planning, environmental is-

sues, erosion, wetlands management and the economic value of water.

Issues that are not tackled in existing policies, treaties and agreements include the diversion and utilisation of waters, environmental protection upstream, sale of water beyond national borders, communication and decision-making tools and principles of cooperation to cover exigencies such as natural disasters and inter-state conflict. Current policy only refers to the ‘development of cooperation on transboundary waters’ and makes no further reference on utilisation.

Although a national water master plan has been developed (since 1993) lack of a database and resources have made it difficult to implement the plan. Whilst other ministerial interests were involved in the formulation of policy of resource management, which was adopted in September 2001 process, the private sector, NGOs and donors were not consulted. This is reflected in the difficulty in implementing the policy.

Implementation of the strategic action plan is hampered by a lack of legislation institutionalising the implementation structure. The action plan includes the participation of the public sector and municipal authorities, but leaves out the private sector and civil society. Also the institution in charge of the coordination of the policy is lacking.

Transboundary Water Resources and Environment Regulation

The current legal framework in Burundi consists of many overlapping laws. The principal water sector law has not been implemented. There is an absence of a legal framework for basin level water resources regulation and management as well as to address transboundary water management issues.

Although a general environment law is in place, regulations setting out water quality standards, waste and effluent discharge and prohibition and/or restriction of development activities in rivers, lakes, lake shores, river banks, wetlands and other ecosystems are lacking. Burundi lags behind the other Kagera River Basin riparian countries in both water resources and environment regulation and management legislation.

Capacity Building

There is a need to reinforce human capacity in the sector, and specifically in monitoring, supply structure development and planning for water resources management. This is compounded by a weak institutional environment overall and the lack of training for staff overseas. At present there is no indigenous institution with competence in developing capacity in water sector disciplines. The current situation means that Burundi will miss out in benefiting from resources at its disposal for development, and will not be able to benefit from equitable sharing arrangements with co-riparian states.

Good regional management requires that national capacities exist. Burundi therefore needs considerable backing from donors to help it to organise its approach to managing the sector and contributing overall to

regional management of the shared resource. During preparation of the policy, important partners were not involved including the poor, NGOs and donors. The policy needs to be dynamic and inclusive and seek further iterations and improvements. The policy has not been submitted to government to have legal basis. The current legal framework consists of many overlapping and incoherent laws; there has been no legal harmonization.

At a regional level there is a lack of technical capacity for formulating and setting in place policy. There is an absence of a legal framework acceptable to all that would serve as a platform for basin level water management. There is a lack of regional data on water demand over time, with which to compare supply and demand within the basin and establish an equitable division of the resource. Decision making tools are still insufficient to clarify adequately the most rational and equitable management of the resource.

7.1.3 Institutions Responsible for IWRM in Burundi

The responsibility for water resources management is spread across different ministries as follows:

- The Ministry of Land Management, Environment and Tourism have the general responsibility for water resources management including trans-boundary issues.
- The Geographic Institute of Burundi (IGEBU) under the guidance of the Ministry of Land Management, Environment and Tourism is responsible for water resources information collection, processing and management. IGEBU is the focal point institution for the cooperation on the Nile Basin including the Kagera river basin.
- The Ministry of Mining and Energy has responsibility for water supply and sanitation, which it does through the Water and Electricity Utility (REGIDESO) for urban areas and water supply and sanitation for rural areas through the General Department of Water Resources and Rural Energies (DGHER).

The Ministry of Energy and Mines through its General Directorate for Water and Energy is in charge of planning, managing and coordinating programmes and activities in the water and energy sectors. Under Decree No. 100/049 passed in March 1997, the Hydraulic Resources Director is responsible for the following:

- designing of sustainable development strategy for national hydraulic resources;
- preparation and updating of National Water Master plan;
- planning of the various water demands in each hydraulic basin with a dy-

namic, long term vision;

- the supervision of new state investments in hydraulics; and
- the establishment of drinking water pricing policy for rural and urban areas.

Other ministries are also involved in initiating the national policies and setting national standards and priorities for water management. Without clear policies on collaboration and coordination, responsibilities of the different agencies with regard to water management administrative conflicts continue to be a problem.

In 1991 government created the National Commission for water and energy (under the Ministry of Energy and Mines). Other institutions include National Urban Water Authority (which sells and supplies water to the urban areas – this was the first ministry); Ministry for Rural Development, Ministry for Land Use, Environment and Tourism; Ministry of Planning; Ministry of Public Health (for quality); Ministry of Commerce; Ministry of Agriculture; the big water consumers (– such as the breweries). Within the Ministry of Environment is a Department of Water Resource Management. When there are floods, it is the Ministry of Public Works to plan for whatever action to be taken.

Local level

At local level, water is managed by each district (Commune) through the establishment of a utility service which is based upon committees. These public water utilities are technically managed by the General Department of Water Resources and Rural Energies, and administratively managed by the District bodies. These utilities are governed by operational rules.

Geographic Institute of Burundi (IGEBU)

IGEBU under the guidance of the Ministry of Land Management, Environment and Tourism of Burundi covers a number of water sectoral activities including hydrology, and meteorology. It is responsible for water resources information collection, processing and management. IGEBU office is located in Gitega and is the focal point institution for the cooperation on the Nile Basin including the Kagera river basin.

IGEBU has developed a large meteorological data base and constitutes one of the few reliable and available meteorological data sources in the Kagera basin region. The institute poses an important resource for establishing meteorological data necessary for forging transboundary relationships.

It is not clear who is in charge of water management and Burundi still lacks clear authority and policies in water resources management.

7.2 National WRM Framework for Rwanda

7.2.1 National Priorities

The national priorities are spelled out as:

- Rural development and agricultural transformation – including agriculture and environment, land, supporting off-farm employment, credit, rural energy, small-scale rural infrastructure and labour-intensive rural public works.
- Human development – including health, family planning, skills development, education, water and settlement. Settlement is included partly because it is operationally so closely linked to water supply.
- Economic infrastructure – including the development of roads, energy, and communications to support economic development both in urban and rural areas.
- Governance – including security, constitutional reform, the justice system and *gacaca*, decentralisation, sectoral strategies, accountability and transparency, and civil service reform.
- Private sector development – including the promotion of investment, the reduction of the costs and risks of doing business, and the promotion of exports.
- Institutional capacity-building (cross-cutting in all sectors) – includes the design of institutional structures and incentives to encourage the development and retention of the relevant skills in public and private sectors.

The Poverty Reduction Strategy Paper (PRSP II) seeks to optimize the use of water in the agricultural sector, energy reduction, transport and tourism as well as environmental management. It reinforces decentralised management at a catchment level. There is a clear emphasis on decentralisation and management at the lowest appropriate levels with strong support to user-based management and high levels of participation.

Government budgets are detailed by programme under the heading of each Ministry, though eventually budget programmes will be classified solely under their respective sector. Water sector programmes do not involve sector-wide approaches as is the case in Uganda and Tanzania. It is, therefore, imperative to adopt a programmatic sector-wide approach.

7.2.2 Review of the Policy, Legal and Institutional IWRM Framework of Rwanda

Currently, water use management and regulation in Rwanda is spread through various government ministries and departments. However, a draft law on water is currently before Parliament. This is intended to codify water rules and regulatory arrangements into one substantive law and provide a legal and institutional framework for access, use and sustainable management of water resources.

Water Policy

The National Water Policy takes account of recent international policies and conforms to various commitments entered into under regional and international agreements. The National Vision 2020 documents provides a framework under which, inter alia, Rwanda must provide for integrated management of the resources, access to drinking water for all, and storage and conservation for economic development.

The policy on decentralisation adopted in 2000 provided a key overall framework within which sector policies could be implemented. The Ministry of Land, Environment, Forestry, Water and Mines (MINERENA) is responsible for implementation, capacity building and financing, planning and management of water resources, rivers and wetlands and for public infrastructure. The provinces play an intermediary role between local government and MINERENA. Communes are responsible for water resources management at a local level. The water supply sector has been liberalized.

The main objectives of the water (and sanitation) sector as outlined by the PRSP are:

- To improve the water supply and extend its network;
- To encourage community management of water supply;
- To increase access to sanitation services;
- To develop a sector strategy; and
- To build capacity at the central and district levels.

Rwanda Development Vision 2020 sets the goal of providing safe water to 100% of the population (access to potable water) by 2020. The Vision sets 2010 as the time when 80% of people will have access to potable water. It is estimated that 64% today have access to safe water. A core objective of the water and sanitation sub-sector is to provide sustainable safe water supply and sanitation facilities to 77% of the rural population and 100% of the urban population by the year 2015, with management responsibility and ownership assumed

by the users, and an 80%-90% effective use and functionality of facilities.

The 1996 Sector Policy for Water and Sanitation suggests that based on the water distribution points established over the years, coverage in rural areas should have been close to 70%. However, by 2000, using norms related to number of users served, the coverage may have declined to 44%, taking into account the actual condition of facilities. Rehabilitation of systems along with effective community based management systems are the key to increasing access to safe water supply.

Electrogaz, a Government owned company for water, electricity and gas, provides drinking water in urban areas (Kigali plus the ten other towns). While information on actual coverage in urban areas is not readily available, it is not likely to exceed 60% of the population, of which about half receives the water through standpipes.

Under the strategy developed in 1999, a demand-led approach is envisaged for the supply of rural water and sanitation. Key elements of this approach are being incorporated into the ongoing Rural Water Supply and Sanitation Project. This project, along with some other smaller projects, is likely to increase the coverage from an estimated 44% - 50%. To further enhance coverage in a sustainable manner, the emphasis will be on learning from a pilot project, from which approaches for a countrywide scaling-up will be developed. The further development of the strategy will involve:

- Redefining the sub-project cycle using a demand responsive approach.
- Restructuring and capacity building at MINERENA at central and province levels.
- Capacity building of districts to develop sub-projects for accessing funds.
- Promoting private sector and NGO role in planning and maintenance of the rural water supply.
- Developing uniform cost recovery policies, including guidelines for the complex systems.
- Developing guidelines for accessing funds from the CDF and other mechanisms.
- Water harvesting is being promoted under the settlement programme (see below). This technology needs to be integrated into the water sector.

The Water Act (Draft), 2007

Purpose and Objective

A Draft Water Act for Rwanda (“the Draft Water Act”), on rules of use, conservation, protection and management of water resources is before Parliament. The Draft Water Act comprises comprehensive provisions for the regulation of water resource utilisation. It is intended to provide applicable

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rules for the use, conservation protection and management of the water resources of Rwanda.

Access to Water

The Draft Water Act seeks to vest water rights in the central government. Water is considered a public good which all persons are entitled to access in accordance with the law. In the supply and use of water resources, the Draft Water Act imposes a duty on the state, civil society and all citizens of Rwanda to protect the water resources.

Principles of Water Resources Management

The Draft Water Act sets out essential principles to provide guidance in the utilisation and protection of water resources in Rwanda. It requires that management of water resources be in accordance with the principle of integrated management of water resources. This principle considers sustainable global management of water resources that aims at protection of the resources, protection against all forms of pollution, preservation of aquatic ecosystem and prevention of wasting and over-exploitation of water resources. In addition the Draft Water Act (Article 5) emphasizes various water resource management principles including the principles for prevention of water pollution.

Duty to Protect Water Resources

The Draft Water Act seeks to impose on the state, local communities, civil society and citizens a duty to protect water resources. It specifically requires the protection of permanent banks of streams, river banks, lakes, swamps and humid zones. Human activities in such water resources will be restricted.

Organic Law No. 04/2005

Overview

The Organic Law Determining the Modalities of Protection, Conservation and Promotion of the Environment in Rwanda (“the Environment Act”) is the principal law on protection of the environment. It was passed in April 2005 to provide guidelines of protecting, conserving and promoting the environment in Rwanda. Its regulatory aims include conserving the environment, ensuring sustainable development that does not harm the environment as well as setting up strategies for protection of the environment. The Environment Act, amongst other things imposes a duty on every person as well as the state to protect, conserve and promote the environment including water resources.

Principles of Environmental Management

The Environment Act incorporates principles of environmental management that are critical to the protection of the environment in general and transboundary water resources in particular. The principles listed under Article 7 include the principle of sustainability of the environment the polluter pays principle and the principle of cooperation. In particular, under the principle of cooperation, the Environment Act requires all authorities, international institutions, associations and private individuals to protect the environment, including water resources, at all levels. In this respect, the Environment Act requires the Government of Rwanda, in its policy of protecting the environment, to always promote international cooperation.

Protection of Water Resources

The Environment Act contains various provisions on protection of water resources including rivers, underground water, springs and natural lakes. Any acts concerned with water resources like the use of swamps

and wetlands must be subject to prior environmental impact assessments. Dumping or disposal of any solid, liquid waste or hazardous gaseous substances in a stream, river, lake and in their surroundings is prohibited. In addition, agricultural activities within ten (10) metres of the banks of streams and rivers or within fifty (50) metres in the banks of lakes are prohibited. Only activities related to protection and conservation of rivers and lakes are allowed.

Specific Obligations	<p>The Environment Act (Articles 49-64) imposes specific obligations on protection of water resources and trans-boundary water resources in particular. Accordingly the state is required to do the following:</p> <ul style="list-style-type: none">• design a general and integrated policy on the environment and its protection;• (take necessary measures to protect and respect obligations stipulated in international agreements and conventions;• prohibit any activity carried out on its behalf or in its capacity that may degrade the environment in another country or in regions beyond its national jurisdiction;• cooperate with other states in taking decisions to control trans-boundary pollution;• establish regulations governing water dams;• establish measures to protect and reserve catchment areas around wells from where drinking water is drawn; and• identify reserved areas for protection, conservation or rehabilitation of water systems and its quality, banks and shores, rivers, streams, lakes, plains, valleys and swamps.
REMA	<p>The Environment Act establishes the Rwanda Environment Management Authority (REMA) as a body corporate. REMA is responsible for implementing government policy on environment, carrying out environmental monitoring on all development programmes and taking part in establishing procedures and safeguards to prevent damage to the environment.</p>
EIA	<p>The Environment Act requires developers of certain projects to carry out Environmental Impact Assessments (EIAs). EIAs must be carried out prior to works on wetlands and watersheds and other water resources. The EIAs must outline the costs and benefits of the protection of watersheds and other related ecosystems. EIAs are examined by REMA or any entity or person authorised by REMA.</p>

7.2.3 Institutions Responsible for IWRM in Rwanda

Current structure

In Rwanda, overall responsibility of managing water resources and initiating national policies and guidelines is vested with the Department of Water and Natural Resources under the Ministry of Natural Resources (MINERENA). The responsibility is shared with a number of line ministries including hydroelectricity and transport, health and hygiene, agriculture and irrigation and planning and finance.

MINERENA is expected to play an important role in the formulation of agricultural policy. The process of reforestation is also expected to receive support from the energy sector, encouraging more efficient use of fuel-wood and substitution into other fuels. The management of water supply is supported by ministry of energy as well as actions to encourage water harvesting in the settlement and housing sector.

Specific functions of the Department of Water and Natural Resources include organization and coordination of the activities in the sector, formulation of national strategies, establishment of master plans, coordination the services and the institutions intervening in the sector of water and sanitation, implementation of the national water resources management policy, programming of investments and management of human resources. Currently, there is a process of institutional reform however; the responsibilities of this department were allocated to various divisions: (i) Urban Water Division (ii) Rural Water Division (iii) Sanitation Division and (iv) Hydrology and Water Resources Management Division.

At the regional and district level, the Department of Water and Natural Resources (DWNR) has regional offices having direct contact with the CDCs. The DWNR is responsible for the sector related issues i.e. technical aspects, and the Ministry of Local Government is responsible for ensuring the participatory process.

The National Water Resources Policy advocates for the devolution of powers and functions to the lowest appropriate administrative level. Under decentralization framework, districts are responsible for water supply and sanitation. Districts involve NGOs and private sector as partners. The policy on decentralisation adopted in 2000 provided a key overall framework within which sector policies could be implemented. MINERENA is responsible for implementation, capacity building and financing, planning and management of water resources, rivers and wetlands and for public infrastructure. The provinces play an intermediary role between local government and MINERENA. Communes are responsible for water resources management at a local level. The water supply sector has been liberalised.

Future structure

The Draft Water Act seeks to put in place a comprehensive institutional structure for the management of water resources. It provides for the following essen-

tial institutional organs in the administration of water resources.

The Ministry in Charge of Water

The functions of the Ministry in Charge of Water are listed in the Draft Water Act. These functions include legislative and policy formulation as well as representation of the Government at international organisations in respect of water resources and which favour international and regional cooperation.

Water National Commission

The Draft Water Act (Article 16) seeks to establish a Water Commission. The Water Commission will be composed, in equal proportions, of state representatives, national councillors and representatives from different public and private water user categories and other competent people. Its functions will include providing advice on planning water projects, formulation of plans for management of water projects and resolution of water use conflicts.

Water Inter-departmental Committee

The Draft Water Act seeks to establish this committee, under the Prime Minister's office. The Committee will comprise representatives of departments of the ministry in charge of water resources. The Committee will be under the supervision of the Director of Water under the Ministry in charge of water. Its functions will include advising on all projects in regard to water legislation and national planning as well as on issues of regional and international nature concerning water resources.

Basin Committees

The Draft Water Act also proposes to create two basin committees for the territories of hydrographic basins in Rwanda (related to the Congo and Nile Rivers) and one sub-basin committee or aquifer committee in each of the hydrographic sub-basins or for each aquifer. These will fall under the administrative authority of the districts concerned.

Water Local Associations

Formation of Water Local Associations by users of water is provided for under the Draft Water Act. These associations can be used at local levels in the management, enhancement and protection of water resources. These associations are empowered to form their own rules governing the protection and sustainable utilisation of water resources in their local areas. Certain central and local government functions in respect of water resources can be delegated to these associations.

Districts and the City

The Draft Water Act also seeks to vest certain functions of water resources administration in the districts and the City of Kigali. The districts will own the water and sewerage infrastructure located in their areas of jurisdiction. The management of public water infrastructure at the district levels will be vested in the respective districts which can delegate some of their functions to Water Local Associations.

IWRM Policy

The legislative basis for the current policies on water resource management is fragmented and outdated.

Lack of a clear sector-wide approach has created a fragmented and uncoordinated approach. It is, therefore, imperative to adopt a pro-

grammatic sector-wide approach. This will not only enable MINERENA to develop a sector strategy and investment plan in coordination with the group of development partners, with a view to achieving overall and sustainable improvements in sector performance, but will also increase the flow of resources to the sector.

Again, improving the sector strategy process is vital for the effective planning and budgeting. At present, all ministries draft separate ministerial policies that sometimes overlap (such as agriculture and environment) and at times duplication may occur due to insufficient coordination of programmes and resources.

Transboundary Water Resources and Environment Regulation

Rwanda is yet to enact a consolidated water law based on generally accepted principles of water resources management especially that of integrated water management. However, the draft Water Act which is currently before Parliament will reform the existing legal and institutional framework for water resources regulation and management and put Rwanda at a level comparable to that of Uganda and Tanzania.

National Character

Although the draft Water Act is national in character and outlook, it proposes the establishment of a Water Inter-departmental Committee whose functions will include advice on national water projects and planning as well as address issues of regional and international water resources management. It will also enforce the protection of banks of streams, river banks, lakes, swamps and water catchment areas.

Although the draft Water Act sets out a broad framework to deal with regional and international water resources management issues, there are currently no regulations addressing trans-boundary water management issues. Accordingly, a transboundary project within any part of the territory of Rwanda is required to comply with the laws of Rwanda as any other national project, in addition to complying with laws of other neighbouring countries.

Basin Management Approach

Rwanda proposes to adopt a basin management approach similar to that of Tanzania. Under the draft Water Act, two (2) basin committees for the territories of the Congo and Nile River basins in Rwanda will be established. In addition, one sub-basin or aquifer committee in each of the hydrographic sub-basin/aquifer under the jurisdiction of the districts in which they are located will be established.

Although this approach is national in character, it is considered a better approach since it facilitates basin wide planning and regulation across different local government administrative structures.

Kagera River Basin

Although the draft Water Act and environmental legislation do not refer to the Kagera River, both the draft Water Act and the Organic Law provide the required legal framework for the regulation of development activities around, and protection of, streams, rivers, basins of rivers and lakes.

Environmental Impact Assessment

Dumping of waste in streams, rivers, lakes and surrounding areas is prohibited. Agricultural activities within ten (10) metres of banks of streams and rivers or within fifty (50) metres of banks of lakes are prohibited. These laws can be invoked to regulate water resources management and to enforce environmental protection measures of the Kagera River Basin within the territory of Rwanda.

All major development projects and other activities in Rwanda with significant adverse environmental impacts are required to conduct EIAs prior to project implementation. However, EIA requirements and standards are also national in character. This means that trans-boundary projects must comply with national EIA requirements in each country which may differ in scope and application.

Capacity building

The national water policy remains poorly understood by water users. Whilst it mentions the policy of IWRM it does not develop its application in practice and the need for institutional and legislative change in order to make it effective. Policy on transboundary resource management is not developed beyond basic introduction in spite of the fact that the country's water resources are provided by two large shared basins. Whilst the policy provides a draft plan of action, this only refers to the drinking water sector. Similarly there is no development of up-to-date approaches to regulation.

At a regional level, although Rwanda's situation as part of transboundary basins requires international cooperation in transboundary management, inter alia, in order to prevent and or resolve conflict, there are no decision-making tools presented in the policy with which to help achieve the required level of cooperation and co-management of resources. Generally speaking the country has low capacity in human resources required for water resources management and there is a need for comprehensive training in this area.

There is weak human resource development in-country with few qualified personnel. There is some development of institutions including units of MINERENA, at district level and within the national university. However, lack of human resource development crosses most fields including planning and resource management, hydrology and hydrogeology. There is a lack of national institutions capable of training in these fields and the country lacks to resources with which to send students overseas; the result is that the country has to buy-in expensive foreign experts, supervised by civil servants who are usually from civil engineering, physical sciences or geography. It is important that other resource management structures have qualified personnel not least because this will enable participation in equitable resource management activities at a regional level.

One positive sign is the recent National University of Rwanda higher qualification in water management. It is hoped that this enterprise will be repeated elsewhere in the country. Staff training requirements include short on the job training as well as longer-term training programmes.

7.3 National WRM Framework for Tanzania

7.3.1 National Priorities

Tanzania's Poverty Reduction Strategy Paper (PRSP) defines priority areas for poverty eradication:

- Reducing poverty through equitable economic growth;
- Improving human capacities, survival and social wellbeing; and
- Containing extreme vulnerability among the poor.

Tanzania's PRSP recognises the dependence of the poor on the environment (soil, water and forests) and the importance of water in the socio-economic development and the fight against poverty.

The National Water Policy views water as one of the most important agents to enable Tanzania to achieve its Development Vision objectives, which include: (i) improving livelihoods (with universal access to safe water as one of the aims); (ii) good governance and the rule of law; and (iii) strengthening growth and competitiveness.

7.3.2 Review of the Policy, Legal and Institutional IWRM Framework of Tanzania

Water Policy

In Tanzania, a water sector review conducted in 1993 revealed that Tanzania's National Water Policy had a number of shortfalls - e.g. non-involvement of the private sector; involvement of beneficiaries being limited to provision of free labour; inadequacy in legal and institutional framework; and more emphasis was on water supply than water resources management. After that review, there followed reforms in the sector which opened the door to formation of autonomous urban water supply and sewerage authorities and community owned rural water supply schemes. A rapid water resources assessment study that was carried out in 1994 also underscored the need for pursuing the IWRM approach for sustainable development.

The National Water Policy became operational in 2002. Most of the things including transboundary issues are now in the Water Policy. Other sectors incorporated into the team hence looked at the other sector policies and took up appropriate linkages; consultations from sector level to district levels.

An analysis of available information was presented at a national workshop on September 14, 2005. The National Water Policy (NAWAPO) has fairly addressed transboundary issues. Although it has not been too committal to such issues it has left room for cooperation and dialogue on transboundary water related aspects. However, taking into account that six out of nine River/Lakes Basins in Tanzania are transboundary in nature, there is a need for an elaborate

transboundary water policy chapter within the NAWAPO.

Policy formulation involves analysis and authorization. The formulation of the Tanzania Water Policy has far advanced. The National Water Policy was passed by Parliament in July 2002 and inaugurated in March 2003.

The National Water Sector Development Strategy (NWSDS) has been developed (February 2005).

Figure 7.3: Policies and strategies for water resources management in Tanzania



Tanzania’s PRSP recognises the dependence of the poor on the environment (soil, water and forests) and the importance of water in the socio-economic development and the fight against poverty. The National Water Policy views water as one of the most important agents to enable Tanzania achieve its Development Vision objectives, which include: (i) improving livelihoods (with universal access to safe water as one of the aims); (ii) good governance and the rule of law; (iii) strengthening growth and competitiveness.

As of June 2005, 9,283 water committees have been formed and increase in rural water supply coverage rose from 42% (1995) to 53.56% (2005). Water sector reforms have also involved formation of Municipal and town water authorities (eventually to be privatized when they become commercially viable and self sustaining). Nineteen (19) Water Authorities and 62 Water Boards have been formed to-date. Water supply coverage in cities and municipals has

increased from 68% (1995) to 74% (2005).

The following are the major documentations already produced as part of the water sector reform process in Tanzania.

Table 7.1: Strategic documents for the water sector in Tanzania

Policy	Year	Comments
National Water Policy	2002	Outcome of the review of the previous national water policy of 1991
Budget Speech for the Financial Year 2005/2006	July 2005	Summarized information on the overall sector performance, future plans and current key policy issues
National Water Sector Development Strategy 2005-2015	February 2005	Policy implementation guidelines, which become operational once approved and the legal framework is in place
Water Resources Bill	February 2005	Enabling principal water resources management legislation.
Water supply and Sanitation Bill	February 2005	Enabling principal legislation for water supply and sanitation services.

The new Water Policy of July 2002 was preceded by the first National Policy of 1991.

Overview

The Water Utilisation (Control and Regulation) Act, (Cap. 331)

The Water Utilisation (Control and Regulation) Act (“the Act”) is the principal legislation regulating water resources utilisation and management in Tanzania. It was first enacted in 1974 and has undergone various amendments to-date. The Act vests all water in the central government for the benefit of all people in Tanzania. It creates an institutional framework and contains provisions essential for the use and protection of water resources in Tanzania. Use and access to water resources in Tanzania must be in accordance with the Act.

Water Use Administration

In order to facilitate smooth administration, use and conservation of water resources, the Act provides for the establishment of three important organs. These are the Principal Water Officer, Central Water Board and Basin Water Boards. The Principal Water Officer is responsible for the regulation of all water use and access matters including natural water supplies, determination, diminution or modification of water rights. However, at the regional level these rights devolve to the Regional Water Officer also appointed by the minister responsible for water.

Central Water Board

The Central Water Board (CWB) is established by section 5 of the Act with broad composition. It consists of not more than ten (10) members who are appointed by the Minister for responsible for water affairs, and the Chairman who is appointed by the President. The functions of the CWB listed under section 6 include that of advising on matters pertaining to utilisation of water nationally. It is also given executive powers on regulation of water pollution including:

- carrying out and promoting the carrying out of research and investigations

into the causes and ways for the efficient prevention or control of water pollution;

- formulating and recommending to the government comprehensive plans for the regulation of the discharge of effluents into water;
- formulating and recommending to the Minister the best ways of ensuring compliance with uniform procedures for the sampling and examination of water, sewerage and industrial effluents;
- advising and assisting the government, public authorities and other persons or bodies of persons measures for the more efficient control or prevention of water pollution;
- recommending to the Minister legislative measures necessary or suitable for the effective control of water pollution; and
- formulating efficient and reviewing water standards, and programmes for ensuring compliance with those standards.

Basin Water Boards

The Minister for responsible for water affairs is under section 7 of the Act empowered to declare any area of land to be a water basin in respect of a river. For each basin declared as such, there must be established a Water Basin Board appointed by the Minister. The functions of Basin Water Boards are the same as those of the Central Water Board in their areas of jurisdiction. The Basin Water Boards have advisory powers similar to those of the Central Water Board, except that they advise Regional Water Officers and exercise executive functions in the regulation of water pollution in their jurisdiction.

Water User Rights

Water resources are vested in the central government. The Act however establishes control and regulatory measures for access to water. Some rights to use water are automatic. For instance anyone with lawful access to water may use that water for domestic purpose and any owner or occupier of land may take limited quantities of water from a borehole or well without needing a special licence. In addition, owners or occupiers of land may construct works on their land for conservation of rainfall and use water as long as those works are not in a river or stream. Holders of mining licences, prospecting licences, mining claims and extensive forestry licences are given implied water rights in their respective areas of operation subject to compliance with certain conditions.

Special Water Rights

In all other cases where water is intended to be used, a water right must be acquired. Where the water right is not acquired, use becomes illegal. A water right is defined as a right to divert, dam, store, obstruct or use water. No water may be used except in accordance with the grant of a water right in accordance with the provisions of the Act.

An application for grant of a water right is made to a Water Officer. Under section 15 of the Act, the Applicant must state the use of the water, amount required, period of use, among other things. The Water Officer

in granting a water right must give conditions and directions for safe use of water. Safe use if granted is interpreted to mean avoidance of pollution of the water while it is being utilized. Where water is returned into a river or lake, the right holder is required to ensure that the water so returned is substantially undiminished in quality. For this purpose, the holder of a water right is required to treat the water in such a manner as to comply with prescribed effluent and receiving water standards.

Discharge of Effluent from Commercial and Industrial Systems

In order to comply with the prescribed water standards, the Act prohibits discharge of any effluent from commercial and industrial sources into receiving water, except with a permit and in accordance with prescribed standards. Discharge of effluent from commercial, industrial or trade systems into receiving waters without the consent of the Water Officer is prohibited. Discharging in this case includes discharge into underground strata.

Water Easements Regime

The Act also provides a water easements regime to facilitate equitable access to water. Under section 30 of the Act, where a person who is a holder of a water right or has applied for the grant of a water right is unable fully to enjoy the benefit of that right without an easement, he can apply to a Water Officer to create such an easement. However, the application to the Water Officer should be made where the applicant has failed to agree with the owner of land from which the easement is to be imposed. In granting such water easement, the issue of compensation has to be considered.

Duty to Protect Water Resources

The Act imposes on all persons a general duty to protect water resources. It is an offence to pollute the water in any river, stream or watercourse or in any body of surface water to such extent as to be likely to cause injury directly or indirectly to public health, livestock, fish, crops, orchards or gardens which are irrigated by such water.

The Water Utilization (General) Regulations G.N. No. 370 of 1997

The Water Utilisation (General) Regulations (“the Regulations”) were made in 1997 to implement the provisions of the Water Utilisation (Control and Regulation) Act. The Regulations contain detailed procedures as well as prescribed forms for applying for water rights and easements. The Regulations also contain rules of procedure and guidelines for Central Water Boards, Basin Water Boards as well as the Water Officer in making decisions concerning utilisation and protection of water resources.

An application for abstraction and use of ground water, must comply with the procedures set out in the Regulations. Where such application is made, the Water Officer must publish a notice of the application to enable public participation in the grant of water rights. The notice must show the following essential information:

- any data and information collected during ground water exploration and drilling activities;

- the quantity and quality of water to be abstracted;
- the area of activities in the particular basin;
- the purpose for which water is to be used, whether domestic, commercial, industrial or any other use.

The Regulations also focus on protection of river banks and lake shores and other water resources. The Regulations prohibit conducting of human activities within 200 metres of a river bank or within 500 metres of the shoreline of a natural lake, dam or reservoir.

Urban Water Act, No. 7 of 1981

The Urban Water Act No. 7 of 1982 (“the Act”) was made for the regulation of water utilisation in urban areas through the National Urban Water Authority.

The Act establishes the National Urban Water Authority (NUWA) (see section 4) as a body corporate. The functions of NUWA are listed under section 5 and include:

- (i) promoting the conservation and proper use of water resources in towns;
- (ii) maintaining and developing water works in towns or water works connected with the supply of water to towns; and
- (iii) advising the government on the formulation of policies relating to the development and conservation of water and portable water standards in relation to towns.

The Act also makes provision for the registration of water rights with the NUWA and gives powers to NUWA, in consultation with the Minister in charge of water affairs regarding the prevention of water pollution. NUWA is also under section 26, declared the principal entity with respect to specified towns, for the implementation of the policy of the government in relation to water, water supply and water resources conservation.

The Act creates offences and penalties for purposes of ensuring lawful use of water rights as well as protection of water resources. It is an offence to wilfully or negligently damage water works or to unlawfully draw off, divert or take water from water works or from any stream of water by which the water works are supplied.

The Environment Management Act, 2004

The National Environmental Management Act, 2004 (“the Act”) is the national framework legislation on environment in Tanzania. It was made to repeal the National Environment Management Act No. 19 of 1983 and to provide more comprehensive provisions for the protection of the environment. The Act provides for a legal and institutional framework for sustainable management of the environment, prevention and control of pollution, waste

management, environmental quality standards, public participation, environmental compliance and enforcement.

Principles of Environmental Management

The Act sets out general principles of environmental management (see 4-10 of the Act). Every person living in Tanzania is entitled to a right to clean, safe and healthy environment. Any entity involved in the implementation of the provisions of the Act, is required to be guided by various principles including the principle of international cooperation in management of environmental resources shared by two or more states. Such agencies include the environmental tribunal specifically established under the Act to adjudicate over environmental matters.

The National Environment Management Council (NEMC)

The National Environment Management Council (NEMC) was established in 1983 under the National Environment Management Act, No. 19 of 1983. When the Act (the National Environmental Management Act No. 20 of 2004) repealed Act No. 19 of 1983, it re-established NEMC. NEMC has a broad mandate to oversee environmental management issues. NEMC is re-established under section 16 of the Act as a body corporate. It is entrusted with environmental management and in exercise of its functions is required to collaborate with relevant sector ministries.

Protection of Water Resources

The Act contains extensive provisions for protection of water resources. Under section 54 of the Act the Minister responsible for the environment is given mandate to declare a river, river bank, lake or lakeshore or shoreline a protected area and to impose restrictions as he considers necessary for the protection of such river, river bank, lake or lakeshore and shoreline from environmental degradation. While exercising such mandate the minister is required to consider.

- the geographical size of the river, river bank, lake or lakeshore or shoreline;
- the interests of the communities resident around the river, river bank, lake or lakeshore or shoreline; and
- any advice that may be given by sector ministries.

In addition, the Act requires NEMC and local government authorities to issue guidelines and prescribe measures for protection of river banks, rivers, lakes and lakeshores and shorelines. Where such guidelines are in place, the Act prohibits conducting the following activities without a permit.

- using, erecting, constructing, placing, altering, extending, removing or demolishing a structure in or under the ocean or natural lake, shoreline, river bank or water reservoir;
- excavating, drilling, tunnelling or disturbing the shoreline of ocean or natural lake, river bank or water reservoir;

- introducing a plant, any part of a plant, plant specimen, in ocean, river, ocean river bank, lake or lakeshore;
- depositing a substance in a river, river bank, lake or lakeshore, shoreline or wetland or in or under its bed which is likely to have adverse effects on a river, river bank, lake or lakeshore, shoreline or wetland;
- directing or blocking a river, river bank, lake or lakeshore, shoreline or wetland from its natural course; and
- draining a river or lake.

The Act also requires the minister responsible for the environment to declare protected wetlands in order to regulate their use and ensure sustainable protection. Human activities of a permanent nature which may or are likely to compromise or adversely affect conservation or the protection of ocean or natural lake, shorelines, river bank, water dam or reservoir are restricted. Such activities can only be conducted within sixty (60) metres of these water resources.

Obligations under Water Laws

The Act requires applicants of water use permits under laws governing management of water resources, abstraction or use of water, to make a statement on the likely impact of such water right on the environment. The Water Boards are required to file annual return in respect of compliance by holders of water permits with environmental conditions.

Environmental Impact Assessments

The Act requires developers of projects including projects relating to or affecting water resources to carry out environmental impact assessments. The purpose of environmental impact assessments is to ensure sustainable protection of the environment in general and water resources in particular.

IWRM Policy

The Government of Tanzania in April 2003 launched a national water policy, the main components of which are water resources management, rural water supply, urban water supply and water utilisation. The challenge remains to disseminate it widely. Although the political guidance is in place at the national level, the capacity to implement, supervise and monitor activities related to surface water at regional and district level remains limited.

In the LWBMO and in the regional office they see the need for transboundary cooperation and even IWRM. However they need access to IWRM tools and proper channels to discuss salient water management issues with the riparian neighbours. However, at district level the main issue is water supply and sanitation.

The LVBWO is running on government funding and charges collected from water users, which is insufficient and has hindered its capacity to effectively play its role. In addition, there is a growing understanding that transboundary water issues need to be given more attention, and yet in the case of the Kagera there are very few water users who have the resources to pay

for the consumption i.e. the basis for the financial sustainability does presently not exist.

Transboundary Water Resources and Environment Regulation

Tanzania's principal water and environment sector laws are broadly similar to Uganda's though differences in relation to regulatory approach exist. There are also a number of regulatory gaps in the law. These include the following:

National Character	The principal laws that regulate the water and environment sector in Tanzania are also national rather than transboundary in character and outlook. A transboundary project within any part of the territory of Tanzania is, therefore, required to comply with the relevant laws of Tanzania as if it was a national project in addition to complying with laws of neighbouring countries.
Basin Management Approach	Unlike Uganda, Tanzania follows a basin wide approach. Under this approach, any area of land declared to be a river water basin is managed by a basin water board. This is considered a better regulatory approach since it facilitates the regulation of a river basin spread through many local government units as a whole. Common standards and regulation of the river basin can be developed and applied across the basin. Despite this, the basin wide approach is also national in character and outlook. Transboundary aspects of the river basins are not sufficiently regulated.
Kagera River Basin	Although the principal water sector legislation does not refer to the Kagera River and other rivers, the Water Utilisation (General) Regulations do focus on protection measures for river banks, lake shores and other water catchment areas. The Regulations prohibit human activities within 200 metres of a river bank or within 500 metres of the shoreline of a national lake, dam or reservoir. This is reinforced by the environment law under which the minister is given the power to declare a river, river bank, lake, lakeshore or shoreline a protected area and to impose restrictions to protect it from environmental degradation. These laws can be invoked to regulate water resource management and to enforce environmental protection measures in the entire Kagera River Basin in Tanzania.
Environmental Impact Assessments	All major development projects and other activities with significant adverse environmental impacts are required to conduct EIAs prior to project implementation. However, EIA requirements and standards are also national in character. This means that transboundary projects must comply with national EIA requirements in each country which may differ in scope and application.

7.3.3 Institutions Responsible for IWRM in Tanzania

MOWLD	In Tanzania, the overall responsibility of initiating the national policies and for setting national standards and priorities for water management lies with the Ministry of Water and Livestock Development (MOWLD). In addition to overall management responsibility and policy implementation, the ministry also undertakes regulation through water boards and basins, and in-
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directly through an independent authority—the Energy and Water Utilities Regulatory Authority (EWURA)—formed by the EWURA Act 2001 to regulate water supply and sewerage services, amongst others.

Following the restructuring of the ministry, there are now four sections / departments (previously they were two) responsible for (i) water assessment and monitoring; (ii) water resources planning and research; (iii) transboundary water resources management; and (iv) water resources protection and environment. The roles of the transboundary water resources management section is essentially dialogue and negotiation with riparian countries, how to manage treaties. There are three technical divisions under the ministry: water resources; Commercial water supply and sewerage division; and Community water supply and sanitation.

Responsibility for regulation is in process of being transferred to specific government regulatory institution. The ministry will be concerned with policy formulation, providing guidelines and policy monitoring.

National Urban Water Authority (NUWA)	The main function of NUWA is to regulate water utilisation in towns and urban centres. Its functions include advising the government on formulation of policies and standards for the development and utilisation of water in towns and urban centres.
NEMC	NEMC is the overall national regulator on all environment management matters in Tanzania. It executes its mandate through local governments. NEMC has wide regulatory powers in relation to the regulation of river banks, rivers, lakes, lakeshores and shorelines. It enforces the environmental impact assessment requirements for all projects relating to or affecting water resources.
The Principal Water Officer	The Principal Water Officer is the chief central government regulator for water resources utilisation and management. At regional level, the Regional Water Officer exercises the powers of the Principal Water Officer.
Central Water Board	The functions of the Central Water Board are largely advisory in nature. It is also given regulatory powers in relation to the control of water pollution. The Board's powers include advice in relation to new legislation and formulation of standards.
Basin Water Boards	Management of water basins declared by the minister for water affairs is by a Water Basin Board appointed by the minister. The functions of a water basin board in relation to the water basin in question are similar to those of the Central Water Board.
Basin Offices	There are 9 water basin offices governed by the basin water board, 6 are transboundary in function. The role of national water board (which is represented by different sectors) is advisory to the ministry – but is responsible for coordinating the planning, and overseeing multi investments. Different sectors are represented on the board. The basin board is overseeing entire catchment areas. This

responsibility falls directly under the new Planning Section of the ministry.

In specific reference to water resources management in the Lake Victoria Basin is under the auspices of the Lake Victoria Basin Water Office (LVBWO) The Lake Victoria Basin covers Kagera, Mwanza, Mara and Shinyanga regions. The basin is one of nine in the country, of which three have operational water resources management offices. The other two, Pangani and Rufiji, are operating with donor support, but LVBMO has none, and has to run on government funding and charges collected from water users. The LVBWO is charged with sensitisation of the population, enforcement of water laws, collection of user fees, conflict resolution, expansion and operation of the hydro-meteorological network.

The LVBWO was inaugurated on 23rd March 2000 and became operational in the same year. It has 6 permanent staff, one Basin Water Officer, one Basin Hydrologist, 4 Basin Technicians and 5 temporary staff. In most transboundary issues the Basin Water officer refers to the Manager of Water Resources in the Ministry of Water and Livestock Development. Currently, there are two technicians of the LVBWO in the Kagera Region, in the Regional Water Engineer's office (RWE) in Bukoba. The name of the office is designated as the Catchment Water Office, Kagera River Sub-Basin.

District level

At the district level there are the District Water Engineer, the District Natural Resources Officer and the District Community Development Officer. There is also a multi disciplinary District Promotion Team, in every district which are very capable of mobilising communities.

Villages and user groups

At the community level there are the village governments and in many cases water user groups established to manage water supply points.

7.4 National WRM Framework for Uganda

7.4.1 National Priorities

Current focus is on:

- Restoring security, dealing with the consequences of conflict, and improving regional equity.
- Restoring sustainable growth in the incomes of the poor.
- Human development – addressing quality and drop in universal primary education, reducing mortality and increasing people's control over the size of their families.
- Transparency and efficiency in use of public resources – to reduce poverty.

7.4.2 Review of the Policy, Legal and Institutional IWRM Framework of Uganda

National Water Policy

The National Water Policy embraces international resolutions, declarations and guidelines for the improvement of the water sector in Uganda e.g. UN Conference on Environment and Development in Rio de Janeiro (June 1992) especially agenda 21 (chapter 18) on fresh water resources.

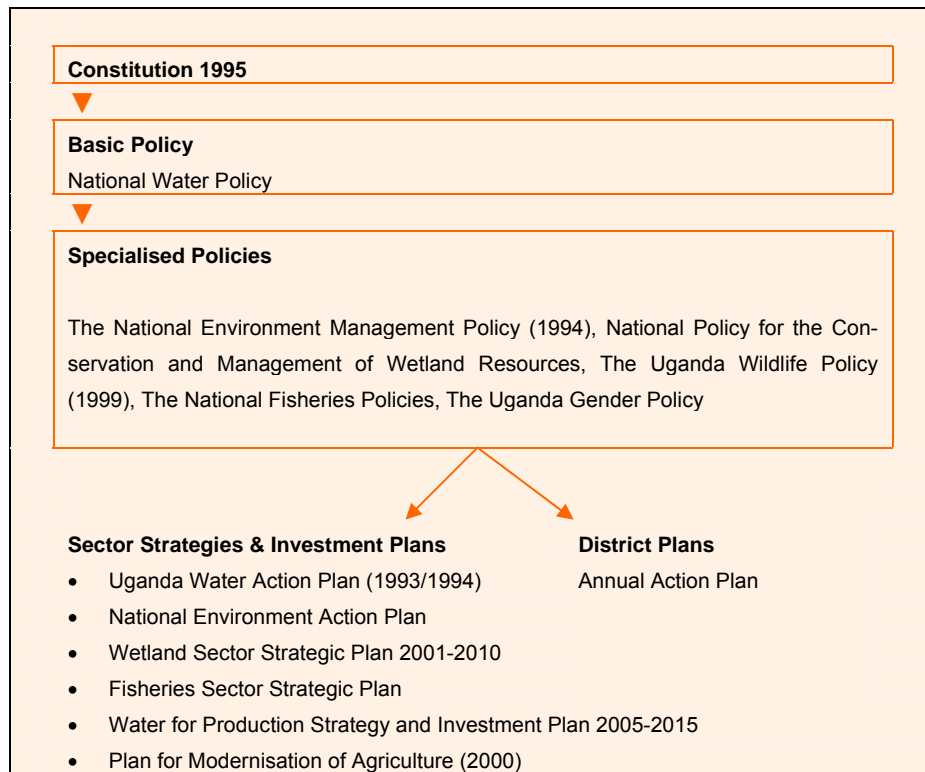
The water sector policy recognizes Uganda's regional obligations including NBI related objectives and issues, and adheres to various currently accepted principles of international law on the use of shared water resources. The policy framework is influenced by Uganda's participation in international, regional and basin-wide bodies of cooperation such as Technical Cooperation Committee for the promotion of the Development and Environmental Protection of the Nile Basin (TECCONILE), Inter-Governmental Agency for Drought and Desertification (IGADD), the defunct Kagera Basin Organisation (KBO), and Lake Victoria Fisheries Organisation (LVFO).

In addition to guiding principles adopted from the international experience, Uganda's water sector policy is guided by set of specific policies and strategies related to broader context of water resources e.g. the Constitution of the Republic of Uganda, the decentralization and privatization policies and the Environmental Management Policy and Statute. This provides the basis for integrated, multi-sectoral approach to water resource management and linkages with the different agencies.

Water and sanitation is treated as sector in national programmes and budgets (receive donor budget and project supports). It has Sector Working Group which contributes to sector policies – under the programme sector-wide approach.

A core objective of the water and sanitation sub-sector is to provide sustainable safe water supply and sanitation facilities to 77% of the rural population and 100% of the urban population by the year 2015, with management responsibility and ownership assumed by the users, and an 80%-90% effective use and functionality of facilities.

Figure 7.4: Policies and strategies for water resources management in Uganda



The National Environment Action Plan – a process undertaken between 1991 and 1994 – among others, took stock of the related environmental laws and policies in relation to the challenges for a sustainable future. Since then, several policies (and laws) have been formulated.

The National Environment Management Policy includes key policy objective on water resource conservation and management:

To sustainably manage and develop the water resources in a coordinated and integrated manner so as to provide water of acceptable quality for all social and economic needs.

The National Policy for the Conservation and Management of Wetland Resources (NPCMWR) considers wetland resources as an integral part of the environment and their management must be pursued in the context of interaction between conservation and the national development strategies. The policy (NPCMWR) set out specific policy strategies. For example, drainage of wetlands is prohibited unless more important environmental management requirements supersede. Only those uses that have been proved to be non-destructive to wetlands and their surrounding are permitted; these include water supply, fisheries, wetland edge gardens and grazing. Any decision to use wetlands must consider the requirements of all other users in the community. Any wetland serving as a source of water supply or receiving effluent as part of a designated service to any human settlement is by definition, a fully protected wetland from any encroachment, drainage or modification. Policy recognizes that wetland resources have transboundary significance, and therefore require regional and

global approaches.

Policy objective

The overall policy objective of the Ugandan Government for the water resources management is: to manage and develop the water resources of Uganda in an integrated and sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs of the present and future generations with the full participation of all stakeholders.

In Uganda, objectives of water sector as outlined by the 1997 PEAP include:

- The provision of a safe drinking water supply network to 100% of the population by 2015, and an adequate water supply for livestock;
- The building of local community capacity to operate and maintain water supply facilities, and increasing community ownership through community participation and financial contributions towards their construction;
- The conserving of water resources by adhering to environmentally friendly practices; and
- Increasing efficiency in the delivery of water services through proper coordination of government water programmes with those of NGOs and other stakeholders.

Uganda's interests (as stated in the Policy) lie within securing her equitable share of the water resources of the Nile basin; ensuring that the good water quality in the water bodies within the national boundary is maintained for sustainable use. At the same time, it is recognized that, in the management and utilization of its water resources, Uganda will do so in accordance with all international and regional obligations under various regional conventions, declarations, principles and organizations relating to the River Nile Basin and Lake Victoria.

Current policy also calls for a coordinated strategy regarding international water resources issues in particular related to utilization of Nile waters and safe guarding of the water quality of Lake Victoria, Kyoga, Albert, George and Edward.

Water coverage in urban areas (under National Water and Sewerage Corporation, NWSC) has increased from 68% to 70% with an increase in connections from 100,000 to 150,000 between June, 2005 and June, 2006 (GoU, 2007). While the sector continues to register an increase in the number of installed water points in rural areas as well, the overall average coverage for rural areas fell from 61.3% to 61% between June 2005 and June 2006. According to Background to the Budget 2007/2008, this was partially attributed to the increasing per capita cost of supplying safe water in rural areas, which increased by 85% between 2002/03 and 2005/06.

The priority actions in water resource management as outlined by the Poverty Eradication Action Plan (PEAP) 2004/5 focus on finalising water resource management reform study and develop an action plan for the short, medium and long term for the water resources management.

Figure 7.5: Strategies for water resource management under the current PEAP

Strategic Objectives	Challenge/constraint	PEAP policy actions
Strengthened environmental and natural resource (ENR) management regime in support of sustainable production of goods and services.	Degraded forests resources Environmental impact assessment regulations not enforced	Prepare a ENR strategy to ensure that economic activities consistent with sustainable use of natural resources and protection of the environment NEMA rationalized in interests of cost effectiveness Prepare National Environmental regulations, standards and guidelines
	Significant degradation of wetlands	Develop and disseminate guidelines for wise use of wetland resources Improve community skills and diversification of wetland products in order to add value to wetland products Enforce appropriate policies, laws, procedures and regulations to curtail degradation of wetland resources Assess wetland resources to determine resource availability and trends Promote community initiatives that promote wise use of wetlands
Strengthened infrastructure in support of increased production of goods and services	Limited water supply to supplement rainfall	Finalise water for production strategy (increase irrigation areas to 10,500 ha by 2013/14) Establish a coordination mechanism

In regard to environment and natural resources (ENR) sector, Government's objectives are to: i) have a sufficiently forested, ecologically stable and prosperous Uganda; ii) ensure that Uganda's wetlands are managed and used in ways that conserve the environment and its biodiversity while optimizing benefits to people in the host communities, and iii) maximize the use of timely and accurate climate information for socio-economic development.

In FY 2006/7, the government aligned policies of 19 out of 21 lead agencies in an effort to strengthen their capacity to plan for and manage the environment and natural resources; issued 4 out of the planned 5 key sectors with Environmental Impact Assessment guidelines; and compelled all the 21 identified most polluting industries to meet their obligations in accordance with agreed standards.

Water coverage in urban areas (under National Water and Sewerage Corporation, NWSC) has increased from 68% to 70% with an increase in connections from 100,000 to 150,000 between June, 2005 and June, 2006 (GoU, 2007). While the sector continues to register an increase in the number of installed water points in rural areas as well, the overall average coverage for rural areas fell from 61.3% to 61% between June 2005 and June 2006. According to Background to the Budget 2007/2008, this was partially attributed to the increasing per capita cost of supplying safe water in rural areas, which increased by 85% between 2002/03 and 2005/06.

The Water Act, Cap 152

The Water Act is the principal law that regulates Uganda's water sub-sector. The Water Act contains regulates general rights to use water through the issuing of permits and licensing and prohibits water pollution. All major activities utilising water resources must be carried out in accordance with the requirement of the Water Act.

Purposes and Objectives

The purpose of the Water Act is to regulate the use, protection and management of water resources.

Water Supply

All aspects of water supply are regulated by the Central Government. Under the Water Act, all rights in water in Uganda are vested in the Government to be exercised by the Minister (responsible for water or natural resources) and the Director of the Directorate of Water Development¹⁴ (DWD) in accordance with the Water Act. The Water Act also imposes a general restriction in relation to the right to acquire or use water. No person is allowed to acquire or have a right to use water, to construct or operate any water works except in accordance with the provisions of the Water Act.

Apart from using water for domestic purposes, for fire fighting purposes and for irrigating subsistence gardens by an owner or occupier of land, other uses of water are restricted. Use of water for any activities that exceed the prescribed limit of 400 cubic metres in any 24 hour period, requires a water permit issued by DWD.

Water Permits Regime

The Water Act restricts water use and extraction unless they are authorised under the Water Act. Authorised water use generally takes the form of a permit issued by the Director of Water Development. Accordingly, any person wishing to extract and or use water must apply to the Director of Water Development for a permit.

A holder of a water permit must comply with the following conditions:

- not to cause or allow any water to be polluted;

¹⁴ This may change to the Directorate of Water Resources Management (DWRM) which became operational in 2008

- to prevent damage to the water source or to a source to which water is discharged;
- to take precautions to ensure that no activities on the land where water is used results in pollution of the water; and
- to observe any special conditions or any other conditions that may be imposed.

The Director of DWD is under, the Water Act, given wide powers to impose other conditions.

Prohibition of Pollution

The Water Act specifically prohibits pollution. It is an offence where a person without permission causes or allows the following:

- waste to come into contact with any water;
- waste to be discharged into water (whether directly; or indirectly); or
- water to be polluted.

Water Policy Formulation

In order to ensure effective implementation of the provisions relating to use and protection of water resources, the Act under section 9 requires the establishment of a national Water Committee. The functions of the Water Committee mainly relate to water policy formulation.

Overview

The Water Resources Regulations, Statutory Instrument 152-1

The Water Resources Regulations, (“the Regulations”) were made in 1998 to provide procedures and measures for implementing the provisions of the Water Act relating to water resources. The Regulations set out detailed procedures for application for water permits, construction permits, drilling permits and water easements all of which are essential in the use and management of water resources. The Regulations also set out conditions for the grant of permits.

Water Permits

Under Regulation 3, a person who occupies or intends to occupy any land or a person who wishes to construct, own, occupy or control any works on or adjacent to certain land can apply for a water permit. An application must be made to the Director of Water Development in a prescribed manner.

In considering the application for a Water Permit, the Director of Water Development is required to take into account various factors listed under regulation 6. These include but are not limited to the following:

- the existing and projected availability of water in the area;
- the existing and projected quality of water in the area;
- any adverse effect which the use of water under the permit is likely to have on existing authorised water users, an aquifer or water

way, the drainage regime, the environment including the river-line and riparian environment and in stream uses of water.

- any water to which the applicant is already entitled; and
- the availability of any alternative sources of supply.

In issuing water permits, the Regulations authorise the Director of Water Development to attach certain conditions (see regulation 7). These conditions relate to the following:

- prevention of water pollution;
- prevention of damage to the source from which water is taken or to which water is discharged after use;
- protection and enhancement of in-stream uses of water;
- protection of water and its surroundings;
- maintenance of flow in the waterway;
- the purposes for which water may be used;
- the maximum amount of water which can be taken at a particular period or under certain circumstances;
- payment for the water used;
- the efficient use of water resources; and
- the protection or control of in –stream uses of water.

Water Policy Committee

The Regulations contain provisions for the composition, duties and functions of the Water Policy Committee, which are critical in matters of policy in the water sector as a whole, and use and protection of transboundary water resources in particular. The Water Policy Committee is entrusted with performance of various functions including the following:

- co-ordinating the formulation of national policies relating to international water resources;
- liaising with international water resources organizations;
- initiating and co-ordinating the preparation, implementation and revision of national water resources policy, national priorities for the use of water and related resources as well as the water action plan;

- co-ordinating the preparation and keeping under review of plans and projects which can affect national water resources undertaken by either government agencies, donors or private developers to ensure that those plans and projects are consistent with policies, priorities and water action plan;
- co-ordinating and monitoring the assessment of Uganda's available water resources;
- liaising with government authorities concerning policies, guidelines, standards, monitoring and data relating to water resources; and
- coordinating the preparation of and keeping under review, national water quality standards.

Water (Waste Discharge) Regulations, Statutory Instrument 152-4

The Water (Waste Discharge) Regulations, ("the Regulations") were also made in 1998. Their main purpose is to regulate the discharge of effluent or waste into water that is likely to cause pollution. Any discharge of effluent or waste into the aquatic environment must be in accordance with standards established by NEMA.

The Regulations prohibit any discharge of effluent or waste into water contrary to the set standards without a permit issued by the Director of Water Resources. In determining whether or not to issue the permit, the Director of Water Resources is required to consider the following:

- the existing authorised and projected water quality in and down – stream of the area;
- any adverse effect which the discharge of waste is likely to have on existing authorised uses of water, possible future beneficial uses of water, any waterways, the river line and riparian as well as environment and in-stream uses of water;
- the minimum water quality standards and effluent discharge standards;
- guidelines relating to waste discharge; and
- government policy on environment management and conservation.

Once a waste discharge permit has been issued, all its conditions must be met. Where the conditions are not met, the Director of Water Resources can cancel the permit and take appropriate measures to prevent any further discharge of waste which may come into contact with water directly or indirectly.

The National Environment Act, Cap 153

The National Environmental Act is the principal environmental protection law. It was enacted to provide for sustainable management of the environment, to establish the National Environment Management Authority

Overview

(NEMA) and to provide for other matters relating to environment. The Act makes provision for establishment of various environmental standards including water standards. Its provisions are critical to the use and protection of water resources.

Principles of Environmental Management

The Act requires NEMA to ensure observance of essential principles of environmental management. Such principles are listed under section 2 and include promotion of international cooperation between Uganda and other states in the field of environment.

The National Environmental Management Authority (NEMA)

The Act establishes NEMA as a body corporate entrusted with the management of environmental matters. Functions of NEMA include the following:

- co-ordinating the implementation of government policy and the decision of the policy committee on environment;
- ensuring the integration of environmental concerns in over all national planning through co-ordinating with the relevant ministries, departments and agencies of government;
- liaising with the private sector, intergovernmental organisations, non-governmental agencies, government agencies of other states on issues relating to the environment; and
- promoting environmental policies and strategies.

In the exercise of its functions NEMA can under section 6 delegate any of its powers to a lead agency. A “lead agency” as defined under section 1 means any ministry, department, local government system, parastatal agency or public officer in which or whom any law vests the functions of control or management of any segment of the environment. (In relation to water resources, DWD, is a lead agency for purposes of sustainable management of water resources).

Environmental Impact Assessments

The Act requires developers of certain projects to carry out environmental impact assessments (EIAs). Section 1 defines a developer as a person who is developing a project which is subject to an environmental impact assessment process. The Third Schedule to the Act sets out a list of projects subject to EIA requirements. The list is long but not exhaustive and the Minister is empowered to add any other projects on the list. Listed projects requiring EIAs include the following:

- any activity out of character with the surrounding;
- water transport;
- storage dams;
- river diversions and water transfers between catchments;

- flood control schemes; and
- drilling for purposes of utilizing ground water sources.

Water Quality Standards

Section 25 obliges NEMA in consultation with a lead agency to establish water quality standards. Specifically NEMA is required to establish:

- the criteria and procedures for the measurement of water quality;
- the minimum water quality standards for all the waters in Uganda; and
- the minimum water quality standards for different water uses.

Restrictions on Use of Lakes and Rivers

The Act has enabling provisions for the protection of lakes and rivers as essential water resources to ensure sustainable utilization of water. The Act sets out limits in relation to the use of lakes and rivers as one of the measures for their sustainable use and management. Section 34 prohibits the carrying out of certain activities in relation to a rivers or lakes. The prohibited activities in relation to a river or lake amongst others include the following:

- using, erecting, reconstructing, altering, extension, removing or demolishing any structure or part of any structure in, under, or over the bed;
- excavation, drilling, tunnelling, or disturbing the bed otherwise;
- depositing any substance in a lake or river or in, on or under its bed, if that substance would or is likely to have adverse effects on the environment;
- diverting or blocking any river from its normal course; and
- draining any lake or river.

Environmental Easements

The Act provides for an environmental easements regime for purposes of environmental management. Under section 72 an environmental easement can be granted to any person or group of persons with an object of enhancing and facilitating the conservation and enhancement of the environment. An environmental easement can be imposed on land to preserve the quality and flow of water in a dam, lake, river or aquifer.

The Environmental Impact Assessment Regulations, Statutory Instrument 153-1

Overview

The Environmental Impact Assessment Regulations, (“the Regulations”) were made in 1998 to operationalise the provisions of the National Environment Act requiring EIAs. The Regulations put in place more detailed procedures for the carrying out EIAs.

Duty to Carry out Environmental Impact Assessments

The Regulations impose a duty on developers of projects requiring EIAs including projects in relation to supply or utilization of water sources to prepare

project briefs setting out in a concise manner:

- the nature of the project;
- the projected area of water that may be affected;
- the activities to be undertaken during and after the development of the project;
- the materials that the project shall use; and
- the possible products and by-products including waste generation of the project.

Public Participation in Environment Impact Assessments

The Regulations enable the members of the public likely to be affected by a project to participate in the environmental impact assessment process. Developers are required to take all measures necessary to seek the views of people in communities likely to be affected by projects. In addition, in approving the projects the Executive Director of NEMA is required to take into account the views of the members of the public. This means that in relation to water resources, the effect of any project on the rights of the community to access and or utilise water resources is an important factor in determining whether or not a project will be approved.

Role of the Lead Agency

The lead agency is required to make comments on the, developers' EIAs. In considering whether or not to approve a project, the Executive Director of NEMA is required to take into account comments of the lead agency. In relation to water resources, the lead agency can be DWD or any other water authority.

Overview

The National Environment (Wetlands, River Banks and Lake Shores Management) Regulations, Statutory Instrument 153-5

The National Environment (Wetlands, River Banks and Lake shores Management) Regulations, ("the Regulations") were made in 2000 to put in place measures and procedures for the sustainable management and use of wetlands, river banks, and lake shores as well as for the protection of rivers and lakes. The principal objective of the Regulations is the sustainable use and protection of wetlands, river banks, lake shores, and lakes and rivers as basic natural water resources.

Management of Wetlands

All wetlands in Uganda are required to be utilised and managed in accordance with the Regulations. The objective of management of wetlands and wetlands resources is to among others:

- provide for the conservation and wise use of wetlands and their resources;
- ensure that wetlands are held and protected by the government or local

government for ecologic purposes for the common good of all citizens;

- ensure water catchment conservation and flood control;
- ensure the sustainable use of wetlands for ecological and touristic purposes for the common good of all citizens;
- ensure that wetlands are protected as habitats of fauna and flora;
- provide for the regulated public use and enjoyment of wetlands; and
- minimize and control pollution.

Management and Use of River Banks and Lake Shores

Regulation 2 defines a river bank as the rising ground not more than 100metres long, bordering or adjacent to a river in form of a rock, mud, gravel or sand and in cases of flood plains includes the point where the water surface touches the land, that land not being the bed of the river. A “lake shore” refers to the land not more than 100 metres adjacent or bordering a lake.

Government and local governments are obliged to hold in trust for the people and protect river banks and lake shores for the common good of the citizens of Uganda. Government and local governments are prohibited from selling or otherwise alienating any river bank and lake shore.

The objectives of managing a river bank or lake shore are amongst others,

- to promote the integration of wise use of resources in rivers and lakes into the local and national management of natural resources for socio – economic development; and
- to prevent siltation of rivers and lakes and control pollution or degrading activities.

Protection Zones of River Banks and Lake Shores

Rivers specified in the Sixth Schedule to the Regulations must have a protection zone of one hundred (100) metres from the highest water mark of the river. These rivers include River Kagera and River Nile from Lake Victoria to Lake Albert. Other rivers not listed under the Regulations are required to have a protected zone of one hundred (100) metres from the highest water mark of the river.

Lakes listed in the Seventh Schedule to the Regulations are required to have a protected zone of two hundred (200) metres measured from the low water mark. These lakes include Lake Victoria. All lakes not specified in the seventh schedule are required to have a protected zone of one hundred (100) metres from the low water mark.

IWRM Policy

The main gaps in policy relate to a lack of a transboundary institutional and management framework. Although the Water Policy recog-

nizes the importance of transboundary issues including NBI issues, it accepts that the existing institutional and management framework in Uganda is not yet comprehensive enough to address the management of water resources in Uganda given the transboundary nature of Uganda's water resources and other factors.

A major institutional gap is the lack of strong river/lake basin management authorities, catchment boards or similar bodies to manage and regulate the transboundary issues of Uganda's national water resources such as the Nile Basin. The Water Policy did envisage the creation of such bodies to manage and regulate transboundary water resources issues posed by river/lake basins as follows: "In the present Uganda context, it has not been found necessary - and therefore it has not been elaborated on further in this policy document - to create authorities, catchments boards or similar bodies. The government will take the necessary steps if in future the requirement will arise for the creation of a river or lake basin management agency within Uganda where there are specific problems that can only be solved through such management structures."

The Water Policy is flexible and does not preclude the establishment of transboundary agencies to handle transboundary management issues relating to river/lake basins in Uganda. As a result of this, management of the Lake Edward and Lake George basins in western Uganda have recently been inaugurated by the Government of Uganda. Overall the national policy objective under the Water Policy is to manage and develop the water resources of Uganda in an integrated and sustainable manner. For this purpose, the Water Policy sets out guiding principles as well as strategies. With respect to international water resources issues, the Water Policy recognizes that "Uganda needs a coordinated strategy regarding international water resources issues in particular related to the utilization of the Nile waters and safe guarding of the water quality of the lakes; Victoria, Kyoga, Albert, George and Edward. This is a national level function".

Transboundary Water Resources and Environment Regulation

Although the Water Act, the National Environment Act and the National Water Policy do apply to international rivers, lakes, wetlands and other natural resources of transboundary character, there are a number of regulatory gaps in the law. These include the following:

National Character

The principal laws that regulate the water and environment sector in Uganda are national rather than transboundary in character and outlook. Although the Water Policy Committee is charged with the responsibility of formulating Uganda's international water policy, no such policy has been formulated and implemented by passing an enabling law. A transboundary project within any part of the territory of Uganda is, therefore, required to comply with the relevant laws of Uganda as if it was national project, in addition to complying with laws of other neighbouring countries.

Lack of River, Lake and other Transboundary Management Institutions

A major regulatory institutional gap in the existing legal and institutional framework for Uganda is the lack of river, lake, wetland, catchment and other transboundary management institutions. River and lake basins, wetlands and water catchment areas in Uganda are regulated as national natural resources regardless of whether those resources form part of transboundary basins and catchment areas.

Kagera River Basin

River Kagera is one of the rivers listed in the Sixth Schedule to the National Environment (Wetlands, River Banks and Lake Shores Management) Regulations. A protection zone of 100 metres in which no activities are allowed is prescribed in relation to Kagera River and other rivers listed in the Sixth Schedule. These Regulations empower NEMA to regulate development activities along the Kagera River section in Uganda.

The Regulations give the Minister wide powers to declare protected wetlands, river banks and lakes shores and to either restrict or prohibit human activities in such protected areas (see Regulations 8, 18-23 and 29-32). These Regulations give the Minister sufficient power to regulate water resource management and to enforce environmental protection measures throughout the Kagera River Basin falling within the territory of Uganda.

Environmental Impact Assessments

All major development projects and other activities with significant adverse environmental impacts are required to conduct EIAs prior to project implementation. However, EIA requirements and standards are also national in character. This means that transboundary projects must comply with national EIA requirements in each country which may differ in scope and application.

Capacity building

Uganda has still got significant need for skills strengthening in IWRM, all aspects of project preparation, planning, management and administration, and the development of technical guidelines. There should be enhanced skills development in project planning and management such as development of practical guidelines and new knowledge relevant to transboundary basin related activities, exchange and sharing of experience and human resources development in understanding river system behaviour, evaluating alternative development and management schemes, and common computer-based platforms for communication.

It is imperative to note that under the decentralization system in Uganda the implementation of policy is through the existing structures i.e. the Local Government structures, the semi-autonomous bodies, the CSOs and the Private sector. Central government which is mandated with policy guidance, formulation and monitoring would require better infrastructure and human resource needs in order to support the development of coordination committees to comprise national senior water managers, the management of water policy and planning components under one management structure to reduce overheads and assure the criteria of draw-down support.

7.4.3 Institutions Responsible for IWRM in Uganda

Water resources management and regulation of the environment in Uganda are shared responsibilities between the central government and local governments. Service delivery has been decentralized to district and lower governments as required under the Local Governments Act, Cap 243 Laws of Uganda. The key regulatory institutions for the water and environment sector and their key functions are outlined below.

MWE

The Ministry of Water and Environment (MWE) has the overall responsibility for initiating national policies and for setting national standards and priorities for water resources management and environment regulation. A multi-disciplinary team representing stakeholders and constituting the Water Policy Committee (WPC) advises the Minister on the above functions and is mandated to initiate revisions to legislation and regulations.

The WPC is also mandated to co-ordinate sector ministries' plans and projects affecting water resources. One of the WPC's key functions is the formulation of an international water resources policy. WPC is also responsible for initiating revisions to legislation and regulations and for coordinating sector ministries' plans and projects (affecting water resources). A part from representatives from government ministries and departments, members of the WPC include representatives from district administration, private sector and civil society.

DWD

The Directorate of Water Development (DWD) is the lead technical agency for the central government responsible for managing water resources, coordinating and regulating all sector activities and provides support services to local governments and service providers. The Directorate is made up of two divisions - Water Resources Division (now Directorate of Water Resources Management (DWRM) in the proposed structure for the Ministry of Water and Environment)¹⁵ and Water Quality & Pollution Control Division, and one standalone Unit – the Water Permits Unit. The Water Resources Division is composed of the Hydrology and Hydrogeology sections. The former carries out monitoring and assessment of surface waters (river and lakes), while the latter does the same but for groundwater. Its functions include:

- monitoring the quality and quantity of surface and ground water resources nationally;
- providing reference water quality analytical services;
- storing, processing and disseminating water resources data and information to all users;

¹⁵ There is a new structure for the Ministry of Water and Environment in Uganda that is not yet widely disseminated. DWD and DWRM are now at par, but the relevant laws still vest the powers of regulation with the 'Director' hitherto understood to be the Director DWD.

- conducting water resources assessment studies and providing guidance to water development programmes and to government based on study findings;
- formulating and reviewing national water resources development and management plans and frameworks;
- providing advice to NEMA through review of Environment Impact studies on water resources related projects;
- reviewing and providing advice to NEMA on standards for water quality and effluent discharge;
- processing, monitoring and enforcing permits for water abstraction, wastewater discharge, borehole drilling and construction of hydraulic works; and
- providing advice to the WPC on trans-boundary water policies and agreement to ensure their equitable use and adequate protection.

The activities of the DWD have now been decentralized to district and lower government level. For instance, districts set local priorities, bye-laws and annual action plans regarding the use of water resources such as fish ponds, irrigated areas, livestock watering, rural and urban domestic water supply. The operation and maintenance of the point source water supply is the responsibility of the user community under the technical support of the district administration. Planning and development of new sources is the role of the district councils.

There are number of government projects under DWD, providing the services to the rural sector. For urban areas, the urban water supply (under the DWD) is under the umbrella programme called the Rural Towns Water and Sanitation Programme (RTWSP). However, major uses like hydropower generating and other uses with trans-district and or transboundary implications are dealt with at the national level but with full participation of the stakeholders.

NEMA

The National Environmental Management Authority (NEMA) regulates all aspects of environment management in Uganda including wastewater discharge regulation, regulation of rivers, wetlands and lakes.

National Water and Sewerage Corporation (NWSC)

The NWSC is an autonomous parastatal entity established in 1972 is responsible for the delivery of water supply and sewerage services in more than 15 large urban centres. These include Kampala, Jinja, Entebbe and Mbale.

Local Government Authorities

These comprise districts, towns, lower local governments which together with the communities, are responsible for implementing, operating, and maintaining water supply and sanitation facilities (except in the large urban centres under NWSC).

Municipal and urban councils are mandated to operate, maintain and manage urban water supplies for domestic and industrial use in partnership with water user groups, associations and water authorities. Municipal and urban councils also handle the licensing of industries, solid, sewerage waste disposal and drainage systems in their localities. They play an important role in the management and protection of water resources. At sub-county level, the sub-county council is responsible for the provision of water and sanitation services and protection of natural resources including water.

Water User Groups and Associations

Water user groups and associations are mandated to manage, operate and maintain water point resources at community level. Lower local governments thus play key roles in setting local priorities and mediating in water management issues.

The Government of Uganda through the Ministry of Water, Lands and Environment, is undertaking a comprehensive water sector reform with four sub-sector strategy components: (i) urban water supply and sanitation, (ii) rural water supply and sanitation, (iii) water for production, and (iv) water resources management. The water sector in Uganda is organised in a six-tier structure operating from village (LCI), Parish (LCII), Sub-county (LCIII) County (LCIV) through the district (LCV) to national level. However, County and Parish level do not have their own budgets.

The government of Uganda produced a National Water Policy in 1999, which emphasises the need for participatory planning at the lowest possible level and specifically mentions the requirement for districts to set priorities, by-laws and annual development plans within policies and guidelines set by national level ministries. It goes further and devolves rights to planning at county and sub-county levels. Water law enforcement is the joint responsibility of the Department of Water Resources and district administration, with the emphasis gradually shifting from the former to the latter. Data is collected by Government and has to be disseminated to the public.

The policy refers to the question of management by sub-catchment, (eight sub-catchments of the Nile are delineated in the country) but considers that this is unnecessary at present. The question will be reviewed in a water resources management project due to start in 2003.

The policy refers to the need for irrigation (estimating the irrigation potential at 400,000 ha.) and also considers the need to maintain adequate river levels for navigation. It also discusses international waters.

The DWD was supported by a Danida-funded Water Resources Assessment Project (WRAP) for the period 1994 to 2002 and an evaluation of the project support on Surface Water & Hydrology achievements was published in February 2003. The project increased the number of rain gauges monitored from 47 to 52, and raised awareness among villages of the importance of protecting them from vandalism. However, these problems continue; there is a shortage of manpower, access is difficult and some areas are still inse-

cure. Overall, capacity for data processing, water resources assessment and assessments of permits for abstraction of surface water has increased under the project

7.5 Comparative Analysis of the National WRM Frameworks

The following have been the areas where comparisons have been made:

- Water Resources Policies
- Water Sector Reforms
- IWRM Policies
- Financial Planning
- Water Allocation and Transfer
- WRM Institutional Set-up
- Decentralisation
- Capacity Building
- Stakeholder Participation
- Gender Mainstreaming

7.5.1 Water Resources Policies

Priority is water supply

Among the four countries it is Tanzania, Uganda and to some extent, Rwanda that make explicit reference / emphasis to water resources in the overall national policies and goal of poverty reduction, and have clear allocation to water sector in national budget. In Burundi, water does not appear as a priority sector and is only included in the annual budget at activity level.

The PRSPs scarcely mention water in other contexts than as inadequate water supply being an indicator of poverty and the productive use of water is not highlighted. In all four countries, recognition and priority to a large extent are given to IWRM at policy level, but what is really lacking is to effectively translate IWRM into practice.

ndices

Table 7.2: Areas of commonalities and differences in the four countries and the EAC

Relevant policies in place	National policies				Regional level
	Burundi	Rwanda	Tanzania	Uganda	EAC
National Water Policy					
National Environment Management Policy	x				
Policy for the Conservation and Management of Wetland Resources	x	x	x		
Wildlife Policy	x	x			
National Fisheries Policy	x	x			
Gender Policy	x				
Land Policy	x				
Agriculture and Livestock Policy		x		x	
Forestry Policy	x				
Energy Policy	x				
Tourism Policy	x	x			
<i>Nature / characteristics of policy regime</i>					
Embraces international resolutions, declarations & guidelines e.g. UN Conference on Environment & Development in Rio de Janeiro especially agenda 21 (chap 18) on fresh water resources.	Not fully				
Recognises regional obligations including NBI related objectives /issues, and accepted principles of int. law on the use of shared water resources.	Partly				
Focuses on transboundary resources issues	x	x		Weak	In reference to L. Victoria
Promotes gender mainstreaming					
Promotes participatory decision making and management involving resource users					
Reinforces decentralised management at a catchment level.	not clear				
Promotes decentralisation and management at the lowest appropriate levels with strong support to user-based management and high levels of participation.	Weak				
Development Strategy/Plan includes key policy objective on water resource conservation and management:					
Emphasis on environmental impact assessment					
Water abstractions - subject to a "water use permit" and fee	x				
In allocating water, water for basic human needs receives highest priority.					
Policy/development strategy provides guideline on utilisation of transboundary water resources.	x	x		x	x

Key to the table above:

	Means the relevant policy exists or the present policy emphasises or promotes such objectives
X	means policy does not exist or the present policy does not emphasise or promote such objectives

Policies have largely national focus with very little attention to transboundary issues. Integrated, multi-sectoral approach as a framework for proper water resources management is very advanced in Tanzania and Uganda, slowly advancing in Rwanda, but nonexistent in Burundi. The level of coordination and consultation is also very advanced in Tanzania and Uganda and greatly improving in Rwanda, but weak in Burundi. Capacity building measures ought to go along with the dialogue. This is an area which may need attention.

7.5.2 Water Sector Reforms

Tanzania water sector policy emphasises that the central government has a responsibility of protecting water resources while environmental protection was not accorded its due importance. The policy aims at ensuring that beneficiaries participate fully in planning, construction, operation, maintenance and management of community based domestic water schemes. In addition, the policy seeks to address cross-sectoral interests in water, watershed management and integrated and participatory approaches for water resources planning, development and management.

A water sector review conducted in 1993 revealed that the National water policy had the following critical shortfalls: Non-involvement of the private sector; involvement of beneficiaries being limited to provision of free labour; inadequate legal and institutional framework; and more emphasis was on water supply than water resources management. After that review, there followed reforms in the sector which opened the door to formation of autonomous urban water supply and sewerage authorities and community owned rural water supply schemes.

A Rapid Water Resources Assessment study carried out in 1994 underscored the need for pursuing integrated water resources management (IWRM) approach for sustainable development. This led to the implementation of the IWRM approach in the Rufiji and Pangani Basins, through the River Basin Management and Smallholder Irrigation Improvement Project. Under the project, a review of the National Water Policy of 1991 was done, leading to the current National Water Policy of 2002 (NAWAPo). NAWAPo helped to eliminate some of the short falls of the 1991 policy and also adequately addresses the requirements of Rio, Agenda 21, 1992, as well as IWRM principles.

The water sector reforms that started after 1993 are still going on, aiming at improving the management of the water resources and water supply and sanitation services. The reforms focus on: introduction and enforcement of the “integrated” cross-sectoral approach to water resources management; clear division between policy making/regulation and service delivery; empowerment of Local Governments and communities for water service delivery (management at lowest appropriate level); introduction and enforcement of cost recovery principles. The implementation of the above principles includes: institutional restructuring; development of national water sector development strategy; revision of current legislation; preparation of a national water sector strategic action plan; harmonisation of sub-sector investment plans which should pay tribute to the re-

quirements of the national strategy for growth and reduction of poverty targets and priorities.

Collaborating with other sectors in promoting water resources development and the conservation and management of the environment, is also improving. There are currently three GEF funded lake management programs in Tanzania, namely: Lakes Nyasa, Tanganyika and Victoria environmental management programs, under the Ministry dealing with environmental affairs. The Ministry of Agriculture and Food Security has prepared a National Irrigation Master Plan and is drafting an Irrigation Bill. The Ministry of Energy has also prepared a Power Master Plan, showing potentials targeted for future hydropower development. The Ministry of Water and Livestock Development is involved in these programs in various ways.

The Tanzania National Water Policy (NAWAPO), 2002, is a comprehensive document that takes on board all requirements of IWRM and poverty alleviation needs, postulated in many National and international declarations, conventions, protocols, treaties, visions and strategies. It aims at creating enabling environment for provision of efficient water services and changing the role of the Ministry of Water to ensure effective implementation of the policy, through participatory strategies, education and awareness raising campaigns targeting all range of stakeholders (both national and international).

Although the framework to support operationalisation of the policy is not yet fully in place (i.e. the legislations and strategies), that has not stopped possible actions, including reforms to implement it to be undertaken. These include: Implementing a transitional organization structure for water affairs (under 4.3: legal and institutional framework). Water resources management is now from the Basin to the lowest level, the sub-catchment water committees and water user associations. Already 9 Basin Water Boards have been formed (7 formed between 2000 – 2004), so that water management in the entire country is under Basin Water Boards. As for water supply and sanitation, the government is gradually pulling out from service provision responsibility to that of coordination, planning, policy and regulation. Private participation and community involvement is being promoted.

Uganda: The Water sector has been undergoing reforms since 1995 with a long-term objective to ensure that services are provided with increased performance and cost effectiveness, to decrease the government burden while maintaining the government's commitment to equitable and sustainable water sector services in Uganda. In recognition of the management challenges, the GoU has since the early 1990's undertaken activities to promote integrated water resources management. The main elements in the process include: Formulation of a Water Action Plan (WAP) and Policy; Establishment of an institutional framework with the required human resources; Increasing knowledge of water resources availability and quality through monitoring and assessments; and Establishment, implementation and enforcement of the legal framework.

7.5.3 IWRM Policies

In Rwanda, Tanzania and Uganda, it has been recognised that the three major environmental problems are intimately linked with actions in the water, energy and agricultural sectors. As such water resources management and policies have components that relate to environment, land and other issues like trade.

Similarly, environmental policies have integrated issues of land, agriculture, water and trade, among other issues. In Rwanda, apart from regulation, most of the positive interventions to support environmental protection are taken within other sectors. In particular, infrastructure such as terracing, reforestation and water management within marshes is undertaken as part of the agricultural strategy.

From the discussion we had with officials in the Ministry of Natural Resources (MINERENA) in Rwanda; the Ministry of Land, Environment, Forest, Water and Mines (MINITERE) in Rwanda is expected to play an important role in the formulation of agricultural policy¹⁶. The process of reforestation is also expected to receive support from the energy sector, encouraging more efficient use of fuel-wood and substitution into other fuels. The management of water supply is supported by ministry of energy as well as actions to encourage water harvesting in the settlement and housing sector. This multi-sectoral approach reinforces the spirit of integrated water resources management.

IWRM

All four countries mention the importance of integrated water resources management (IWRM), but there are few cases of IWRM actually being put into practice.

7.5.4 Financial Planning

Resource planning in each of the four countries is guided by country Poverty Reduction Strategy Papers (in Uganda, Poverty Eradication Action Plan is the country's PRSP). Other principal instruments that guide country plans and resource allocations are country Visions and presidential manifestos: Uganda Vision 2025; Rwanda Vision 2020 Umurenje.

The vision framework contains long term goals and objectives and national aspirations. The PRSP is the national planning framework, which guides detailed medium term sector plans and district plans. The planning processes are the same in Rwanda, Tanzania and Uganda, except the timing. In Tanzania and Uganda the planning process starts in November and ends in October. In Rwanda and Burundi, it begins in January and ends in December. Rwanda is in the process of bringing its planning calendar in conformity with those of its EAC partners' (Uganda, Kenya and Tanzania's) by 2009. This will call for change in Article 70, 72 of the State Finance Law.

¹⁶ Consultations with officials from these two ministries were in the period June to August 2007 before the ministries were amalgamated into the current Ministry of Natural Resources (MINERENA).

- Rwanda: OBL Article 70 suggests Budget Agencies submit their annual report to Ministry of Economic Planning and Finance by end of January. Article 71 indicates that these need to be sent to Auditor General by March 31.
- In Burundi, the Constitution requires the ministry responsible for the budget to submit finance law to parliament by 5 October
- In the Ugandan case, the 1995 Constitution (Article 15, section 1), stipulates that the President, as the head of the executive branch of Government will cause the budgetary estimates for each financial year to be prepared and presented to the Parliament - not later than 15 days to commencement of the new financial year.

In Burundi, the Constitution requires the ministry responsible for the budget to submit finance law to parliament by 5 October

In all the four countries, budgetary processes take a long process of consultations between line ministries, ministry of finance and the cabinet through the review process, strategic planning and the budget preparation (Figure 7.6). It differs slightly in Burundi, but they all involve the cabinet and the parliament.

Figure 7.6: Annual Planning, Budget Preparation, and Policy Review Process

	Districts	Line Ministries	Ministry of Finance	Development Partners	Cabinet / Parliament
Joint Review Process	District Plans	Report - Annual Action Plan & Budget execution	Macroeconomic review, resource envelope		
Strategic Planning	Strategic issues papers	Strategic issues papers, budget consultation based on draft BFP	BFP, indicative transfers to districts		
Budget Preparation	Budget Framework Paper	Detailed budget based on budget ceilings		Joint budget support	Discussion of budget/bill in cabinet
			Finance Bill		Vote on Bill

Aligning resources with policy priorities

Rwanda, Tanzania and Uganda are using the Medium Term Expenditure Framework (MTEF) as the means of aligning aggregate spending with sustainable levels of financing and provide a predictable framework at the sectoral level. Budget ceilings are set for every sector (e.g. water sector) and district local governments. Prudent fiscal policies which are needed to maintain macro-economic stability requires that spending agencies must contain their expendi-

tures as set out in the MTEF, within the available budgetary resource envelope. The resource envelope comprises mainly tax and non-tax revenues and disbursements of donor loans and grants.

However, in the current framework (MTEF) there is still limited policy-level engagement and commitment, incomplete expenditure coverage, focus on details rather than strategic consideration, weak linkage to operational decision-making, problem of needs-based rather than resource-constrained planning and weak linkages to ongoing public sector reform.

In Uganda, water and sanitation is treated as sector in national programmes and budgets (receive donor budget and project supports).¹⁷ It has Sector Working Group which contributes to sector policies – under the programme sector-wide approach.

In Rwanda, Policy (PRSP II) seeks to optimize the use of water in the agricultural sector, energy reduction, transport and tourism as well as environmental management.

Government budgets are detailed by programme under the heading of each Ministry, though eventually budget programmes will be classified solely under their respective sector. Water sector programmes do not involve sector-wide approach as is the case in Uganda and Tanzania. It is, therefore, imperative to adopt a programmatic sector-wide approach.

After approval, all government/ donor funded project have to go through the tender process (donor participate in selection) for service provision and the project is sanctioned. In case of foreign project convention is signed through foreign affairs (as is the case in Burundi) or a memorandum of understanding /agreement is signed through Ministry of Finance (Rwanda, Tanzania and Uganda).

Project selection

Procedures and guidelines concerning project selection and approval are contained in various policy documents and legislations such as national water policy, national constitutions, environmental legislations, procurement regulations, funding (donor) guidelines, etc. None of the countries has a policy or a blueprint on development project selection and approval. As a result, application of rules is left to the judgement of the parties involved in the process. In all the four countries, when you talk about water development projects references are usually made to domestic water supply. Very little, in terms of projects are said about water for agricultural production and other water uses including industry, hydropower, recreation and ecosystem needs. This clearly shows that in the Kagera Basin most countries will be concerned about safe water issues although investment on hydropower and irrigation is emerging.

¹⁷ Other sectors are: agriculture; education; health; economic functions; works, roads and transport; accountability; Justice, law and order; public administration and security.

Lesson from a cross section of projects suggest that criteria and procedures with regard to selection and approval of public projects are similar across the countries. Emphasis are put on project feasibility, economic/financial viability, needs (demand) and ownership, quantity (returns/output), quality, public health aspects and environmental standards, among others. Involvement of the community and the policy actors in project selection is minimal. Selection is top-down and is usually dominated by technocrats. Cabinet and parliament are consulted when the project is being approved. Yet, very few projects (e.g. hydropower) go to cabinet or parliament.

In Rwanda, Tanzania and Uganda, under the decentralized programme, the district local governments are responsible for interfacing with central government (especially the ministry of finance) and donor agencies in the identification of development projects (e.g. rural water supply for consumption and livestock), design and appraisal. In Burundi projects are identified within the ministries.

As provided for in law, application of environmental impact assessment (for large projects such as irrigation, industrial project, and hydropower projects; and obtaining water rights) happens in all the countries – in both public and private sector projects. Otherwise, environmental examination is applied when authority decides that there is no need for full environmental impact assessment. Findings from studies are used in process of project selection and design, but not common. In Rwanda, Tanzania and Uganda this was being done. Use of feasibility studies cuts across the board.

7.5.5 Water Allocation and Transfer

Principles for water allocation and transfers are very stringent especially in Uganda and Tanzania. According to Uganda's National Water Policy, there are no permanent water rights. All rights on water are vested in the state to protect and manage its use as a common good. First priority in water allocation is to meet the domestic water demand. Second consideration is given to resource management and environment (allocations are reserved to ensure continued viability of the resource and for the conservation of the environment).

Allocation of water for production takes into consideration the socio-economic value of the use and optimal development of the water potential (e.g. hydropower schemes), and the impact on water resource. Principle governing water allocation in response to emergencies requires that an assessment be first made and detail strategy developed to determine whether allocations of selected categories of users be reduced during such periods. A market-based approach to water allocation is yet to be developed, which will put to practical use the principle of "water as a social and economic good". The water available to be allocated in this manner is determined based on the available yield, after reserving for domestic needs and for ecosystem maintenance.

All water abstractions are subject to a "water use permit" and abstraction fee. Administration of water use permit and fee is the role of the central government through the Directorate of Water Development, but plan is underway for dis-

tricts to take-over this role to administer application and permit procedures. Policy is lacking with regard to utilisation of transboundary water resources.

The Tanzania's National Water Policy provides for prioritization of water allocations so as to ensure that socio-economic activities and the environment receive their adequate share of the water resources on the basis of its availability, and to enable the sectors increase productivity, and to mitigate conflicts. Policy also provides guideline on utilisation of transboundary water resources.

In allocating water, water for basic human needs receives highest priority. Water for the environment to protect ecosystems and ensures viability of water resources attains second priority. Other uses are subject to social and economic criteria, which is subject to review from time to time. Utilisation of transboundary water resources is based on the principle of equity, rights and rationality in accordance with agreements among the riparian state, and by respecting the principle of international obligations on transboundary water resource.

All water abstractions and effluent discharges into water bodies are subject to a "water use permit" or "discharge permit" that is issued for a specific duration. Water use permits are issued only after ascertaining the benefits of water use.

Water use and water rights are elaborated in each country's water policy document, in some cases supported by legislation. The Water Utilisation (Control and Regulation Act) in Tanzania provides for rights for water use and issuing of user permit. The permit can be withdrawn by failure to comply with conditions set in the law. Threshold that does not require issuing of permit or user fee is: 22700l/day, beyond this one is required to pay. Special consideration is given to mining and forestry – can extract water without paying water user fee.

In Rwanda, under existing legislation water is regarded as a common good that is not owned by anyone, but management of which is entrusted in the government for the 'public interest'.

7.5.6 WRM Institutional Set-up

All the countries have institutions in place that are responsible for the management of water resources at national and lower levels. The following specific institutional arrangements have been identified as key:

- Overall coordination, strategy and policy formulation at national level, which lies with Government ministries.
- Some of the ministries (**Uganda and Tanzania**) are supported with operational national level coordination bodies, which are multi-sectoral in their composition.
- All the countries have adopted a decentralised system of governance, and with the exception of **Burundi**, have institutions operating at these levels. These institutions have linkages with the national level institutions.

- At the community level, all the countries, with the exception of **Burundi**, have established water user groups. These groups work closely with the institutions at the decentralised level.

The proposed institutional framework is built on the following key assumptions:

- 1 That the main function of the Kagera Basin Management Unit (KBMU) is to coordinate and facilitate activities that address issues that are of common amongst the riparian countries.
- 2 That the KBMU will seek to build and work with exiting institutional arrangements in a bid to ensure harmonization, avoid duplication and ensure cost effectiveness.

One of the implications of the above is that the institutions, particularly at national and local level, will need to have the capacity to provide the information, monitor and implement activities with the KBMU. Below is an assessment of the key institutions that it is envisaged, will play a role in the proposed Cooperative framework.

Assessment of Institutional Arrangements at National Level

In Uganda, the rights to investigate, control, protect and manage the water are exercised by the Minister of Water and Natural resources. In Tanzania, the Ministry of Water and Livestock Development is the apex institution for water resources management. In Rwanda, water resources management comes under the responsibility of the Ministry of Natural Resources (MINERENA), but responsibility is shared with other ministries including hydroelectricity and transport, health and hygiene, agriculture and irrigation and planning and finance. In Burundi, the institutional environment remains complex, with overlapping responsibilities between various line ministries ranging from the Ministry of Health, to the Ministry of External Relations and Cooperation and the Ministry of Agriculture. However, overall coordination seems to rest with the Ministry of Tourism and Environment.

The ministries in Uganda, Tanzania and Burundi are in turn supported by other institutions. In Uganda, the minister has authority to delegate this role and in most cases it has been delegated to the Director of Water Resources Management (DWRM). DWRM undertakes the functions and operations of the minister at national level. It collaborates with other directorates and departments like the Directorate of Water Development (DWD), Water for Production which is under Ministry of Agriculture and water supply. In addition to DWD and DWRM, there is a National policy committee to assist the minister in the coordination of hydrological and hydrogeological investigations, prepare, implement and amend water action plans and to advise the minister. The committee is composed of the Permanent Secretary to the Ministry of Water, the Director of NEMA, the Director for Irrigation, the Director for Animal Industry and Fisheries, the Commissioner of Industry, the Commissioner Hydropower, a representative of District council chairpersons, Chief Administrative Officer, the

Director of National Water and Sewerage Cooperation. The Committee also has two ex-officios, and the Director of DWD. Whilst the framework coordination exists in Uganda, the challenge lies in its operationalisation.

In Tanzania, the Central Water Board is under the Ministry of Water and is responsible for the collaboration with other line ministries in the water sector. It consists of not more than ten (10) members who are appointed by the Minister responsible for Water Affairs. Thus it deals with the functions and operations of the ministry at national level. This means that it is responsible for the development, conservation, sustainable management and utilization of water resources in Tanzania.

In Rwanda, there is no specifically established coordination body that falls under the MINERENA. However, responsibility is shared with other ministries including hydroelectricity and transport, health and hygiene, agriculture and irrigation and planning and finance. The challenge with having no specific body/institution to ensure effective collaboration and coordination is that it may eventually be done in an ad hoc manner.

In Burundi, a National Commission for Water and Energy was established in 1993, however, it has not been operational since its establishment. The Council of Ministers thus decided to reinforce the coordination role of the Geographical Institute of Burundi (IGEBU) to help organise sectoral activities. This publicly-owned institute covers a number of areas in Burundi, including hydrology and meteorology and is the national focal point for Nile basin cooperation. REGIDESO is under the Ministry of Energy and controls the production and distribution of water and electricity. DGHER, the Directorate General of Hydraulics and Rural Energy focuses on the production and distribution of drinking water and energy and has responsibility for development of the country's hydraulic infrastructure. One of the main challenges with water resource management in Burundi is the lack of effective coordination between the institutions.

Assessment of Institutions at Local Level

All the four riparian countries have adopted a decentralised system of governance. The structures and their effectiveness differ between the countries. However, they have all used the local government structures to manage water resources at local level.

Table 7.3 below gives the top five levels of Government in the four riparian countries.

In Uganda, the Local Government Act governs the implementation of the Government policy of decentralization and management of public resources at the lowest levels. The decentralisation framework is built on a system of local governments that have the district at the apex. Below the districts are four levels of lower local governments. The local governments are governed by elected councils. One of the responsibilities of the local councils in Uganda is to control and manage their natural resources and environment.

With specific regard to water resource management, the District council is responsible for managing; (i) forests and wetlands (ii) environment and sanitation and (iii) protection of streams, lakeshores, wetlands and forests. The District councils may devolve services and functions to the Lower Local governments including the protection of wetlands, the protection and maintenance of local water resources.

It is thus apparent that Uganda has an institutional framework for the devolution of the management of water resources to lower level local governments. However, these systems do not adequately address issues at the catchment level, which is desired in the long term.

At the community level, “water user associations” have been set up to manage local community water supply systems, such as boreholes and protected springs. However, they do not play any role in overall water resources management and influencing planning processes in this regard. Given the critical role played by user groups in the management of water resources, the absence of a clear institutional mechanism for local community participation in water resources management in the Uganda is a gap which needs to be addressed.

Table 7.3: Riparian Levels of Government

Level	Burundi	Rwanda	Tanzania	Uganda
1	Central	Central	Central	Central
2	Province	Province	Region	District
3	Commune	District	District	County
4	Zone	Secteur	Village gov.	Sub-County
5	Secteur	Cellule		Parish
6				Village

In Burundi, at local level, water is managed by each district (Commune) through the establishment of a utility service which is based upon committees. These public water utilities are technically managed by the General Department of Water Resources and Rural Energies, and administratively managed by the District bodies. These utilities are governed by operational rules.

In Rwanda, the National Water Resources policy advocates for the devolution of powers and functions to the lowest appropriate administrative level. Under decentralization framework, districts are responsible for water supply and sanitation. Districts involve NGOs and private sector as partners. The policy on decentralisation adopted in 2000 provided a key overall framework within which sector policies could be implemented. The Ministry of Natural Resources (MINERENA) is responsible for implementation, capacity building and financing, planning and management of water resources, rivers and wetlands and for public infrastructure. The provinces play an intermediary role between local government and MINERENA. Communes are responsible for water resources management at a local level. The water supply sector has been liberalised.

In Tanzania, water is managed at lower levels through Basin water Boards that are financially and administratively autonomous, and financed from water user charges. The Boards, are accountable to the Ministry responsible for water, and employ the staff necessary to carry out all of the Board's functions and responsibilities. Below the Basin Water Boards are the Catchment and Sub-Catchment committees which are also autonomous bodies, financed from user charges. They carry out functions as are delegated by the Basin Water Board. They may also employ staff necessary to carry out these functions, or may be supported by Basin Water Board staff. Informing the Catchment and Sub-catchment committees are Water User Associations, which are legally constituted bodies that draw their membership from water users in a particular locality. The costs of the Association are met through the charges levied on water users. District councils are represented on Basin Water Boards and Catchment and/or sub-catchment committees. The district councils also formulate and enforce by-laws for environmental protection and conservation of water sources, they prepare district plans for water resources provision and promote efficient water utilisation and control.

Stakeholder Participation in Institutional Arrangements at Decentralised/Sub-National Levels

All the riparian countries operate under a decentralised system of governance, and apart from Burundi, they all have formalised processes of community involvement in planning, implementation and monitoring of development projects. A number of these projects impact the process of water resource management. Further, in a bid to ensure greater participation; ownership; and management of water resources, all the countries have encouraged the establishment of water user groups and committees at community level. The composition and operations of these committees varies in the different countries, for instance the Groups in Uganda are formed to manage the resources but not necessarily have a say in the planning and decision making processes. Important experiences and lessons could be shared and learnt between the water user groups and committees in the different countries. Further, the systems that guarantee participation of key stakeholders including civil society and the private sector, in the planning processes could be strengthened.

All the riparian countries are either embarking upon, or are still in the process of ongoing reform of their water sector, which provides an opportunity for KBMU to engage in dialogue on how best to ensure that issues relating to The Kagera Basin are integrated in the reform process. All the countries also recognise the importance of addressing transboundary issues and one indicator is the membership and commitment to the development to the East African Community. A common challenge across the riparian countries is the inadequate institutional framework to address transboundary water related issues, as well as the attendant skills and capacity of staff. Common threats include the challenge of ensuring that water resources are protected and managed effectively, and yet are also able to continue providing communities with water they need. The need to ensure that policies are actually implemented and that the resources required for implementation are available.

Table 7.4 below presents some of the key strengths, challenges and opportunities faced by key water resource management institutions in the riparian countries.

Table 7.4: Matrix of Institutional Arrangements in the Riparian Countries

Areas of Strength	Areas of Challenge	Opportunities
Burundi		
<p>(i) Recently established (November 2007) a Ministry of Water, Energy and Mines that provides a possible coordination point for institutions and agencies involved in water resource management in Burundi.</p> <p>(ii) IGEBU (The Geographic Institute of Burundi) has developed a large meteorological data base and constitutes one of the only reliable and available meteorological data sources in the Kagera basin region. The institute provides an important resource for establishing meteorological data necessary for forging transboundary relationships.</p> <p>(iii) The existence of two regional bodies to ensure adequate focus on both urban and rural water resource management issues.</p> <p>(iv) The existence of Regie de eaux (community based water management groups) that are responsible for managing and maintaining water resources at community level.</p>	<p>(i) The establishment of the Ministry of Water, Energy and Mines is recent, and its establishment has meant a division of matters related to water and natural resource management and protection that falls under the Ministry of Environment and Lands.</p> <p>(ii) The above delineation of ministries has led to some confusion between these ministries that both have some mandate with regard to water management and protection.</p> <p>(iii) Other ministries are also involved in initiating the national policies and setting national standards and priorities for water management. However, without clear policies on collaboration and coordination, responsibilities of the different agencies with regard to water management administrative conflicts continue to be a problem. There is thus need for horizontal coordination</p> <p>(iv) Capacity of the institutional framework at local level is not adequate for ensuring effective and efficient management of water resources, to a large extent because Burundi has not yet decentralized its services in the water sector sufficiently.</p> <p>(v) Capacity of communities to engage their local leaders on issues of water rights is still limited, to a large extent because of lack of awareness.</p>	<p>(i) Ongoing discussions to clarify roles, responsibilities and functions of the various ministries and agencies engaged in the water sector.</p> <p>(ii) Ongoing discussions on possible reforms in the water sector.</p> <p>(iii) Ongoing discussions to establish a multi-sectoral national technical committee to oversee and guide planning for the water sector. It is also proposed that a similar committee be replicated at lower local government levels.</p> <p>(iv) Experience in transboundary arrangements through membership to NBI.</p> <p>(iv) Membership to the EAC offers opportunities for engagement in another transboundary arrangement, the LVBC.</p> <p>(v) The Regie de eaux provide an entry point for supporting the development of community capacities to engage in planning and managing water resources at community level.</p>

Areas of Strength	Areas of Challenge	Opportunities
Rwanda		
<p>(ii) Whilst the overall responsibility of managing water resources and initiating national policies and guidelines is vested with the Department of Water and Natural Resources under the Ministry of Natural Resources (MINERENA). The responsibility is shared with a number of line ministries including hydroelectricity and transport, health and hygiene, agriculture and irrigation and planning and finance. This is a good attempt to involve all sectors and stakeholders engaged in water resources management.</p> <p>(ii) The decentralisation system in Rwanda provides opportunities for community involvement in planning, and monitoring the use of water resources in their communities. Community groups (Regie des eaux) have been formed to manage water resources.</p>	<p>(i) Currently no institutionalized common forum for the ministries and institutions engaged in the water resources management to plan together.</p> <p>(ii)The draft Water Act proposes the establishment of a number of institutions and this will require a lot of resources to implement.</p> <p>(iii) Capacity of communities to engage their local leaders on issues of water rights is still limited, to a large extent because of lack of awareness.</p>	<p>(i)The ministry is in the process of institutional and legal reform, which will take on a basin wide approach, establish multi-sectoral national water commissions and strengthen local water associations. This reform will address current institutional challenges and through the Draft Water Law seeks to put in place a comprehensive institutional structure for the management of water resources. It provides for the following essential institutional organs in the administration of water resources.: Ministry in Charge of Water, Water National Commission, Water Inter-departmental committee, Basin Committees, Water Local Associations, Districts and the City</p> <p>(ii) The Regie de eaux provide an entry point for supporting the development of community capacities to engage in planning and managing water resources at community level.</p>
Tanzania		
<p>(i)Tanzania seems to have an ideal institutional framework that promotes participation and representation at all levels.</p> <p>(i) Use of the Basin wide approach which is considered to be a good regulatory approach since it facilitates the regulation of a river basin spread through many local government units as a whole. Common standards and regulation of the river basin can be developed and applied across the basin.</p>	<p>(i)The institutional framework is national in character, therefore the transboundary aspects of the river basins are not sufficiently regulated. For instance, in the LWBMO and in the regional office they see the need for transboundary cooperation and even IWRM. However they need access to IWRM tools and proper channels to discuss salient water management issues with the riparian neighbours.</p> <p>(ii) The Lake Victoria Basin office has no donor support, it relies on Government funding and water user charges . This limits its effectiveness and capacity to oversee water resource management in the Basin. Furthermore, there is a growing understanding that transboundary water issues need to be given more attention, and yet in the case of the Kagera there are very few water users who have the resources to pay for the consumption i.e. the basis for the</p>	<p>(i) Tanzania is still in the process of reforming its water sector.</p>

Areas of Strength	Areas of Challenge	Opportunities
	<p>financial sustainability does presently not exist.</p> <p>(iii)The Government of Tanzania in April 2003 launched a national water policy, the main components of which are water resources management, rural water supply, urban water supply and water utilisation. The challenge remains to disseminate it widely. Although the political guidance is in place at the national level, the capacity to implement, supervise and monitor activities related to surface water at regional and district level remains limited.</p>	
Uganda		
<p>(i)The Ministry of Water and Environment is newly reformed and already implementing reform recommendations which are geared towards IWRM principles.</p> <p>(ii) The existence of a multi-sectoral national water policy committee, whose composition promotes IWRM.</p> <p>(iii) The decentralisation system in Uganda provides opportunities for community involvement in planning, and monitoring the use of water resources in their communities. Water User Associations have been formed to manage water resources.</p>	<p>(i) Lack of an effective framework for the management, development and utilisation of transboundary water resources.</p> <p>(ii)Whereas an institutional framework exists in Ugandan law for the devolution of the management of water resources to lower level institutions, these institutions are not ecosystem based. Hence raising the need for a catchment based Institution to take on the responsibility of managing water resources.</p> <p>(iii)The “water user associations” in Uganda are organisations dealing with the management of local community water supply systems, such as boreholes and protected springs. They have hardly any role with regard to water resources management and influencing planning processes in this regard. Given the critical role played by user groups in the management of water resources, the absence of a clear institutional mechanism for local community participation in water resources management in Uganda is a gap that needs to be addressed.</p>	<p>(i) The development of frameworks and capacities to address transboundary water resources is part of the ongoing reform of the water sector.</p> <p>(ii)There is a pilot project to test the viability of catchment based water resource planning and management.</p> <p>(iii) Existence of water user associations at community level.</p>

7.5.7 Decentralisation

Administrative level of water resources management differs. In Tanzania is now from the Basin to the lowest level, the sub-catchment water committees and water user associations. Already 9 Basin Water Boards have been formed (7 formed between 2000 – 2004), so that water management in the entire country is under Basin Water Boards. As for water supply and sanitation, the government is gradually pulling out from service provision responsibility to that of coordination, planning, policy and regulation. Private participation and community involvement is being promoted. Yet in Burundi, the system is heavily centralized.

The consultations made it clear that all four countries are pursuing a policy of decentralisation of their governance, giving increasing authority to the district level (or equivalent). As might be expected, this policy has made different progress in different countries. In e.g. Uganda there is an ongoing process of decentralising water resources management to district level which may not be expected to come into fruition until well into 2004. In Tanzania such a policy has been in force for some time, and the creation of the Lake Victoria Basin Office in Mwanza is a manifestation thereof. But that office is not yet financially sustainable, and few management functions have yet been delegated to district level.

In Rwanda the districts have been given wide-ranging authority for the identification and implementation of development activities, but the capacity to assume this authority is yet limited; the situation is similar in Burundi.

7.5.8 Capacity Building

There is a general need for reinforcing human capacity and supporting and development weak institutional environments. Specifically, any move to greater regional development requires greater national capacity.

During the consultations, capacity gaps in implementation arrangements were widely cited, including absence of mechanisms to follow up on implementation of policy and to monitor and evaluate impact.

In many cases policy and institutional environments were affected by a lack of role definition and high personnel ‘brain drain’ and turnover. These were combined with generational gaps in capacity in some countries, particularly those where there had been protracted conflict.

Some countries had benefited greatly from ‘institutionalising’ the process of institutional change, by introducing reform units in key ministries. This level of capacity was rare, but pointed to potential areas for intra-regional experience sharing and training support. The lack of trainers in many cases was a problem cited.

Access to basin-wide and international expertise was also significant, with a clear demand for greater development of mechanisms to support international-quality training of key personnel from technical, planning and other backgrounds.

Understanding of key issues and their application in policy processes—for instance economic efficiency, legal and institutional matters, water quality versus sector use issues and ways of overcoming institutional conflicts—were important to address in training.

There could be a unification of methodologies of development, implementation and assessment of policies across the basin combined with joint research on new challenges including addressing the problem of industrial development, resource exploitation and water quality across the basin.

Regional training centres that already exist, for instance under the NBI, could become policy support centres providing particular training needs to service policy development and implementation processes. These could help to bolster the declining existing resource centres in many countries and, where appropriate, even help establish new centres. These could be complemented by regional database systems and ways of assisting in the retention of key staff. Particular specialist skills including GIS and Remote Sensing were in critical need.

Skills strengthening in IWRM project preparation, planning management and administration were in high demand.

7.5.9 Stakeholder Participation

Participation

A striking feature of the consultations was that professionals reported their greatest successes when working with communities at district level. There are real capacity constraints at that level, a lack of experience in planning and administration, and a legacy of decades of planning by central government institutions. Yet there is also an awareness of a turning of the tide in the sense of the stated intentions by governments to decentralise, and there is a keen willingness in rural (and urban) communities to rise to that challenge and to assume an increasing responsibility for their own development.

In those locations where that willingness can be matched with an infusion, often limited in scope, of human advice and financial resources, the results can be quite positive. NGOs and professionals active in the basin were able to cite several such examples. It will be the task of an IWRM project to capitalize on such sentiments and abilities to build a set of successful demonstration projects within the basin. The subsequent, and arguably more difficult, challenge will be to scale them up in order to achieve broader impact.

Successful lake basins need good pathways to the communities that depend on the water resources. In some cases it may involve having community representatives on management bodies.

The process of policy formulation is quite involving in some countries than others and requires time and substantial amount of other resources to accomplish. The consensus building effort levels is huge and complex like the case of Tanzania. Capacity building measures ought to go along with the dialogue. This is an area which may need attention.

In Tanzania, there has been participatory involvement of various departments and ministry for e.g. in preparing a zonal land use plan, various sectors were represented including agriculture, wild life, water resources. In case of transboundary plan, various ministries are involved e.g. water, water, wildlife to provide guidelines on issues related to their respective sectors of a transboundary nature.

In Burundi, such participation is not yet very evident although current policy as stated in PRSP and the National Policy for Water Resources Management and Plan of Actions (2001) gives sufficient attention to stakeholder participation, including local community. In Rwanda and Uganda, wide consultation of various stakeholders including relevant government institutions and NGOs has been conducted. In Uganda, presence of sector working group has made such consultation perhaps more comprehensive than any of the riparian countries.

7.5.10 Gender Mainstreaming

Authorities in all the four countries have embraced the need for gender mainstreaming in water resources issues, agriculture and other development processes. Across the countries, gender mainstreaming is emphasized in policy documents. In water sector development program, all the sectors present different elements that spell out gender mainstreaming. In the National Environment Management Policy for Uganda, involvement of water resource users particularly women are emphasized in the design, implementation, monitoring and evaluation of water policies, programmes and projects. Greater stakeholder participation is being encouraged across sectors in all the countries. In Uganda's water policy, essential role of women in the provision, management and safeguarding of water; and important role of the private sector in water management are elaborated.

All the countries have acted to increase female political representation, setting up women's councils at all political levels and promoting affirmative action in local administration. This has succeeded at policy level but is difficult to see it work in programme implementation such as implementation of IWRM within the river basin. This indicates that there is a weak link between policy and actual programme implementation and lack of capacity to integrate gender related concern in programme design.

Gender ministry in each country (in Rwanda, the Ministry of Gender and the Promotion of Women – MIGEPROFE; in Uganda, Ministry of Gender and Social Development) are supposed to assist sectoral ministries in ensuring that the objectives of the national gender policy are mainstreamed and monitored in each sectoral strategy. It is mandatory for all ministries to follow this policy,

but this action is not followed in programme design and implementation. In all the four countries, authority admitted that projects do not follow equity. The ministry in The Gender Action Plan has been adopted for Uganda (2000) and Rwanda (in August 2000) in which it offers to provide guidelines and modalities for gender mainstreaming and to undertake gender sensitisation of key staff in all line ministries and other institutions. Gender awareness has been created. Building capacity for gender mainstreaming policies and integration of gender perspective into national policies and planning and local governments is still needed.

In Burundi, current policy of government is to ensure that women's participation is maintained at all levels of decision making – in the country's economic and social development process. The PRSP states that 'no strategy will be developed without explicitly addressing gender issues, so as to guarantee the full participation of women in decision making, the choice of priority actions, and more specifically, their implementation'.

The Tanzania's national water policy also accords "active and effective participation of women and men in rural water supply programmes" (as one of its primary goals). Gender participation – especially of women - in rural water is ensured by: (i) encouraging a fair representation of women in village water-user entities; (ii) basing rural water supply programmes on what both men and women in rural communities know, want, and are able to manage, maintain and pay for; (iii) raising awareness, training and empowering women to actively participate at all levels in water programmes, including decision making, planning, supervision and management.

7.6 Harmonisation Requirements

7.6.1 Policy

There is lack of harmonisation in policies of riparian countries with regard to integrated water resources management. For example with regard to stakeholder participation, some countries (Uganda, Tanzania, and to a great extent Rwanda) emphasise participatory and local level planning while in some (especially Burundi), little emphasis is placed on participatory and local level planning, environmental issues, erosion, wetlands management and the economic value of water.

With regard to overall national priority, water is one of the priority sectors in development strategy and the national budget in Uganda, Tanzania and Rwanda, but in Burundi water does not feature in development strategy and has no specific budget line in the government recurrent and development budgets. With regard to transboundary issues, water policy in Burundi only refer to the 'development of cooperation on transboundary waters' and makes no further reference on utilisation; but Tanzania's and Uganda's policies make some references to transboundary water utilisation.

Unlike Uganda, Rwanda or Burundi, Tanzania follows a basin wide approach (uses a basin water board) in the management of the area of land declared to be a river water basin.

Policies and legal frameworks in the riparian countries exhibit fundamental gaps. There is an absence of a legal framework for basin level water resources regulation and management as well as to address trans-boundary water management issues. For the case of Burundi, the country currently appears to lack a functional water sector law as it has not succeeded to implement the principal water sector law in place. Coordination among the line ministries in IWRM in the riparian countries still presents considerable challenge.

In comparison, Burundi appears to lag behind the other Kagera River Basin riparian countries in water resources and environment management policies and legislation.

At regional level (for all riparian countries) there is no decision-making tool presented in the policy with which to help achieve the required level of cooperation and co-management of resources. Decision making tools even at national level are still insufficient to clarify adequately the most rational and equitable management of the resource. There is an absence of a legal framework acceptable to all that would serve as a platform for basin level water management.

There is a lack of technical capacity for formulating and setting in place policy. Regional data on water demand over time is also lacking, with which to compare supply and demand within the basin and establish an equitable division of the resource.

Environment impact assessment requirements and standards are also national in character. This means that transboundary projects must comply with national environment impact assessment requirements in each country which may differ in scope and application.

7.6.2 Legal

The water resources related legislation in the four countries differs according to national traditions and various extent of water sector and other reforms. The legal analysis identifies differences, gaps and weaknesses in the water resources related legislation of the four countries. The countries can sometimes benefit from each other's experiences, both in relation to reforms and in relation to more technical regulations.

However, in spite of the differences, the various EAC protocols already legally commit the Partner States to work towards the sustainable management of the shared water resources and the EAC protocols have a number of clauses that cover the essential elements transboundary environmental and natural resource management. Being EAC legislation, these protocols take precedence over national legislation.

To the extent that the EAC protocols have not been transposed into national legislation there could be practical difficulties that may complicate the preparation and implementation of joint management plans, but this will not prevent the proposed organisation from carrying out its work. However, as elaborated in Volume 2 of this Report, one of the functions of the proposed organisation will be to work with the four riparian countries and assist them in harmonising legislation as needed.

As pointed out previously, the EAC framework provides a very powerful mechanism for harmonisation of legislation since the Partner States are required to transpose community legislation into national law.

7.6.3 Institutional National Level

(i) The Establishment of National Multi-sectoral Coordination Fora/Committees

One key challenge faced by the various institutions involved in water resource management in the riparian countries, is ensuring effective coordination and collaboration amongst themselves, in practice.¹⁸ This will require among others:

- Clarification of roles and responsibilities between the agencies
- Organising and implementing regular meetings/forums for interaction
- Jointly monitoring the implementation of common decisions

The establishment of national multi-sectoral coordination forums/committees can also contribute to better coordination, collaboration and effectiveness of these institutions. The IWRM principles encourage coordination and collaboration between various sector that are impacted by water resource management, or that have an influence on water resource management.

Amongst the riparian countries, only Uganda and Tanzania seem to have systematically established national multi-sectoral institutions to support the various line ministries responsible for water resource management. Rwanda and Burundi also encourage multi-sectoral collaboration; however these have not been systematically institutionalised. The need for well established and functioning national multi-sectoral coordination forums/committees could constitute an area for harmonisation.

¹⁸ As pointed out earlier, in Burundi, the responsibility for water resource management is spread across various line ministries, in Rwanda, whilst there are efforts to ensure collaboration between the various ministries involved in water resource management, no systematic process/forum to ensure this is in place as yet.

(ii) *Addressing Transboundary related issues*

All the legislation relating to water resource management in the riparian countries is national in character and outlook, and thus does not provide adequately for transboundary issues. This is reflected in the institutional arrangements and set-up. Therefore, in addition to harmonising legislation in this regard, specific institutions and/or committees should be given a particular mandate to plan and address transboundary issues, particularly at the catchment level. The consultant was informed that NBI is implementing a programme in this regard.

(iii) *Information and Data management*

Sharing information and databases between the countries can be done through the development of protocols in this regard. The consultants were informed that a programme to encourage this is being implemented at the moment by NBI.

Local Level

(i) *Project Planning and Implementation Processes at Local Levels*

At the Local level, the various countries have different procedures and processes for planning, implementing, monitoring and evaluating their water related projects. However, due to the common nature of some of the development concerns and issues around water resource management, opportunities for harmonization exist in the nature in which the countries plan, implement and monitor their water resource management activities.

Two specific areas of harmonisation exist, namely:

- **The use of catchment based planning processes at local level:** This is being piloted in Uganda it is being implemented in Tanzania, and the proposed Water Act of Rwanda proposes the use of catchment based management. Planning at the level of a catchment allows for broader coverage in terms of geographical area, and also ensures that common issues that may cut across districts are planned for in a coordinated way.
- **Basin level planning processes and forum:** Whilst the catchment based planning will realise harmonisation at national level, a common planning forum at the Kagera Basin level will foster harmonisation and collaboration at the regional level. The national plans of the riparian countries can be brought together at Basin level, and areas of common concern and need identified and addressed jointly. An established forum that brings together representatives from the various countries (the Kagera Basin Planning Committee) has been proposed to carry out this role. This joint planning can be facilitated by the KBMU. The planning process will require the acknowledgment of differences, and also build synergies of what is possible. The joint planning process will address all common issues. It should also have a monitoring and evaluation system as one of its outputs to ensure follow up and allocate responsibility to all those involved.

(ii) Data and Information Management

The establishment of a common planning forum, also presents an opportunity for regular information sharing and monitoring. The riparian countries should consider setting up a common database at the Basin level, and establish mechanisms of sharing and receiving information jointly, or sharing information amongst each other regularly.

(iii) Capacity Building

In most of the countries, there is a need to reinforce human capacity in the sector, and specifically in monitoring, supply structure development and planning for water resources management, particularly transboundary water resource management. A common/harmonised capacity building plan that will make maximum use of resources in the region is required. It has been recommended that the KBMU develop a capacity building plan for the countries in the Kagera Basin.

(iv) Stakeholder Participation

At both national and local level, it is important to engage key stakeholders including CSOs and the Private sector. CSOs represent the aspirations of the public and concerns hence supporting the creation of policies, and structures for management of resources. CSOs are also good community mobilizers and facilitate participation of the various stakeholders. However, they have limited capacities to engage and inform; both CSOs and the communities. Communities have limited awareness, CSOs lack funding. On the other hand, the Private sector is already providing services and partnerships have been established to facilitate quality control.

At the decentralised/sub-national level, the riparian countries have adopted different methods of ensuring stakeholder participation in the existing institutions. Areas for harmonisation at this level, could be identified through sharing experiences and identifying best practices that can be replicated. Some particular areas to explore include:¹⁹

- Ensuring effective stakeholder involvement;
- Ensuring effective coordination with national agencies;
- Ensuring efficient operation of water user groups and / or committees.

¹⁹ These areas were identified during the Kagera TAMP consultation with Local Authorities in October 2007.

8 Options for a Kagera River Basin Cooperative Framework

As highlighted in Chapter 2, particularly Sections 2.3 and 2.4, a framework for cooperation in the utilisation, development and management of the water resources of the Kagera Basin is required to provide optimal solutions to the basin’s multitude of competing, yet rapidly growing demands on the resources. Collaborative action from the riparian countries will not only ensure optimal realisation of the resources’ potential to provide a catalyst for socio-economic development, but also minimise, if not pre-empt, conflicts in resource use.

8.1 Basis of Framework Development

The proposed Kagera River Basin Transboundary Cooperative Framework synthesises the general principles and standards of International Water Law, enumerated in Chapter 4, and the critical elements for designing successful water resources management institutions, discussed in Chapter 6 – summarised in Table 8.1 below.

The design also takes into consideration the basin’s complex amalgam of physical, cultural, economic and political characteristics, as well as the policy and legal environments.

Table 8.1: Summary of Critical Institutional Design Elements

Principles of International Water Law	Critical Drivers of Success
<ul style="list-style-type: none"> • Cooperation on the basis of sovereign equality; • Establishment of joint management mechanisms or commissions; • Equitable and reasonable utilisation; • Obligation not to cause harm; • Protection and preservation of ecosystems; • Collection and open exchange of data; • Public participation of all stakeholders; • Ensuring sustainable development 	<ul style="list-style-type: none"> • Long-term commitment and flexibility; • Utilising integrative potential and existing frameworks; • Specific and narrow functional scope; • Realistic and sound objectives; • Adequacy of organisational capacities; • Social adaptive capacity; • Real demand for cooperation; • Third-party assistance

8.2 Legal Arguments

To the extent that the four Kagera River Basin riparian countries are parties to the draft Nile Basin Cooperative Framework Agreement, the EAC Treaty and the LVBC Protocol, there is no need to formulate new principles for the proposed cooperative framework for the Kagera River Basin.

One of such principles is that of subsidiarity which requires that development and protection of river basins be planned and implemented at the lowest appropriate level. Accordingly, one of the key conclusions is that while the Kagera Basin drains into, and forms part of, the Lake Victoria Basin and the wider Nile Basin and should in its management maintain effective linkages with the NBI and LVBC, the proposed cooperative framework should be planned and implemented at basin level.

8.3 Analysis of Existing Frameworks

8.3.1 The Nile Basin Cooperative Framework

While the substance of the draft Nile Basin Cooperative Framework Agreement, which when concluded will lead to the establishment of a permanent institution – the Nile Basin Commission (NBC)²⁰, has been agreed, the text for the water security provisions is yet to be agreed. As a result, the NBI remains transitional in nature because its legal framework is yet to be formally settled, executed and ratified by NBI member states. After its formal ratification by NBI member states, protocols and other subsidiary legal instruments to fully operationalise it will be required and experience indicates that negotiation of intergovernmental protocols and other legal instruments takes many years to finalise.

Already two key weaknesses in the draft Nile Basin Cooperative Framework Agreement are apparent. The first relates to decision making by the Council of Ministers which is required to be by consensus. This has been partly responsible for the long delays in settling the terms of the draft Nile Basin Cooperative Framework Agreement. The second relates to dispute settlement and requires NBI member states to settle disputes by negotiations between individual states. If unable to settle their disputes, NBI member states can seek the intervention of the Commission. Given the fact that decision-making by the Council (Article 23 - 4) must be by consensus, it is apparent that the dispute settlement mechanism under the draft Nile Basin Cooperative Framework Agreement is likely to prove ineffective and unworkable.

²⁰ Following the conclusion, ratification and entry into force of the NBI Cooperative Framework Agreement, the NBC will become a successor institution to the transitional NBI. By operation of law – and indeed as is envisaged under Article 30[a] of the draft NBI Cooperative Framework – the NBC will automatically assume the rights and obligations of the NBI under the proposed Cooperative Framework for the Kagera River Basin and other similar agreements and undertakings entered into by the NBI. It will then be upon the NBC Council of Ministers to decide on whether to ratifying; amend or even revoke the terms of the agreements and undertakings succeeded to by the NBC.

Consequently, the draft Nile Basin Cooperative Framework alone cannot be used as the legal basis for the establishment of the proposed permanent transboundary cooperative framework for the Kagera River Basin. It needs to be reinforced by existing binding regional treaties and protocols to which the four Kagera River Basin riparian countries are parties, notably the EAC Treaty and LVBC Protocol.

8.3.2 The EAC Treaty and LVBC Protocol

Following the admission of Rwanda and Burundi into the EAC effective from 1 July 2007, all the four Kagera Basin countries are members of the EAC. Unlike the NBI, the EAC legal status is clear and certain under the EAC Treaty. The EAC operational principles in relation to water and natural resources management and environmental protection are broadly similar to those of the NBI under the draft Nile Basin Cooperative Framework Agreement. They include that of subsidiarity with emphasis on multi-level participation and involvement of a wide range of stakeholders in the process of integration.

The EAC Treaty establishes an institutional framework that includes sectoral committees, the East African Court of Justice and the East African Legislative Assembly. The EAC Treaty, therefore, provides a permanent regional legal framework through which various laws and regulations on agreed areas of regional cooperation can be passed and implemented at regional level. It also provides a permanent regional legal framework through which disputes between EAC member states can be resolved through an independent regional court of justice.

The EAC Treaty has been implemented through various EAC protocols. The LVBC Protocol established the LVBC and mandates it with the role of coordinating, regulating and overseeing the management and development of the Lake Victoria Basin. To the extent that the entire Kagera Basin drains into the Lake Victoria Basin, the EAC through the LVBC already has the mandate under the EAC Treaty and LVBC Protocol to regulate, coordinate and oversee the management and development of the Kagera River Basin. Accordingly, the EAC Treaty and LVBC Protocol do provide a permanent legal framework on which the proposed transboundary cooperative framework for the Kagera River Basin can be based.

8.3.3 NBI/EAC and LVBC Linkages

Both the draft Nile Basin Cooperative Framework Agreement and the EAC Treaty and LVBC Protocol do recognise the importance of utilising sub-basin organisations and arrangements, as well as, the need to establish effective linkages with sub-basin organisations. Under Articles 31 and 32 of the draft Nile Basin Cooperative Framework Agreement, NBI member states that are members of sub-basin organisations or arrangements are required to ensure that such organisations or arrangements are consistent with the principles and objectives of the NBC. NBI member states that belong to sub-basin organisations or arrangements are also required to ensure that such sub-basin organisations or ar-

rangements work in close cooperation with NBC. The Commission is also required to cooperate closely with sub-basin organisations and arrangements.

Article 5 (7) of the LVBC Protocol recognises the fact that the Lake Victoria Basin forms part of the wider Nile River Basin. It requires EAC member states to cooperate with other interested parties, regional or international bodies and programmes.

Both the NBI and EAC have agreed to cooperate on the management and development of the Lake Victoria Basin. A memorandum of understanding has for this purpose been executed by the NBI and EAC. However, the NBI/EAC MoU on Lake Victoria Basin is yet to be implemented by the establishment of working arrangements as well as designation of the respective implementation organs. The NBI/EAC MoU, the LVBC Protocol, EAC Treaty and the draft NBI Cooperative provide a legal basis on which effective linkages between the NBI and NELSAP on the one hand and the EAC and LVBC on the other can be executed through the proposed transboundary cooperative framework for the Kagera River Basin.

8.3.4 Possible Revival of the Kagera River Basin Organisation (KBO)

The KBO was formally dissolved on 7th July 2004 when the Heads of States of KBO member states signed the Agreement for the Dissolution of the KBO. The revival of the KBO would, therefore, require the negotiation and ratification of a new agreement, treaty or protocol by the four (4) Kagera River Basin riparian countries. The new agreement, treaty or protocol would be outside the draft Nile Basin Cooperative Framework Agreement and the EAC Treaty and LVBC Protocol, and could formulate its own principles, objectives, institutional structures and mandate.

However, given the long time it takes to negotiate regional and international treaties, protocols and agreements, the revival of the KBO under a new agreement, treaty or protocol would delay the formulation of the proposed transboundary cooperative framework for the Kagera River Basin. This would also be inconsistent with the KBO Council of Ministers recommendation at its 12th – 13th January 2000 meeting in Kigali that recommended the transfer of KBO projects and activities into the EAC framework after the admission of both Rwanda and Burundi into the EAC.

The Agreement for the Dissolution of the KBO was based on the recommendation of the KBO Council of Ministers and noted that KBO objectives should be promoted through existing initiatives under the NBI and the EAC. Accordingly, the revival of the KBO through the negotiation and ratification of a new KBO agreement, treaty and protocol does not appear to be a viable option under the proposed transboundary cooperative framework for the Kagera River Basin and would be unlikely to get the support of EAC member states that are required under the EAC Treaty and LVBC Protocol to negotiate as one bloc.

8.3.5 National legal frameworks

A review of national water resources and environment laws and regulations indicates that while many legal reforms have been undertaken in recent years by the four Kagera Basin countries notably by Uganda, Rwanda and Tanzania, each of the countries principal water resources and environmental laws is national in character. As a result, transboundary projects and activities within the Kagera River Basin are required to comply with the relevant national laws and regulations of each country.

A legal framework for the identification, coordination, information sharing and implementation of transboundary projects and activities within the Kagera River Basin needs to be agreed. This will involve harmonisation of laws and regulations at the national level of each country to ensure that national projects and activities within the Kagera River Basin are subject to uniform laws and regulations.

It will also involve the formulation of laws, regulations and standards for transboundary projects and activities within the Kagera River Basin. One of the functions and roles of the proposed transboundary cooperative framework for the Kagera River Basin will be to coordinate the harmonisation of water resources and environment laws, regulations and standards at national level for each of the four Kagera Basin countries, as well as, the development of a legal framework for the regulation of transboundary projects within the basin.

8.4 Options for Cooperation

Based on the above, the Consultant's considered view is that there are four (4) possible options by which the legal framework for the proposed permanent transboundary cooperative framework for the Kagera River Basin can be structured as outlined below.

8.4.1 Option 1: Kagera Basin Cooperative Framework within NBI/NELSAP - NBC Cooperative Framework

The first would involve the negotiation of an agreement, protocol or treaty by the four Kagera River Basin riparian countries under the NBI transitional mechanism or its successor NBC under the Nile Basin Cooperative Framework Agreement. As indicated above, Articles 31 and 32 of the draft Nile Basin Cooperative Framework recognises the importance and need of utilising sub-basin organisations or arrangements.

The Kagera Integrated Water Resources Management Project can, under the agreement, protocol or treaty made under Articles 31 and 32 of the draft Nile Basin Cooperative Framework Agreement be transformed into an institution of the NBI/NBC with corporate and legal status operating through the proposed institutional structure of the NBC.

The main disadvantage associated with this option is that it is dependent on the finalisation and ratification of the draft Nile Basin Cooperative Framework Agreement which could take many years to realise. Given the underlying differences between the upper and lower Nile Basin riparian countries due to the pre-colonial Nile River treaties that gave preference to the interests of Egypt and Sudan and the uncertainty associated with the legal status of the Nile Basin Cooperative Framework, this option does not provide the required legal certainty for the proposed permanent transboundary cooperative framework for the Kagera River Basin.

8.4.2 Option 2: Kagera Basin Cooperative Framework within the EAC's LVBC Protocol

The EAC Treaty and LVBC Protocol provide a permanent legal framework for regional cooperation for the entire Lake Victoria Basin including the Kagera River Basin. The LVBC under the LVBC Protocol and the LVBC Bill will have the required corporate and legal status as the EAC institution with the mandate to coordinate, regulate and oversee all management and development projects and activities within the Lake Victoria Basin.

This option involves the utilisation of the LVBC Protocol, the EAC Protocol on Environment and Natural Resources Management, the EAC Treaty and other EAC legal instruments. To the extent that the LVBC Protocol and other EAC protocols and legal instruments and institutions are already established, this option would not require the negotiation and ratification of a separate agreement, protocol or treaty for the proposed permanent transboundary cooperative framework for the Kagera River Basin. Rather, this would involve the transfer of the former KBO project office, resources and assets to the LVBC to be managed in accordance with the LVBC Protocol and other EAC legal instruments with no or little direct involvement of the NBI.

8.4.3 Option 3: Kagera Basin Cooperative Framework under the NBI / NBC – EAC Cooperative Partnership

The third legal option involves the operationalisation and/or implementation of the Memorandum of Understanding (MoU) between the NBI and the EAC. This involves the negotiation of an agreement under which the proposed permanent transboundary cooperative framework is based on both the Nile Basin Cooperative Framework and the existing permanent legal framework under the EAC Treaty, the LVBC Protocol and other EAC protocols and legal instruments.

Under this option, an agreement can be negotiated to provide effective linkages between the NBI and NELSAP on the one hand and the EAC and LVBC on the other by implementing Article VI of the NBI/EAC MoU. A Kagera River Basin Cooperative Framework under the LVBC and the EAC but funded and controlled by both the NBI and the EAC can be formulated thereby establishing a permanent cooperative partnership between the NBI and the EAC.

8.4.4 Option 4: Establishing an Autonomous Institution or Reviving the KBO

The fourth legal option would involve the establishment of a new institution or the revival of the KBO through the negotiation and ratification of a new Kagera River Basin specific agreement, protocol or treaty outside the Nile Basin Cooperative Framework and the EAC Treaty. As indicated above, this option is unlikely to get the support of the four Kagera River Basin countries because the terms of the KBO Dissolution Agreement envisaged the transfer of KBO projects and activities into either the NBI or the EAC.

The merits and potential challenges of each option are highlighted in the SWOT analysis of Table 8.2 below. It is on the basis of these detailed arguments above that the recommendations in Section 8.5 are developed.

Table 8.2: SWOT Analysis of Options

Option	Kagera Basin Cooperative Framework within the NBI/NELSAP - NBC Setup	Kagera Basin Cooperative Framework within the EAC's LVBC Protocol	Kagera Basin Cooperative Framework under NBI/NBC - EAC Cooperative Partnership	Kagera Basin Cooperative Framework establishing an Autonomous Institution
Strengths	The project has established institutional linkages and frameworks	The EAC and LVBC are fully legally constituted and recognised in all riparian countries	The NBI and EAC have signed a Memorandum of Understanding (MoU) for cooperation in basin management and development activities	Gives best focus to Kagera issues: all and only riparian countries of the Kagera would be members
	It has extensive technical expertise and experience of operating in the region	Fully established organs – secretariats, legislature, court – and mechanisms for harmonisation of policies and laws	The EAC is well established in the region with a Treaty ratified by all riparian countries and functional management arrangements in place	
	Has established support networks with development partners	Demonstrated political commitment to both organisations by all riparian countries	The RBO would benefit from the EAC's established institutional linkages and structures in each country	
		Have established support networks with development partners	RBO would be an extension of EAC institutional activities and programs in particular the LVBC which has extensive technical expertise and experience in similar activities	
Weaknesses	NBI is a transitional mechanism and the Nile Basin Commission (NBC) framework agreement yet to be settled	LVBC yet to attain full operational capacity	Permanent NBI-EAC cooperative partnership agreement required under Art. 3 of MoU	Inadequate technical, financial and administrative resources to set up independent of NBI and EAC/LVBC
	The NBI's legal status is not established in all countries	There are marked differences in the functional capacity of individual riparian country institutions to implement joint activities	Capacity of individual riparian countries to fully participate in EAC activities varies and this may constrain the functionality of the RBO Relevant EAC institutional arrangements particularly the LVBC yet to attain full operational capacity	Difficult to justify necessity especially against the background of the failed Kagera Basin Organisation

Option	Kagera Basin Cooperative Framework within the NBI/NELSAP - NBC Setup	Kagera Basin Cooperative Framework within the EAC's LVBC Protocol	Kagera Basin Cooperative Framework under NBI/NBC - EAC Cooperative Partnership	Kagera Basin Cooperative Framework establishing an Autonomous Institution
Opportunities	Relatively functional operational structures in place in all countries	Commonalities in goals; problems and their appreciation; and people and traditions	Circumvents current constraints to NBI activities implementation in the region posed by the transitional status of the NBI and the delays to a Cooperative Framework agreement for a permanent institution - the NBC	Unification of riparians to pursue common goals
		Synergies with other Lake Victoria sub-basins – Mara, Sio-Malikisi	Arrangement would operationalise Articles 31 (Subsidiarity) and 34 (bi- and multi-lateral coop) of the Draft Nile Basin Framework	
			Establishing the RBO would contribute to process of building relevant local/regional technical and administrative capacity for basin management	
			Drawing more international attention to EAC/LVBC and Kagera	
Threats	Operationalisation dependent on when or if the Nile Basin Draft Cooperative Framework is settled, executed and ratified	Kenya, which is not a riparian of the Kagera, may not fully appreciate and support the RBO's programmes	Uncertainties over future of NBI/NBC and NBI – EAC partnership especially given current obstacles to Draft Nile Basin Cooperative Framework	Over-extending member countries' commitments to regional bodies – NBI/NBC, EAC/LVBC, SADC, COMESA, LTA, CEPGL
	Potential low prioritisation of Kagera issues in the context of the wider Nile Basin	Self-sustainability is suspect as the EAC and LVBC are highly dependent on development partner support	Undue influence of member countries of NELSAP that are not Kagera basin riparians in the RBO's activities	Irrelevance given existence of NBI/NBC - NELSAP and LVBC
	Lingering questions of self sustainability of, and riparian financial commitment to NBI/NELSAP – NBC and thus RBO		Self sustainability concerns	High costs of negotiating requisite functional arrangements
	Likelihood of impasse – Nile-COM decision making stipulated to be by consensus (Article 23, Draft Framework)			Uncertainties of ability to attract funding

8.5 Recommended Option: Option 3 Kagera Basin Cooperative Framework under the NBI/NBC – EAC Cooperative Partnership

The proposed permanent transboundary cooperative framework for the Kagera River Basin should be based on the combined NBI and EAC legal frameworks.

Such an arrangement fulfils the principle of subsidiarity which is a key guiding principle under both the draft Nile Basin Cooperative Framework Agreement, the EAC Treaty, the LVBC Protocol and other EAC protocols and legal instruments. Furthermore, the draft Nile Basin Cooperative Framework Agreement, the EAC Treaty and the LVBC Protocol do recognise and stress the need to establish effective linkages with other regional or sub-basin organisations and international bodies and programmes in relation to the management and development of the Nile River Basin and the Lake Victoria Basin. Accordingly, the Consultant recommends that an agreement or protocol between the NBI and EAC be negotiated pursuant to Article VI of the NBI/EAC MoU.

In making the above recommendation, the Consultant recognises the fact that the Kagera River Basin is not the only Nile River sub-basin draining into Lake Victoria. In particular, the Consultant is aware that a similar project for the Sio-Malaba-Malakisi catchment area is under way. The Consultant is of the view that LVBC should consider establishing other sub-basin management units. It would make coordination easier if the other sub-basins i.e. Mara and Sio Malakisi, also established coordination units to be anchored within relevant EAC activities that are currently being implemented by the LVBC. In this way, LVBC would be in position to address any issues/challenges that may arise between and within the river basins. It will also contribute towards harmonization of interventions, avoiding duplication and hence ensuring more efficient and effective use of resources.

The Consultant therefore recommends that the proposed agreement or protocol to be negotiated between the NBI and EAC pursuant to Article VI of the NBI/EAC MoU should be wide and flexible enough to facilitate the establishment of other sub-basin organisations or arrangements within the Lake Victoria Basin without the need to negotiate a separate agreement or protocol for each of such sub-basin organisations or arrangements. In other words, the recommended agreement or protocol between the NBI and the EAC should not be restricted to the proposed transboundary cooperative framework for the Kagera River Basin only, but also for the Sio-Malakis-Malaba and Mara sub-basin.

8.5.1 Proposed Institutional Framework

This section elaborates our institutional framework proposals for the recommended option. The purpose of the proposed institutional framework is to provide an opportunity for coordination, cooperation, harmonization, collective action and joint management of the Kagera River Basin, and to address issues relating to sustainable development in the Kagera Basin region.

The broad mandate of the proposed institutional framework will be based on Article 33 of the LVBC Protocol but its main functions will be specific and relate to the Kagera River Basin.

In line with Article 33 of the LVBC Protocol, the broad mandate of the proposed River Basin will be to:

Promote, facilitate, and coordinate activities of different actors towards sustainable development and poverty eradication within the Kagera River Basin through:

- (a) Harmonisation of policies, laws, regulations and standards;
- (b) Promotion of stakeholders participation in sustainable development of natural resources;
- (c) Guidance on implementation of sectoral projects and programmes;
- (d) Promotion of capacity building and institutional development;
- (e) Promotion of security and safety on River Kagera;
- (f) Promotion of research development and demonstration;
- (g) Monitoring, evaluation and compliance with policies and agrees actions;
- (h) Initiation and promotion of programmes that target poverty eradication; and
- (i) Perform any other functions that may be conferred upon it under the framework agreement.

Section 1.3.1 of Volume 2 of this Report sets out the following more specific functions for the proposed institutional framework:

- (a) Prepare integrated management plans for the Kagera River basin in cooperation with the riparian states and the Lake Victoria Basin Commission with the aim to facilitate the sustainable management and development of its water resources;
- (b) Coordinate hydrological and water quality monitoring in the basin;
- (c) Facilitate joint water resources development projects;
- (d) Collect and disseminate information on the water resources in the basin;
- (e) Participate in the development of common standards;

- (f) Develop or participate in the development of common guidelines for water resources activities or activities that affect water resources;
- (g) Organise and implement capacity building activities in the field of water resources management for the riparian states;
- (h) Assist the riparian states in harmonising policies and legal and institutional frameworks;
- (i) Assist the riparian states in finding solutions to shared problems that impact on water resources through exchange of information and joint projects;
- (j) Review and comment on EIAs on activities that significantly affect the water resources in the basin;
- (k) Mediate between riparian states in case of disputes;
- (l) Establish an informal network of technical working groups for specific issues;
- (m) Facilitate trans-boundary cooperation by assisting the formation of trans-boundary water resources committees at district-level and provide technical support; and
- (n) Flood warning.

The Values that will guide the operations of the proposed institutional framework are based on the fact that the Lake Victoria Basin is a sub-catchment of the Nile Basin, under the mandate of the Nile Basin Initiative. The Kagera Basin, which forms part of the Lake Victoria Basin, is thus under the mandate of the Lake Victoria Basin Commission. The KBMU will therefore be formed under LVBC, because the LVBC provides the framework for the management of the Kagera Basin as a hydrological unit. Being formed under the LVBC will require the KBMU to adhere to LVBC administrative procedures. It will benefit from the established LVBC set-up and will not be burdened by having to create its own administrative procedures. It is recommended that the KBMU be organised as a LVBC unit, but with a clearly identified budget and work programme approved by the Lake Victoria Basin Commission.

However, it is also important for NBI and the EAC (under which LVBC falls) to monitor the overall implementation of the cooperative framework. It is therefore recommended that between NBI and EAC, a monitoring and coordination committee be set up for the sole purpose of regularly monitoring the implementation of the cooperative framework. Selection of the membership to this committee shall be determined by the NBI and EAC secretariats in consultation with their respective advisory committees and/or councils.

The linkages between the KBMU, regional and international organisations will primarily take place through the LVBC. However, the KBMU can also work directly with NELSAP and other regional or international organisations on technical matters or on projects that form part of the Kagera Basin Development Programme as approved by the LVBC Council or approved by the LVBC Secretariat on a case-by-case basis.

Figure 8.1 illustrates the proposed institutional framework.

Description of Components of the Proposed Institutional Framework

(v) The LVBC Sectoral Council

At the Apex of the LVBC structure is the Sectoral council, which reports to the council of ministers and then ultimately the Summit of Heads of State or Government. The council consists of one member from each country at ministerial or cabinet level and is responsible for the overall governance of the Commission. The Council makes policy decisions and provides other necessary guidance concerning the promotion, support, co-operation and co-ordination of joint activities and programmes in the Lake Victoria Basin.

(vi) The Kagera Basin Sectoral Committee

Article 37 of the Lake Victoria Protocol provides for the establishment and composition of Sectoral committees at the recommendation of the Coordination Committee. One key factor informing such recommendations is the existence of sectoral bodies and the need to have operational linkages. Sectoral Committees are composed of Senior Officials of Partner States, Heads of Public Institutions, representatives of Regional Institutions, representatives from sectors covered under Article 3 of the LVBC Protocol, business and industry and Civil Society. It is suggested that a sectoral committee with specific focus on the Kagera Basin be established.

The functions of the sectoral committees are provided for under Article 38 that states thus:

“Subject to any directions that the Sectoral Council gives, the Sectoral Committee shall:

- (a) Coordinate regional activities and those of national focal points within the Basin;
- (b) Be responsible for the preparation of comprehensive implementation of programmes and the setting out of priorities for the Basin;
- (c) Monitor and keep under constant review the implementation of the programmes undertaken in the Basin;

- (d) Submit from time to time, reports and recommendations of working groups and Focal Points in the Basin; and
- (e) Perform such other functions as may be conferred on it by or under the LVBC Protocol.”

The Kagera Basin Sectoral Committee would therefore be responsible for the implementation of the policies and decisions of the LVBC Council that specifically relate to the Kagera Basin. It will also be responsible for providing technical advice, particularly in the development of the Basin Development Plan, and monitoring its implementation. This body functions as a board of management.

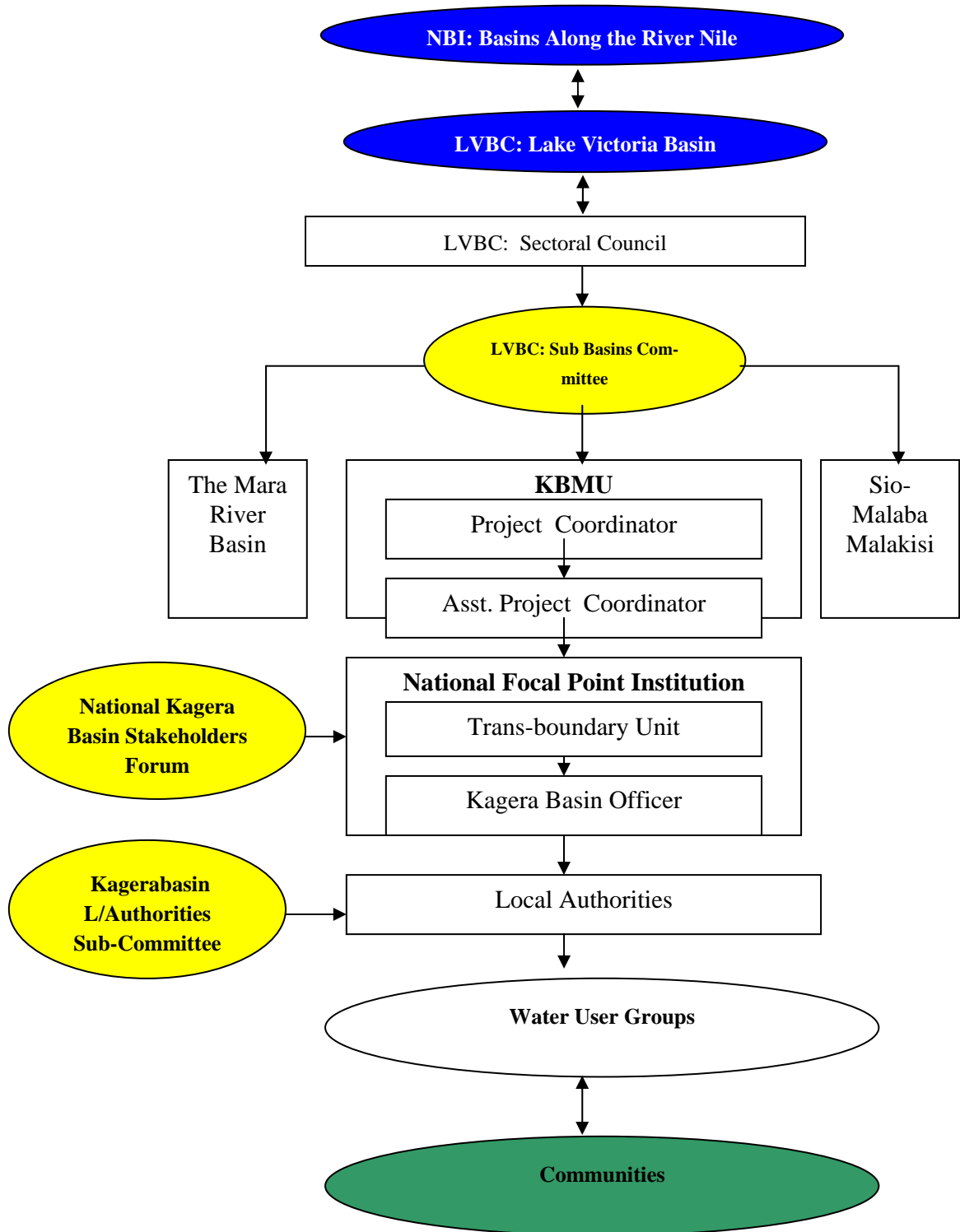


Figure 8.1: Proposed Organogram for the BMU under LVBC

(vii) KBMU Secretariat

The KBMU will be the operational and administrative arm of the LVBC programmes responsible for the Kagera Basin. The Unit will receive technical support and guidance from the Kagera Basin Sectoral Committee. The Unit will be the implementation arm of the LVBC Council and the Kagera Basin Sectoral Committee. It is the responsibility of the KBMU to draw upon catchment plans from the various riparian countries and put together a Kagera Basin Development Plan and Capacity Building Plan that will guide their interventions. The KBMU will work with counterparts at national level: a national focal point institution and a Kagera Basin National Stakeholders' Forum.

(viii) National Focal Point Institution

Since the main function of the KBMU is coordination, it is essential that the KBMU develops close working relationships at national level, in all the countries in the Kagera Basin.

In recognition of the various capacities and levels of coordination in the area of water resource management in the different countries, it is recommended that each country identifies and appoints an institution that will coordinate, liaise and work with the KBMU. This national institution will coordinate national level activities of the KBMU, and also facilitate information sharing and communication between ministries and natural resource management agencies at national level, district level and the KBMU. These ministries and agencies will form a Kagera Basin National Stakeholders' forum that will meet regularly. However, the forum will also have the mandate to form sub-committees to address any issues that may affect a few specific agencies and/or ministries in line with the Kagera Development Plan.

The criteria to select the institution should include the following:

- The institution should be national in its mandate and operations.
- The institution should deal with aspects of water and natural resource management.
- This institution should also have a clearly defined mandate to handle transboundary issues, including the Kagera Basin area. In this way, it will be guaranteed that the institution will provide time, skills and human resource required to work with the KBMU.
- Where such an institution does not have specific capacity to handle transboundary related issues, support should be provided to develop this capacity, through providing training to key identified personnel.

(ix) *Kagera Basin Desk Officer*

In order to ensure implementation of programmes in the riparian countries, particularly support in the development and harmonisation of district catchment plans at national level, it is necessary for the National focal point institution to designate a Kagera Basin desk officer, who would need to work under the Transboundary Unit/department of the Institution. This desk officer will also be responsible for monitoring and follow up of initiatives at the national level. The officer's performance will be supervised by the National Focal Point Institution, who will in turn require him/her to work with the KBMU.

(x) *National Stakeholders' Forum*

It is critical that the national focal point institution functions effectively as a facilitator and does not constitute an administrative bottleneck. So whilst the focal point institution should be kept informed, it is necessary that the KBMU is able to work directly with the relevant government agencies and other stakeholders in the riparian countries when this is deemed most practical, for instance in connection with agreed activities. In particular, the KBMU should seek to involve actors and development agencies that may not have a direct focus on water related issues, and yet their work has implications on the Kagera Basin. Examples include ministries responsible for foreign affairs, land use, environment, gender and social issues, labour, energy, health, agriculture and trade and socio-economic development.

It is therefore proposed that these institutions establish a National Stakeholders' Forum on the Kagera Basin²¹.²² In addition to Government ministries and agencies, the Forum will have representation from civil society, the private sector and Local Authorities that operate within the Kagera Basin. The Agency representatives at this Forum should be those that deal directly with issues relating to the Kagera Basin, and may therefore be staff of national agencies that are based in the Kagera Basin region. This Forum will be coordinated by the National Focal Point Institution. The function of this forum will be advisory on programmes and policy, and ensuring implementation of activities through monitoring and evaluation. The forum will also provide an opportunity for networking and information exchange, which will in turn feed into the development of the Kagera Basin Development Programme.

The National Stakeholders' Forum will also include the National Focal Point officers of NBI and LVBC. It is suggested that a meeting be held in which to identify areas of similarity and complementarity and devise mechanisms/means

²¹ In countries like Uganda where a Joint Water Committee exists, or in Burundi where a similar committee is proposed, the Kagera Basin National Stakeholders' Forum could be a part of that Forum, as a sub-committee.

²² In countries like Uganda where a Joint Water Committee exists, or in Burundi where a similar committee is proposed, the Kagera Basin National Stakeholders' Forum could be a part of that Forum, as a sub-committee.

of working together on matters related to the Kagera Basin. In each partner state, the focal point ministry has nominated a Focal Point Officer for LVBC. The officer is of a level that he/she is able to easily communicate, coordinate, reach, contact, or work with other stakeholders in government, private sector and civil society. The NFPO is responsible to the Permanent Secretary of the focal point ministry. NBI also has National Focal Points whose key role is to coordinate and implement activities of NBI at national level. According to the Draft Nile Basin Cooperative Framework Agreement (S.32.2), “ The function of National Nile Focal Point Institutions is to serve as national focal points for the Commission with regard to matters within the competence of the Commission.” This description of function provides wide latitude, and it can be argued that the broad functions of the NBI National Focal Points are similar to those of the LVBC National Focal Point Officers. National Focal Point Officers provide liaison between LVBC and the different government ministries on common issues of the basin development. They also facilitate stakeholder involvement in the development process, coordinate the activities of the commission at country level, and seek to harmonise the implementation of programmes and projects within the Lake Victoria Basin. They should therefore be able to add a lot of value to the National Stakeholders’ Forum.

(xi) Local Authorities

Despite the varying levels of decentralisation, the local authorities in the riparian countries play a central role in identifying development priorities, planning for these, and managing natural resources at the local level. Their involvement in the framework can therefore not be overemphasised. It is proposed that the Local Authorities in the Districts and /or Provinces that are part of the Kagera Basin should establish a sub-committee that will provide specific advice and/or input in planning for the Kagera Basin area, a Kagera Basin Local Authorities Sub-Committee. It is also recommended that a representative from this sub-committee should represent the Local Authorities at the National Stakeholders’ Forum

It is proposed that as part of the final process of developing the Kagera Basin Development Programme, the KBMU facilitate a meeting of representatives of the Local Authorities in the various countries that can be called the Kagera Basin Local Authorities Annual Forum that will meet once a year to review the implementation of the Kagera Development Programme over the year, and provide input to the proposed Programme for the coming year. This Annual Forum will also serve to facilitate coordination and networking at the basin level. This Forum can also act as a point of information sharing and a common forum to develop advocacy initiatives for policy and legislation. The Forum will comprise representatives of Local Authorities from the Riparian countries, representatives from the National Focal Point Institution, the Kagera Basin National Stakeholders’ Forums, Representatives of Civil Society and the Private Sector.

It has also been suggested that the KBMU can make use of LVRLAC, an already existing institution that brings together representatives of Local Authori-

ties in the Lake Victoria Basin. LVRLAC can be a good entry point for discussion and common planning. However, LVRLAC addresses a number of issues concerning its membership, so the possibility of insufficient focus on matters in the Kagera Basin region is high. It has however been suggested that the LVRLAC structure allows for the establishment of sub-committees to address specific concerns for its membership. It is therefore possible for LVRLAC to establish a sub-committee that will focus on its members in the Kagera Basin. This sub-committee could then co-opt representatives from the National Focal Point Institutions and /or the National Stakeholders' Forums, Representatives of Civil Society and the Private Sector. However, the other challenge lies with the mandate of LVRLAC, it is a voluntary membership organization, and at the moment is largely dependent on donor support. What happens if one of the local authorities is not interested in being a member, or opts out? Also, what happens when there is no donor funding? These challenges would need to be addressed for LVRLAC to be a viable option for hosting the Kagera Basin Local Authorities Annual Forum.

(xii) Water User Groups/Associations

It is proposed that the Local Authorities Planning Sub-Committees in the riparian countries should also have representation from Water User Groups/Associations. These Groups/Associations should be comprised of community members from the Basin area, and their main role will be to mobilize communities and inform them about water user rights, water protection and to serve as representatives who will channel community views and perspectives on water resource management to the Local Authorities. Where these Water User Groups/Associations are not in place, the Local Authorities should encourage communities to form these with the support of CSOs.

(xiii) Civil Society Organisations

A number of Civil Society Organisations that work on issues relating to water and the environment operate at both national and local levels. In particular, the Nile Basin Forum has offices in all the countries in the Kagera Basin, and has established networks and links with CSOs operating at district. Developing a relationship with Nile Basin Discourse Forum (NBDF) would be strategic, because they have the networks, information and linkages with the grassroots, which present an opportunity for capacity building and engagement with communities on matters relating to water and natural resource management. The relationship can be formalised through a memorandum of understanding in which the NBDF would liaise with the KBMU in planning, monitoring and implementing their activities geared towards capacity building and awareness raising amongst communities. NBDF can also support the set up of Water User Groups/Associations. Civil Society Organisations should be represented at both the National Cooperation Partners' Forum and the Kagera Basin Planning Committee.

(xiv) Private Sector

In most of the countries, the private sector plays a key role in providing water and managing water resources. In most of the countries, the private sector is mainly involved at the level of implementation at the local level. It is therefore suggested that the private sector be represented on the Local Authorities Kagera Basin sub- Committee. Their role will be to share information, particularly of a technical nature and advise the committee where necessary.

Table 8.3: Overview of the functions of components of the proposed institution

Institution	Proposed Functions	Required Competencies
Kagera Basin Sectoral Committee	<p>(i) Coordinate activities of a transboundary nature within the Kagera Basin.</p> <p>(ii) Be responsible for the preparation of comprehensive implementation of programmes and the setting out of priorities for the Kagera Basin through providing technical and advice and guidance on the development of the Kagera Basin Development Programme. This Development Programme will then be submitted to the LVBC Council for approval.</p> <p>(iii) Approve the Kagera Basin Capacity Building Plan.</p> <p>(iv) Monitor and keep under constant review the implementation of the Kagera Basin Development programme. This may require commissioning studies and assessments on the impact, relevance and responsiveness of the Kagera Basin Development programme.</p> <p>(v) Submit from time to time, review reports and recommendations of Kagera Basin National Focal Point Institutions, and their Stakeholders' Forums.</p> <p>(v) To assign tasks and supervise the activities of the KBMU, as is required to implement the Kagera Basin Development Programme and Capacity Building Plan. The Committee will also make recommendations for the approval of the organisational structure and operations of the KBMU.</p> <p>(vi) Address issues of conflict that may arise between members, and where necessary refer these to the council.</p> <p>(vii) Perform such other functions as may be conferred on it by or under the LVBC Protocol.</p>	<p>(i) Good and clear understanding of proposed regional activities and the structures in place to implement them.</p> <p>(ii) Have a good understanding of transboundary issues in water resource management in the Kagera Basin.</p> <p>(iii) Have a good understanding of project management .</p>

Institution	Proposed Functions	Required Competencies
KBMU Secretariat	<p>(i) Develop the Kagera Basin Development Programme, through assessing and building on the national Kagera Basin Plans and through a participatory process that will involve all stakeholders, then facilitate and ensure its implementation.</p> <p>(ii) With the approval of the Sectoral Committee, establish Project Management Units, or outsource consultants to manage and implement major development projects of a transboundary nature.</p> <p>(iii) Develop, facilitate and ensure the implementation the Kagera Basin Capacity Building Plan.</p> <p>(iv) Coordinate and facilitate communication and information exchange between the various institutions that are responsible for water resource management in the Kagera Basin area through holding regional forums and meetings including the Kagera Basin Local Authorities Annual Forum.</p> <p>(v) Maintain a database of information on the Kagera Basin.</p> <p>(vi) Carry out the decisions and tasks that will be given by the Council and Sectoral Committee. The KBMU is directly responsible to the Sectoral Committee.</p> <p>(vii) Make the necessary preparations for meetings of the Kagera Basin Sectoral Committee.</p>	<p>(i) Data and information management</p> <p>(ii) Communication skills and equipment.</p> <p>(iii) Good understanding of transboundary water resource management issues in the Kagera Basin.</p> <p>(iv) Have the contacts and capacity to outsource and supervise consultants.</p>
National Focal Point Institution	<p>(i) Act as contact point for the KBMU secretariat at national level.</p> <p>(ii) Coordinate the convening of the National Stakeholders' Forum.</p> <p>(iii) Facilitate the activities of the National Stakeholders' Forum.</p> <p>(iv) Supervise the operations of the Kagera Basin desk officer.</p>	<p>(i) Data and information management.</p> <p>(ii) Coordination</p> <p>(iii) Understanding of Transboundary water resource issues in the Kagera Basin.</p> <p>(iv) Negotiation skills</p> <p>(v) Advocacy and Lobbying skills</p>

Institution	Proposed Functions	Required Competencies
National Kagera Basin Stakeholders' Forum	(i) Provide advice on policies and programmes relating to the Kagera Basin area. (ii) Monitor and evaluate the implementation of KBMU activities at national level. (iii) Network and share information amongst each other. (iv) Share information with the KBMU secretariat, which will inform the Kagera Basin Development Programme. (v) Establish sub-committees to address particular issues that may arise.	(i) Understanding of Transboundary water resource issues in the Kagera Basin. (ii) Policy analysis skills (iii) Project management skills
Kagera Basin Local Authorities Planning Forum	(i) Contribute to the development of the Kagera Basin Development Programme. (ii) Ensure effective implementation of the programme through monitoring and evaluation. (iii) Facilitate communication, information sharing and exchange between the local authorities and communities in the riparian countries. (iv) Provide a common forum to develop advocacy initiatives for policy and legislation.	(i) Project management skills. (ii) Data and information management. (iii) Lobbying and advocacy skills (iii) Understanding of transboundary issues in water resource management in the Kagera Basin. (iv) Policy development and analysis. (v) Mobilisation and facilitation skills
Water User Groups/Associations	(i) Mobilize communities and inform them about water user rights, water protection. (ii) Serve as representatives who will channel community views and perspectives on water resource management to the Local Authorities.	(i) Understanding of water user rights. (ii) Mobilisation and Communication skills. (iii) Capacity to facilitate consultative processes. (iv) Policy analysis. (v) Lobbying and Advocacy skills.
Civil Society	(i) Liaise with the KBMU in planning, monitoring and implementing their activities geared towards capacity building and awareness raising amongst communities. (ii) Support the set up of Water User Groups/Associations. (iii) Have representation on both the National	(i) Good understanding of transboundary water resource management issues in the Kagera Basin. (ii) Training and Facilitation skills. (iii) Advocacy and lobbying skills

Institution	Proposed Functions	Required Competencies
	Kagera Basin Stakeholders' Forum and the Kagera Basin Local Authorities Annual Planning Forum.	
Private Sector	(i) Have representation on both the National Kagera Basin Stakeholders' Forum and the Kagera Basin Local Authorities Annual Planning Forum. (ii) Share information, particularly of a technical nature and advise the various Forums when the need arises.	(i) Technical knowledge in water resource management. (ii) Good understanding of transboundary management issues in the Kagera Basin.

9 Implementation Strategy

9.1 Legal Implementation of Recommended Option

Implementation of the recommended legal framework will require both the EAC, through the LVBC, and the NBI to make certain key decisions and execute a number of legal instruments as outlined below.

9.1.1 EAC

The EAC needs to formally endorse the recommendation to establish a sub-basin coordination and management unit within the LVBC. This requires the LVBC Secretariat to initiate a proposal for the establishment of a sub-basin coordination and management unit for the Kagera River Basin and other sub-basins draining into Lake Victoria.

The proposal needs to be channelled and endorsed by the Lake Victoria Coordination Committee, the Sectoral Council on Lake Victoria and ultimately the EAC Council of Ministers. The proposal needs to be endorsed by the EAC Council of Ministers and formulated as a “Regulation”, “Directive”, “Decision” or “Recommendation” under Article 16 of the EAC Treaty to give it legal force binding on EAC member states and organs including the LVBC.

Key features of this proposal should include the following:

- it should mandate the LVBC to establish a sub-basin organisation unit within the LVBC to coordinate and manage the Kagera River Basin and other sub-basins whose projects and activities including funding are jointly coordinated and/or managed by the EAC, NBI and any other regional or international organisation or programmes;
- the mandate of the LVBC should include the power to formulate, negotiate and agree on transboundary cooperative frameworks for the Kagera River Basin and other sub-basin organisations within the Lake Victoria Basin;
- it should designate the LVBC as the EAC implementation organ under Article VI of the NBI/EAC MoU;

- it should mandate the LVBC to revise its organisational structure to include units or sections for selected sub-basins within the Lake Victoria Basin under the supervision and control of the head of a LVBC sub-basin coordination and management unit. The head of the sub-basin coordination and management unit should in turn report and be answerable to the Executive Secretary of the LVBC in accordance with the existing LVBC institutional structure, and to a monitoring committee on which both the NBI and EAC are represented;
- details of the areas of cooperation between the NBI and EAC in relation to the Kagera River Basin and any other sub-basin within the Lake Victoria Basin should be set out in an agreement or protocol between the EAC and NBI; and
- the agreement in (v) above should make provision, amongst others, for funding of transboundary and national projects and activities and the establishment of joint coordination, monitoring and evaluation mechanisms.

9.1.2 NBI

To put into effect Article VI of the NBI/EAC MoU, the responsibility of implementing programme activities has to be shouldered by a particular organ of the NBI. For purposes of the Kagera Cooperative Framework, NELSAP could be that organ.

The second key decision to be made by the NBI is to formulate the terms and scope of its role in the proposed transboundary cooperative framework for the Kagera River Basin and other sub-basin organisations within the Lake Victoria Basin. Given the fact that the recommended legal framework will largely be anchored on the EAC Treaty and LVBC Protocol and implemented through the existing LVBC institutional structure, the role of the NBI in the recommended legal framework needs to be carefully defined in the recommended agreement or protocol between the NBI and EAC.

The third key decision for the NBI is to negotiate and agree with the EAC/LVBC on the terms of the agreement or protocol for the establishment of a sub-basin organisation unit within the LVBC to coordinate and manage the Kagera River Basin and other sub-basins within the Lake Victoria Basin.

9.1.3 Draft NBI/EAC Cooperative Framework Agreement

A draft NBI/EAC Cooperative Framework Agreement for the establishment of a sub-basin organisation coordination and management unit within the LVBC is set out in Volume 2 to this Report.

9.2 Agreement between the EAC and NBI

The proposed institutional arrangement whereby the Kagera Basin Management Unit is formed as part of LVBC legally does not require the riparian states to sign any new legal instruments.

However, in relation to the NBI there is a need for an agreement that sets out the cooperation framework between the two organisations. A draft agreement between the EAC and the NBI on "Establishment of sub-basin cooperative arrangements within the Lake Victoria Basin under the Lake Victoria Basin Commission" is attached as Volume 2 of this Report.

Since it is foreseen that similar arrangements eventually will be made concerning the other transboundary sub-basins of Lake Victoria, the draft agreement has been formulated so as to include these.

9.2.1 Discussions within the EAC Framework

Consultations during the preparation of this report indicated that EAC is of the view that the LVBC should be strengthened with the formation of management units for the major basins. It was also stressed that the organisation should be focused on water resources issues including prevention of pollution rather than the wider development mandate that the former KBO had and which proved not to be sustainable. The consultant's proposal is in full agreement with these views. However, detailed discussions are now needed within the EAC framework of the proposed model, the tasks of the KBMU and the draft agreement.

9.2.2 Discussions with NBI and Potential Donor Agencies

The proposed organisation and its functions have many links to NBI activities and future close collaboration is anticipated. The proposal should therefore be discussed in some depth with NELSAP and key potential donors.

One issue to be discussed is the future administration of on-going and planned projects.

9.2.3 Adoption of the Agreement

When the Parties to the Agreement, EAC and NBI, have agreed, it can be signed.

9.2.4 Agreement Concerning the Location of the Office

The EAC partner states will decide on the location of the office and the details regarding this set out in an agreement between NBI/EAC/LVBC and the selected country. This will be approved and endorsed using appropriate governance structures

9.2.5 Budget Allocation

Once the EAC has agreed to the proposed organisation and its funding, the organisation can be formed. An allocation within the EAC budget for the basic operation costs of the KBMU will need to be made through the LVBC. It is proposed to establish the organisation gradually.

9.3 Core Staffing of the Proposed KBMU

9.3.1 Staffing Options

Two options for core staffing of the KBMU Secretariat have been considered:

Option 1:

The Secretariat would have two key core staff proposed for Option 1:

- A Project Coordinator.
- An Assistant Project Coordinator.

Option 2:

The Secretariat would have a Project Coordinator²³ and technical staff (Programme /Project Officers) to handle key issues of concern in the Kagera Basin.

The key staffs of the proposed KBMU are proposed for Option 2 is:

- A Project Coordinator.
- Programme Officers.

Project Coordinator (Option 1 and Option 2)

The Project Coordinator will have the overall responsibility for the management unit. S/he will be responsible for drafting and supervising agreements with consultants, service providers and key partner organisations. S/he will also take part in the technical work of the organisation. S/he will report to the LVBC head office.

Assistant Project Coordinator (Option 1 only)

The Assistant Project Coordinator, will report to the Project Coordinator, and will have specific responsibility for coordination, implementation, monitoring and evaluation of KBMU activities. KBMU activities will aim to promote coordination, cross learning and information exchange between the countries.

The specific activities will be determined after an assessment of existing needs at the basin level, the task of the coordinator will thus be to facilitate identification of synergies between the different national and district plans, support joint

²³ Key tasks of the Project Coordinator remain as described above.

skills development or other activities on aspects of the projects that are similar and/or complimentary.

The advantage with Option 1 is that it is a lean structure, hence would cost less to run. It is also a structure that is heavily dependent on the operations and activities of member countries, as a result, the secretariat's function will be limited to coordination, facilitation, communication and information exchange. However, the limitation with this structure is that the secretariat will not have control on activities of the member states and will thus have to work at their pace. There is also the possibility of having too much work at the Secretariat; however this can be addressed through outsourcing.

Programme Officers (Option 2 only)

It is envisaged that two Programme Officers can be recruited to handle the above issues: the Programme Officer, Water Quality, would handle Watershed protection and environment, Agriculture, Water Resource Management and Hydro Electricity. The other officer would handle Gender and Social Development.

The main programmatic areas for the Programme Officers include:

- Watershed protection and Environment.
- Agriculture.
- Water Resource Management.
- Gender and Social Development.
- Hydro electricity.
- Water Quality.

The Programme Officers will report to the Project Coordinator, and will have specific responsibility for coordination; implementation, monitoring and evaluation of KBMU activities in their area of focus i.e. (i) Water Quality (ii) Gender and Social Development. All the activities will aim to promote coordination, cross learning and information exchange between the countries.

The specific activities will be determined after an assessment of existing needs at the basin level, the task of the programme officers will thus be to facilitate identification of synergies between the different national and district plans, support joint skills development or other activities on aspects of the projects that are similar and/or complimentary.

The advantage of this staffing arrangement is that the programme officers coordinate activities, and are also able to provide technical support where the need arises. Having two programme officers also provides more time and space to the Project Coordinator to focus on the broader networking, visioning and de-

velopment on strategy. The challenge with this arrangement though is the need to ensure that the roles of the programme officers and national institutions do not clash, because in every country, there are institutions in place that have the responsibility to provide technical support to the districts. There is also an extra cost implication in having two programme officers, as opposed to one assistant project coordinator.

Recommended Option

The Consultants recommend Option One because it is a leaner structure with less cost implications. Further, since the core purpose of the KBMU is coordination, having a lean staff will ensure focus and priority setting. Besides, if as the project grows, the need arises for extra support, this can be provided through consultants or the establishment of another position.

The staffing for the KBMU for the first 3 years of its operation is given below:

Table 9.1: Proposed Staffing of the KBMU

Position	Year 1	Year 2	Year 3
Project Coordinator	1	1	1
Assistant Project Coordinator		1	1
National Focal Point Institution			1
Secretaries	1	2	2
Accountant	1	1	1
Technical assistants		2	2
Drivers and other support staff	1	2	3
Total	5	11	13

As mentioned, it is also recommended that the LVBC creates a unit in its head office to coordinate all transboundary basin activities.

National Focal Point

Since the main function of the KBMU is coordination, it is essential that the KBMU develops close working relationships at national level, in all the countries in the Kagera Basin.

In recognition of the various capacities and levels of coordination in the area of water resource management in the different countries, it is recommended that each country identifies and appoints an institution that will coordinate, liaise and work with the KBMU staff. The main functions of the national focal point institution will be coordination, information sharing and communication between water and natural resource management agencies at national level, district level and the KBMU. The national focal point institution will also be responsible for providing support to the district supported projects.

The KBMU will also need to work closely with the National Focal Point officers of NBI and LVBC. It is suggested that a meeting be held in which to iden-

tify areas of similarity and complementarity and devise mechanisms/means of working together on matters related to the Kagera Basin.

Costs

The costs are provisionally estimated using pro-rated figures from the budget of the LVBC. As mentioned, it has been proposed to increase the staff of LVBC to 23 and increase its operating expenses to the region of USD 3.0-4.1 million per year. After the initial establishment phase, the KBMU is proposed to have a staff of about half of this and an annual budget about USD 2.2 million.

The table below gives an outline of the proposed annual budget:

Table 9.2: Annual Budget Estimate for the KBMU

Item	Development	Recurrent
Staff emoluments (12 positions) USD		550,000
Recurrent expenditure (office running costs etc.)		200,000
Development budget		
Monitoring	200,000	
Planning	500,000	
Demonstration projects	500,000	
Training activities	150,000	
Workshops and meetings	50,000	
Publications and awareness	<u>25,000</u>	
	1,425,000	<u>1,425,000</u>
		2,175,000

It should be stressed that these figures are rough estimates that indicate "typical" expenditure. During the first years, some costs will be lower, but there will also be investments in setting-up the organisation. It is assumed that the host country provides suitable office accommodation at no rental cost to the organisation.

10 Plan and Strategy for Stakeholder Participation

Introduction

One of the principal tenets of IWRM is that operational responsibility for the allocation and management of water resources should be devolved to the river basin level with policy development being retained at national level. This implies that for implementation purposes, other stakeholders need to be brought on board to augment this process.

Stakeholder participation is a process whereby stakeholders - those with rights (and therefore responsibilities) and/or interests - play an active role in decision-making and in the consequent activities which affect them. Stakeholder participation and involvement includes both sectoral level involvement of organized entities and utilities – such as water supply authorities, industry, agriculture, livestock, tourism, mining and hydropower– as well as local level organizations representing community groups. The former typically are involved at national level (including national Governments line Ministries, Municipalities, Parastatal Agencies as well as Non-Governmental organizations), while the latter are involved in decisions at basin and sub-basin levels and also include special interest groups, women, farmers, households, user associations, farmers groups, local communities and the private sector.. Recently the definition of stakeholders encompasses as well the world community and the future generations.

The stake includes access to water, the options for future use, the protection for long term availability and land security.

In the case of water resource development projects, the stakeholders include communities that are both upstream and downstream of the development. In the case of large projects such as dam development, the latter have traditionally been left out of negotiations and are only now being recognized in many countries.

This chapter focuses on the strategies and plan for stakeholder participation in integrated transboundary water resource management of the Kagera Basin. It recognises the fact that the success of cooperative water resource management strategies in the Kagera Basin Catchments (incorporating inputs from a broad range of sectors & stakeholders), to a large degree hinges on providing the

stakeholders effective means of participating in water-management decisions directly affecting them

The Dublin Principles specifically identified women as needing to be included in decision making because of the special role that they play in provision of water in many developing countries. The extent of participation can vary from the provision of information to affected groups, to canvassing the objectives and requirements of the affected groups, to full inclusion of interested groups in decisions.

Stakeholder participation and involvement must constitute an integral strategy in IWRM. as a number of benefits can be derived from it. These include:

Improving the quality of alternatives because of the wider range of expertise available leading to more informed decision-making. Many stakeholders (particularly CSOs and the private sector possess a breadth of information that cannot be matched by centralized structures, such as a government water department;

More appropriate solution to problems: stakeholders are the most affected by lack of water resources or poor management of water resources and have the keenest interest in ensuring that solutions are appropriate;

Reducing the risk that opposition from disaffected groups may bring. Arriving at consensus at early stages of the project can reduce the likelihood of conflicts or delays in the implementation of decisions which can harm the implementation and success of the project;

Greater public confidence: stakeholder involvement contributes to the transparency of public and private actions, as these actions are monitored by the different stakeholders involved;

Building participation in water resources decisions also contributes to the wider effort to promote good governance and accountability in government decision making

Improving public acceptance of decisions and greater trust by civic society: the involvement of stakeholders can build trust between the government and civil society, which can lead to long-term collaborative relationships;

Greater commitment by cooperating partners: a process where stakeholders are fully and meaningfully involved is more likely to attract support from donors and other cooperating partners.

Improved implementation and monitoring - Public input supplements scarce government resources for developing laws, as well as for monitoring, inspection, and enforcement, by identifying environmental threats or violations of applicable laws;

Early warning of potential challenges - Public participation can identify and address problems at an early stage, saving time, energy, and scarce financial resources in the long run.

10.1.2 Justification for Stakeholder Participation in the Kagera Basin

Water security remains an elusive goal in all the Riparian countries despite the fact that they are relatively well endowed with freshwater resources. Water insecurity is compounded by

- inadequate investments in constructed water storage and other water resources infrastructure to buffer against the impact of droughts and floods (climate variability) and inadequate investments in water quality management and pollution control;
- Investments in costly but unreliable infrastructure, and;
- Inadequate investments in water resources management systems, institutions, and regulations, which is contributing to poor environment management practices and water-use conflicts threatening water sources and the destruction of natural storage capacities.

While measurable progress has been made in achieving specific targets—especially in the delivery of services, such as increasing water supply coverage and hydropower generation capacity—the necessary institutional and legal reforms for water resources management have evolved very slowly. Water resources institutions are poorly resourced and functioning far below their expected capacity. Huge infrastructure gaps—for water supply, for meeting energy demand and for food security needs—remain.

All this add up to the complexity and immensity of the task of water resource management within the Kagera Basin. For water management to effectively integrate the goals of efficiency, sustainability and equity, a broad cross section of stakeholders need to participate. Whether on the local scale of the small catchments or on the international transboundary scale, water users and other interested parties need to be involved to varying degrees in the planning, development, implementation and monitoring of water management activities.

The efficient and environmentally sustainable management of water implies a commitment by water users to use available supplies in ways which avoid waste – maximizing beneficial use. Households, farmers and industrialists have to implement water conservation measures – aiming to gain the maximum benefit from every drop consumed. The concept of integrated water resources management needs to be widely appreciated, uniformly understood, accepted, or and properly supported by all stakeholders in the Kagera basin.

There are several issues and concerns surrounding the direct involvement of stakeholders and the private sector. A broader conceptualization of water Re-

source management involving solving the mysteries surrounding poverty and environmental degradation opens new avenues for collaboration between sectors that have traditionally operated in isolation. Examples include the health, agriculture, forestry, and power sectors, and even local governments themselves. Substantial effort will be needed to ensure their active participation.

Great importance will need to be placed to stakeholder participation and partnership in water resources planning and management for all water uses encompassing drinking, sanitation, irrigation, hydropower, industries, navigation as well as environmental protection.

Stakeholder participation is influenced by inter-disciplinary conditions beyond the water resources management such as democratization, political stability, good governance, appropriate policy, enabling and regulatory environment, and of vital importance the clearly defined development objectives and ranking of priorities

All the four riparian states have adopted the policy of Decentralization which is slowly and steadily taking root. Apart from allowing indigenous people to participate in the decision making process, this policy has drawn the participation of the private sector as well. In drawing out and planning water resource management policies, these stakeholders cannot be left out.

Already, governments within the riparian countries have turned to the private sector²⁴ to manage water resources institutions. The private sector is actively participating particularly in water supply and sanitation, irrigation, and in hydropower infrastructure, bringing technical and managerial expertise and new technology into the sector and improve economic efficiency in the sector—in both operating performance and the use of capital investment.

However, experience from several water resources management initiatives indicates that stakeholder participation is not easy. It often proves difficult to engage sectoral interest groups, even at national level, in decisions about water resources management; at basin or local level, experience has shown that it takes many years to develop stakeholder groups where there has not been a tradition of individual involvement. Even in countries, such as India, where there has been an active civil society operating within a democracy, there are few institutional mechanisms for inclusive water resources management. Decisions can be delayed as ways are found to build stakeholder inclusion and time is spent explaining issues to those without backgrounds in water management.

As a result, it is important to develop deliberate initiatives to guide the focus of stakeholder participation. This recognition forms the basis of the proposed strategy and plan for stakeholder participation.

²⁴ World Bank 1997. Toolkits for Private Participation in Water and Sanitation. World Bank, Washington DC.

10.2 Stakeholders in the Kagera Basin

There are several stakeholders performing different functions or depending on the Kagera Basin for their livelihood. These include:

Farmers: mainly subsistence farmers but practicing a wide range of farming systems from intensive perennial banana-coffee based systems, to annual cereal based systems, to mixed agro forestry and crop-livestock systems. Occasionally too, some fishing is done.

Pastoralists/Herders: livestock herding and seasonal migrations to find water and grazing are also evident in some parts of the basin. There are large herds of Ankole cattle, for instance, found between the borders of Uganda and Rwanda (but although well adapted to local conditions, these are being gradually crossed with introduced breeds for greater milk and meat productivity)

Households relying for their livelihoods on a combination of farming or herding with fishing or forestry activities also included, as their activities directly influence the land and water resources. This includes, for example, those settled near the Kagera River wetlands and river banks, and those managing woodlots or making use of resources from the few remaining natural forests. It is recognized that the majority of farmers and herders also carry out some hunting and gathering of food, fodder, timber, medicinal products and other non-wood forest products, especially those without access to land and those living near wetlands, parks, forest reserves and other protected areas.

Community level leaders and decision makers with responsibilities for land resources allocations and conflict resolution within and between community territories, for developing and applying local by-laws and for representing the community /civil society at higher level decision making fora – district, region, national levels;

Civil society organizations such as farmers groups and associations, water users associations

Women: women are amongst the major stakeholders as they are largely responsible for many agricultural and resource management activities, in addition to their family and household tasks. This includes land preparation and planting, weeding, collecting wood for household energy needs, collecting water for household needs, watering and feeding stall-fed and small livestock, gathering medicinal plants or wild foods to supplement their diets, and so forth. Moreover, as a result of HIV/AIDS and rural exodus there are many female headed households that are entirely responsible for farm and livestock management.

Existing projects particularly addressing improvement in livelihood activities. In the event that most of the communities are reliant on agriculture as the mainstay for all the riparian countries, a number of programs and projects have been developed in an attempt to improve this particular source of livelihood.

In addition to these direct stakeholders, there are a number of other stakeholder groups involved to varying degrees. These include:

National and international NGOs already supporting on-going actions at local community levels in natural resources management and with long standing experience in providing capacity building and several community activities

- Local provincial and district authorities and government bodies
- Research institutions and bodies
- Private sector Stakeholders
- The donor community and projects with Water Resource Management complementary objectives and activities.

10.3 Stakeholder Classification and Analysis

Stakeholders can be divided into two very broad groups: those ultimately affected, *primary stakeholders* (who expect to benefit from or be adversely affected by interventions made within the Kagera Basin catchments) - and those with some intermediary role - *secondary stakeholders*. The Kagera Basin integrated Transboundary Water Resource Management and development project is itself a secondary stakeholder, with its own perspective, culture and agenda

Primary stakeholders include local communities (the majority of whom are poor men and women), farmers, industrialists, etc who derive their livelihoods from the water resources of the basin or whose activities directly rely on or impact the water resources of the catchments.

Secondary Stakeholders include the donors, public sector agencies (ministries, regional/provincial or local governments, government mandated agencies, etc), private sector, donors, and NGOs.

However of particular interest here are the key stakeholders²⁵ as broadly classified below:

External Support/Funding and Technical Support organizations

These comprise major Technical Support organizations as indicated in the table 10.1 below. They are very important in influencing the project planning and implementation process as they often have strict terms under which they provide their financial and technical support to guard against mismanagement of their funds.

²⁵ Key stakeholders here refer to those stakeholders who can significantly influence activities within the Kagera basin, or are most important if the objectives of establishing the KBMU are to be met. Both primary and secondary stakeholders may be key

Table 10.1: Key External Support/Funding and Technical Support organizations

Name of Stakeholders	Main interests	Importance	Remarks
Sida	Poverty alleviation Improvement of livelihoods Establishment of the resources required for subsequent interventions Environment Management in the Kagera Basin	Provide vital resources for development projects in the basin	Sida has exhibited marked interest and presence in supporting Water Resources management in the Kagera Basin so far. The KIWRMP is a beneficiary of Sida support
The World Bank	Economic growth within the Riparian states Poverty Alleviation and improvement in the livelihoods of Basin Communities Sustainable environment and natural resources management;	Institution for financing both structural and infrastructure development in the region	
FAO	Food Security Sustainable management of Water Resources (Nile Basin Water Resources Project)	Important institution in supporting initiatives for boosting food production	

National stakeholders comprising basically of national institutions within each country in charge of providing and enforcement of regulatory framework, planning, implementation and monitoring that may have effect on water resources use and activities. Table 10.2 below shows these stakeholders for each of the riparian countries.

Table 10.2: Key National Stakeholders

Country	Key National Stakeholder
Burundi	Ministère de l'Aménagement du Territoire et de l'Environnement et du Tourisme Ministère de l'Énergie et des Mines Ministère du Développement Communal et de l'Artisanat Ministère du Commerce, de l'Industrie Ministère de l'Agriculture et de l'Élevage Ministère de la Santé Publique Ministère de l'Intérieur et de la Sécurité Publique Ministère des Transports, Postes et Télécommunications

Country	Key National Stakeholder
	<p>Ministère des Relations Extérieures et de la Coopération</p> <p>Geographical Institute of Burundi; publicly-owned, this covers a number of areas including hydrology and meteorology; it is the national focal point for Nile basin cooperation</p>
Rwanda	<p>Ministry of Lands, Environment, Forests, Water and Mines (MINERENA)</p> <p>Ministry of Agriculture (MINAGRI) - mandated to develop, initiate and administer programs for transformation and modernisation of Agriculture, develop and promote appropriate systems to enhance and improve agricultural marketing especially through better storage and produce processing and develop and manage programs to promote and improve animal production including fisheries so as to give it a paramount role in the national economy and welfare of the population.</p> <p>Ministry of Infrastructure (MININFRA)</p> <p>Ministry of Health (MINISANTE) - The Ministry of Health responsible for the improvement and provision of quality and sustainable health services to the entire Rwandan Population. This encompasses provision of access to treatment through universal coverage health insurance (Mutuelles de Santé), to enhance public health services, to address the major traditional problems of health as well as the new challenges set by the pandemic of HIV/AIDS.</p> <p>MINICOM - The core function of the Ministry of Commerce, Industry, Investment Promotion, Tourism and Cooperatives are supervision of all activities related to elaboration, monitoring and evaluation of national policies and programs as regards commerce, industry, tourism, investment promotion and cooperatives; Initiating national strategies for protection of consumers; Developing of management systems for the quality of products; Initiating and management of the process of regional economic integration for Rwanda and conducting regional, international and multilateral commercial negotiations; Supervision of conception and updating of Investment Code; Orientation and supervision of functioning of public agencies under the ministry; Supervision of partnership and resources mobilization for the sectors of commerce, industry, investment promotion, tourism and cooperatives.</p> <p>MINALOC</p> <p>Rwanda Environment Management Authority (REMA) - regulates all environmental management in Rwanda including wastewater discharge regulation</p> <p>RURA (L'Agence Rwandaise de Régulation des Services d'Utilité Publiques) - Regulate public utilities such as telecommunication, water, electricity, Sanitation, gas and transportation. RURA has the responsibility to ensure that certain utilities provide goods and services throughout the country to meet in transparency all reasonable demands and needs of all natural persons and organizations; Ensure that all utility suppliers have adequate means to finance their activities; Continually promote the interest of users and potential users of the goods and services provided by utilities so that there is effective competition when competition is introduced in each utility sector and protection of users from abuses of monopoly positions is ensured due to the fact that certain Public utility sectors have a monopoly over the market. Facilitate and encourage private sector participation in investments in public utilities; Ensure compliance by public utilities with the laws governing their activities</p> <p>Local Authorities; comprising Districts, towns and lower local governments together with the communities responsible for implementing operating, and</p>

Country	Key National Stakeholder
	maintaining water supply and sanitation facilities
Tanzania	<p>Ministry of Water and Livestock Development (MoWLD) - Mandated to Coordinate Water Resources Development Policy, Rural and Urban Water Supplies, Sewerage and Drainage, Drilling and Dam Constructions, Water Resources Institute, Central Stores, Central Water laboratory, River Basin Development, Water Quality and Pollution Control, Water Boards, Livestock Development Policy, Livestock Research and Extension Services, Veterinary Services, Hides and Skins. Also ensure that livestock and water resources management and development are carried out in collaboration with all stakeholders in an economic, environment and social sustainable manner</p> <p>Ministry of Health - Responsible for formulation of health policies, provision of all health related services for the achievement of improved health status of the people. Promotion of traditional medicine, inspection of health services and participating in international health and medical organizations</p> <p>The Energy and Water Utilities Regulatory Authority (EWURA) - Responsible for technical and economic regulation of the energy and water sectors in Tanzania i.e. licensing, tariff regulation and quality of service regulation of the electricity, water, petroleum and natural gas sectors</p> <p>Urban Water Supply and Sewerage Authorities - This is an entity charged with the overall operation and management of water supply and sewerage services in urban areas which includes provision of clean and safe water to the people.</p> <p>Water Supply and Sanitation Authorities - are responsible for implementing operating, and maintaining water supply and sanitation facilities</p> <p>President's Office; Regional Administration and Local Government; Municipal and District Councils; Village Councils</p>
Uganda	<p>Ministry of Water and Environment (MoWE). Ministry of Lands and Mineral development)</p> <p>Water Policy Committee (WPC); multi-disciplinary team representing stakeholders and constituting advising the Minister (MoWE) and mandated to initiate revisions to legislations and regulations; coordinates sector ministries' plans and projects affecting water resources; key function is the formulation of an international water resources policy</p> <p>Directorate of Water Resources Management (DWRM); lead technical agency responsible for managing water resources, coordinating and regulating all sector activities and provides support services to the local governments and other service providers through its technical department - the Water Resources Management Department (WRMD); comprises Water Resources Monitoring and Assessment, Water Quality</p> <p>The Water for Production Department</p> <p>Analysis and Water Resources Regulation Divisions which manages the Water Permits Unit.</p> <p>National environmental Management Authority (NEMA); regulates all environmental management in Uganda including wastewater discharge regulation</p> <p>National Water and Sewerage Corporation (NWSC); autonomous parastatal entity responsible for the delivery of water supply and sewerage services in 15 large urban centres</p>

Country	Key National Stakeholder
	<p>Local Authorities; comprising Districts, towns and lower local governments together with the communities, are responsible for implementing operating, and maintaining water supply and sanitation facilities (except in the large urban centres under NWSC)</p> <p>Municipal and urban councils mandated to operate, maintain and manage urban water supplies for domestic and industrial use in partnership with water user groups, associations and water authorities; also handle the licensing of industries, solid, sewerage waste disposal and drainage systems in their localities; important role in the management and protection of water resources</p> <p>Sub-county council is responsible for the provision of water and sanitation services and protection of natural resources including water</p> <p>Water user groups and associations are mandated to manage, operate and maintain water point resources at community level; lower local government thus plays key role in setting local priorities and mediating in water management issues.</p> <p>Ministry of Health (MoH) responsible for hygiene promotion and household sanitation, spearheaded by the Environmental Health Division (EHD)</p> <p>Ministry of Education and Sports (MoES) is responsible for hygiene promotion and sanitation in schools It works to ensure that schools have the required sanitation facilities and provide hygiene education to the pupils including the need for hand washing after latrine use</p> <p>Ministry of Gender, Labour and Social Development (MGLSD) is responsible for gender responsiveness and community mobilization</p> <p>Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) interfaces with MWLE in the implementation of water for production programmes, in particular the use and management of water for irrigation, animal production and fisheries</p> <p>Ministry of Energy responsible for Hydropower development</p> <p>Ministry of Finance, Planning and Economic Development responsible for macroeconomic management leading budgeting and planning, including allocation of funds for the operations of other Ministries. It is the contact ministry in mobilization of development partners supporting the various sectors in the economy</p> <p>Ministry of Foreign Affairs; responsible for foreign affairs and regional co-operation; plays key role in maintaining the diplomatic fabric between Uganda and other riparian states</p> <p>Ministry of Justice and Constitutional Affairs is responsible for analysis and advice on legal matters pertaining to the country's cooperation with other riparian states</p>

10.3.2 Key Stakeholders addressing Livelihood (agriculture) development

It is worth noting that agriculture remains the mainstay of the majority of the basin population. Addressing poverty is inevitably tied up with addressing agricultural productivity as a basis of livelihoods in the rural setting. This brings on

board a set of other key stakeholder national institutions, projects and programmes.²⁶ These include the following:

Improvement of Food Security in Cross-border Districts of Burundi, Rwanda and Uganda, in support of the modernization of agriculture and poverty reduction under the NEPAD framework (FAO/Italy US\$3 million, 2005-2008). This project aims to increase incomes and living standards of small rural householders in cross-border districts of Burundi (Ngozi and Kayanza), Rwanda (Humure, Nyagatare and Butare) and Uganda (Kabale, Kisoro) through more profitable agricultural production systems, increased market access and value-added activities. COMESA (Common Market of Eastern and Southern Africa) provides the regional dimension for refining agricultural development strategies towards regional integration under NEPAD.

- **FAO Special Programme on Food Security (SPFS)**. The SPFS aims to increase food security of the population through increased productivity (diversification, intensification, water management) overcoming constraints and strengthened capacity of farmers and their organisations. In Burundi SPFS focused on developing participatory integrated management of wetlands and valley bottoms to increase agricultural potential, through improved water management, while restoring productivity of watersheds, through agro-silvo-pastoral activities. The pilot phase (US\$645,000; 2000-2003) in five representative AEZ reached 2,000 households and improved 159 ha. of wetlands. Constraints identified for uptake are lack of resources to operationalise/integrate and lack of effective coordination mechanisms at all levels for food security. In Tanzania mainland SPFS (until end 2006) supported farmer driven activities in irrigation rehabilitation, intensified production practices and livelihood diversification (aquaculture, village kiosk businesses, and livestock promotion). It is facilitating emergence of Participatory Farmer Groups (PFGs), which form a legal basis around Savings and Credit associations and/or Water Users Associations in irrigated areas. Plans are underway through ASDP for nationwide expansion of PFGs, and through PADEP and DASIP (25 districts around Lake Victoria). In this process, Farmer Field Schools are instrumental as a first step in building group trust, skills and organisational structure.
- The **FAO** is an important stakeholder in the Kagera basin. Several FAO technical assistance projects have piloted **Farmer Field Schools (FFS) approaches** and resulting partnerships in the region for strengthening capacity building and empowering farmers through participatory learning and research-action and contributing to food security. This includes expertise, curricula, training materials, methods and experiences on integrated

²⁶ The projects mentioned here have basically been identified to amplify existing stakeholder projects in one way or the other associated with improvement of agriculture as a source of livelihood in attempts to reduce poverty. At the onset of this study, efforts were being made to commission *The Transboundary Agro-ecosystem Management Programme for the Kagera River Basin (Kagera TAMP)*. These projects provide useful lessons and synergies in attempts at targeting poverty as an integral component of the KBITWRMP.

pest and production management (FFS-IPPM), land and water management including conservation agriculture (FFS-LWM). As an agricultural response to HIV/AIDS, FAO and WFP are collaborating in several countries in Africa in empowering orphans and vulnerable children through **Junior Farmer Field and Life Schools (JFFLS)** to improve knowledge and skills in agriculture, agro-businesses and nutrition, and important life skills and awareness on HIV/AIDS. In Tanzania, a Japanese funded **Human Security Project (HSP)** aims to strengthen human security through sustainable human development (mid 2006-2008, FAO, UNDP, WFP, UNIDO, UNICEF and GoT). The project operates in Ngara and Karagwe in the Kagera basin which were seriously affected by refugees and by HIV/AIDS. The FFS approach is a popular basis for strengthening the resilience and livelihoods of people living in the region and improve the food security and nutritional status at household level. Vulnerable populations are targeted (orphans, children, women and men impacted by influx of refugees, poverty and HIV/AIDS), through Junior (JFFLS) and Adult Farmer Field and Life Schools (AFFLS).

Rwanda

- **The Rural Sector Support Programme (RSSP)** (World Bank \$100 million, 2001-2011) is the main agricultural investment nationwide and aims to increase food production and support off-farm income generation in rural areas in all provinces of Rwanda. Components include small scale irrigation, soil/natural resources conservation, cash crops marketing, off-farm income generation, public infrastructures (markets, roads, bridges, grain storage silos, etc.).
- **Umutara Community Resources and Infrastructure Development Project (PDRCIU)** (IFAD, OPEC countries and NGO support; \$53 million, 2002 to 2011) Aims: i) to improve access by rural households to sustainable public infrastructures with a demand responsive and efficient district planning; and ii) to increase the returns to households from farming, livestock and forestry management activities through the promotion of sound technical practices, development of a dynamic market environment and cost effective extension and financial services. It operates in Nyagatare and Kayonza districts of Eastern Province (ex Umutara) and promotes decentralised processes, equity and sustainability (socio-economic integration of the poor, gender, HIV/AIDS, unity and reconciliation, land tenure, environment) and community empowerment (district and provincial development planning, capacity building, support to rural economy).
- **Projet d'Appui à l'Aménagement des Forêts du Rwanda (PAFOR)** (AfDB\$11 million, 2002 to 2006) aims at increasing the means of living of local populations by diversifying income while conserving the environment. It is operational in Nyagatare, Kayonza, Kirehe, Bugesera and Kamonyi districts of Eastern and Southern provinces. Its components include reforestation of bare hills, river banks and watershed protection, agroforestry, fuel energy saving, and marketing of trees and forests products.

- **Projet d'Appui à l'Aménagement Intégré et à la Gestion des Lacs Intérieurs du Rwanda (PAIGELAC)** (AfDB US\$16 million, 2005-2009) aims at improving food security in Rwanda through sustainable development of the fishing sector. Expected results are: strengthening of institutional capabilities of the fishing sector operators; integrated management of lakes and protection of lakes water catchment; fishing activities and increased returns from fish and other halieutic resources. Within the Kagera basin, the project is operational in Bugesera and Kayonza districts in Western province.

Burundi

- **Projet de Relance et de Développement du Monde Rural (PRDMR)** (FIDA-OPEP, 2000- 2008) which promotes smallholder agriculture (extension, livestock, seed multiplication, inputs); land management (wetlands, watersheds, agro-silvo-pastoral integration); support to local initiatives (artisans, literacy, micro-finance, agro-processing); and community infrastructure (schools, health centres, water points, rural roads).
- **Projet de Réhabilitation et de Gestion Durable des Terres (PRASAB):** (WB/GEF, 2004-2010, US\$40 million) promotes investment in production systems and sustainable land management; strengthening capacities of community/producers organisations and institutional support.
- **Projet Agro-Sylvo-Pastoral de Bututsi** (BAD, 2006 –2011)
- **Projet d'Aménagement des Bassins Besants** (PABV), AfDB: US\$13million, 2006-2011 (forestry, agroforestry, soil conservation and capacity building in 5 provinces.

Tanzania

- **The Agricultural Sector Development Programme (ASDP).** The ASDP was developed during 1998-2003 with intensive FAO support, through studies and wide consultations by the four agricultural sector lead ministries -MAFS, MCM, MWLD and PO-RALG and a final World Bank led appraisal in February 2006. It provides a stakeholder framework for implementing the **Agricultural Sector Development Strategy (ASDS)** - shifting investment from single donor project funding to a coherent, jointly managed sector-wide programme, supporting decentralisation to local authorities with the central government role shifting from implementation to policy and legislative reform and participatory quality assurance. It comprises investment: i) at district /field level to support **District Agricultural Development Plans**; ii) at national level to support development and management of policy interventions, iii) in the institutional framework and national support services, as well as cross-cutting support. Emphasis is on agricultural productivity profitability, sustainability, increased rural incomes; food security and reduction of rural poverty.
- **Participatory Agricultural Development and Empowerment Project (PADEP)** (World Bank, US\$ 70.6 million of which IDA \$56M) aims to

raise food production, income and assets of participating households/groups in at least 840 villages in a sustainable manner through community agricultural development sub-projects (empowering communities/farmers' groups for choice of sustainable, productive technology; sharing costs and hence risk of adoption of improved technologies; enhancing demand for products/services provided by private sector; promoting improved land/crop husbandry practices; supporting district decentralization process; improving infrastructure to improve access to markets.

- **District Agriculture Sector Investment Project (DASIP)** (2006-2012, \$58million by AfDB - loan \$43mn; grant \$7mn, GoT and beneficiaries). Based in Mwanza, it will operate in 25 districts in Kagera, Kigoma, Mara, Mwanza and Shinyanga Regions of NW Tanzania and aims to reach 250,000 farmers. The project lays the foundation for the preparation and implementation of more effective **Village Agriculture Development Plans (VADPs)** by (i) creating and strengthening the capacity of large numbers of participatory farmer groups and networks, using the FFS and PFG intervention model already widely used in Tanzania so as to increase production, productivity and profitability, and (ii) strengthening the capacity of local government authorities (LGAs) in facilitation, preparation and execution of VADPs and DADPs. It has three field driven components i) Farmer capacity building ii) Community planning and investment in agriculture iii) Support to rural micro-finance and marketing.

Uganda

- **Plan for Modernisation of Agriculture (PMA)**: aims at the eradication of poverty by means of a long term strategy for the transformation of the agricultural sector through multi-sector interventions and a decentralised planning process. It is a central part of the government's Poverty Eradication Action Plan (PEAP). PMA is supported by many donors through a basket fund and seeks to increase the productivity of agriculture to ensure food security, create gainful employment, increase incomes and improve the quality of life for those engaged in agriculture. **National Agricultural Advisory and Development Services Programme (NAADS)** - which is now operating in all Kagera basin districts, is a principal programme for PMA implementation which aims to establish a demand-driven client- and farmer-led agricultural service delivery system, particularly targeting the poor and women (resulting from the costly failure of traditional extension approach to increase productivity and expansion of agriculture). The focus is on a commodity driven approach for increasing productivity, empowering farmers and building their demand for both research and agricultural advisory services. During a recent evaluation, natural resources management was identified as an area requiring specific attention as the short term goals of farmers could lead to increased exploitation and degradation of resources without required investments in restoring natural resources.
- **Uganda Farm Income Enhancement and Forest Conservation Project (UFIEFCP)** (AfDB US\$51 million, 2006-2011). Also nationwide, the main goal is to contribute to the poverty reduction in Uganda through improved

incomes, rural livelihoods and food security through sustainable natural resources management and agricultural enterprises development. It includes rehabilitating degraded watersheds through communities, forest plantations and capacity building.

- **National Livestock Productivity Improvement Project (NLPIP)** (AfDB, US\$33.6 million, 2006-2011) aims to increase household incomes of participating livestock farmers in Uganda through increased livestock productivity and marketing while taking care of environmental concerns of land degradation and overgrazing due to increased animal population and conventional livestock practices. It will minimise possible water and soil pollution (acaricides), reduce soil erosion and improve water supply, encourage tree and fodder planting and minimise fire burning. NEMA will work closely with this project to monitor and assess the environmental impacts. The **HEIFER** project aims to improve livelihoods through provision of heifers which will help farmers and rural communities to overcome problems of nutrition and increase farmer incomes. Farmers are encouraged to manage resources sustainably, to use animal manure for increased food production, plant trees for fodder/ green manure and minimise land degradation.
- The **Area based Agricultural Modernisation Project (AAMP)** operates in Mbarara, Kabale, Ntungamo and Rakai districts and aims to reduce poverty through provision and extension of appropriate agricultural, natural resource and environmental technologies. These are carried out through field demonstrations on farmer's fields, soil and water conservation, provision of appropriate agroforestry technologies and water harvesting techniques.

10.3.3 Key Stakeholders addressing ecosystem management and development

- The **Nile Transboundary Environmental Action Project (NTEAP)** (GEF World Bank and UNDP, 2004-2009, US\$39 million, regional unit hosted by Khartoum) was developed under the multi-donor **Shared Vision Programme (SVP) of the NBI** (launched in 1999 among members-Rwanda, Tanzania, Uganda, Burundi, Congo, D.R., Kenya, Sudan and Egypt). NTEAP promotes cooperation among the Nile Basin countries in protecting and managing the environment and the Nile River Basin ecosystem. Skills development training is provided to government ministries, NGOs and local communities in environmental management and monitoring (knowledge management, capacity building for EIA; prevention of transboundary erosion and pollution, including agriculture non-point source pollution; water quality monitoring; conserving wetlands and their biodiversity). Local NGOs and communities can receive small grants (US\$10,000-25,000) to promote community-based approaches to land and water conservation to reduce soil erosion, desertification, pollution and control invasive water weeds.

- **Lake Victoria Environmental Management Program (LVEMP) Phase I** (1997-2005, GEF-US\$37mn, IDA-US\$48mn; Kenya, Tanzania and Uganda-US\$10mn) focused on scientific research and data collection, monitoring and analysis for formulating policies/strategies for sound management of the Lake Victoria ecosystem and harmonizing and strengthening support services (fisheries, water hyacinth control, water monitoring, waste and wetlands management, catchment afforestation, support to universities and land use management). LVEMP-II is under preparation (+15 years), to shift gear from improving the knowledge base, to achieving environmentally and socially sustainable development in the lake basin with a focus on biodiversity conservation (including in satellite lakes and wetlands) water quality (control of water hyacinth; reducing sources of nutrients that lead to eutrophication; R&D on other pollutants) and poverty eradication. It will also support EAC capacity in transboundary environmental management.
- **Integrated Management of Critical Ecosystems (IMCE)** project in Rwanda (GEF/WB, full project commenced in February 2006, US\$4.3mn of which US\$ 400,000 counterpart funding) is focusing initially on assisting the Government in the sustainable management of critical marshlands and later community management of watersheds and buffer zones to reduce pressure on protected areas.
- **Rehabilitation and Sustainable Land Management Project (PRASAB)** in Burundi (GEF/WB, 2004-2010, US\$40.47 million of which IDA-US\$35M, GEF-US\$5M, beneficiaries, 0.4M). The project covers all 5 agro-ecological zones and 9 provinces. The project aims at restoration of specific degraded lands, development of community and national strategies for sustainable use of natural resources in certain wetlands and swamp areas, promoting an integrated approach of watersheds and wetlands management, as well as emergency support for returnees and internally displaced persons.
- **Land Use Change Analysis as an Approach to Assessing Biodiversity Loss and Land Degradation (LUCID)** was a UNEP/GEF funded targeted research project that generated GIS models and maps of land-use change in some of the concerned districts in Uganda and Tanzania.

10.3.4 Other Key Stakeholders

Transboundary Regional Institutions grouping one or more countries

These comprise of organizations such as the NBI, EAC, and Lake Victoria Commission. These are important in ensuring effective participation in regional and international shared water initiatives and programs and; Compliance with state international water related obligations and protection of national water related interests and; are very essential in providing technical and logistical support to the agencies responsible for decision-making, planning, and implementation of projects in the basin.

Education and Research Based stakeholders undertaking studies related to Water Resource Management such as the This collaboration must also be established with Universities, inter alia: Makerere University, Kampala; the University of Butare, Rwanda; Institute Géographique de Burundi, (IGEBU), the Lake Zone Agricultural Research and Training Institute (LZARTI) in Mwanza, Tanzania, University of Dar es Salaam and Mbarara University. They are very important in broadening the knowledge base and development of Human Resource Capacity within the basin. In the current setting, they do not directly participate in the planning and decision-making processes in the basin and are thus not very influential in this regard.

Private Sector and CSO comprising of organizations such as the Nile Discourse Forum, CARE, etc. The private sector is not very influential in the decision-making and planning processes in the basin since their main interest is to do business and make a profit. Their most noticeable influence is in lobbying for contracts and for policies and laws that enhance their participation. However, the CSO form an important advocacy front with strong capacity to disseminate and mobilize local community support

Indigenous people and Community (Men, women, youth) actively utilizing resources within the basin to eke out a living. Individually they may not be very influential, but through associations and special interest groups, they have a lot of influence in the decision-making and planning processes. They include the cultural leaders who stand out so prominently in countries like Uganda.

In a bid to ensure greater participation; ownership and; management of water resources, all the countries have encouraged the establishment of water user groups and committees at community level. There are also, beach management units. The composition and operations of these committees varies in the different countries. Important experiences and lessons need to be shared and learnt between the water user groups and committees in the different countries. Her are also included the Cultural leaders and beach management units.

The Media comprises an important stakeholder group. Information materials (that include major newspapers in the East African region), the existing radio and television stations provide an important source of influence and basis for modelling behaviour. The media is particularly important in the dissemination of correct transboundary water resource management practices. One development in the East African region is the proliferation of the FM radio stations that have had an appeal to young people.

10.4 Stakeholder Issues

A series of consultations were held with stakeholders (particularly in Rwanda and Uganda). A number of issues were raised regarding Transboundary integrated water resources management.

The involvement of Community Based organizations in Transboundary Water Resources management is important especially since they are constituted by

local people. It is therefore easier to disseminate Transboundary Water Resource management policies and plans through them. However, CBOs within the Kagera Basin are diverse and numerous and do not necessarily focus on Water Resource management directly or even look at trans-boundary issues as part of their agenda. Their main focus is on poverty reduction.

Any opportunities seen towards this are regarded as opportunity enough to take on. Many CBOs do not maintain consistent objectives as these are shifted based on the goals of the funding agencies. It is therefore rather difficult to sustain the same focus as the coming on board of funding agencies can easily tilt the interests of CBOs. Additionally, Community Based organizations and CSO have very limited skills for conducting Environment Impact Assessments, project planning, preparation and development coupled with limited knowledge of Integrated Water Resource management. This may hinder effective participation in TIWRM.

10.4.1 Stakeholder Participation in Institutional Arrangements at Decentralised/Sub-National Levels

As mentioned earlier in this report, all the riparian countries operate under a decentralised system of governance, and apart from Burundi, they all have formalised processes of community involvement in planning, implementation and monitoring of development projects. A number of these projects impact the process of water resource management.

Further, Further, the systems that guarantee participation of key stakeholders including civil society and the private sector, in the planning processes need to be strengthened.

One key challenge faced by the various institutions involved in water resource management in the riparian countries, is ensuring effective coordination and collaboration amongst themselves, in practice.²⁷ This will require among others:

- Clarification of roles and responsibilities between the agencies
- Organising and implementing regular meetings/forums for interaction
- Jointly monitoring the implementation of common decisions

The establishment of national multi-sectoral coordination forums/committees can also contribute to better coordination, collaboration and effectiveness of these institutions. The IWRM principles encourage coordination and collabo-

²⁷ As pointed out earlier, in Burundi, the responsibility for water resource management is spread across various line ministries, in Rwanda, whilst there are efforts to ensure collaboration between the various ministries involved in water resource management, a systematic process/forum to ensure this is still in the process of development.

ration between various sectors that are impacted by water resource management, or that have influence on water resource management.

Amongst the riparian countries, only Uganda and Tanzania seem to have systematically established national multi-sectoral institutions to support the various line ministries responsible for water resource management. Rwanda and Burundi also encourage multi-sectoral collaboration; however these have not been systematically institutionalised. The need for well established and functioning national multi-sectoral coordination forums/committees could constitute an area for harmonisation.

At the decentralised/sub-national level, the riparian countries have adopted different methods of ensuring stakeholder participation in the existing institutions. Areas for harmonisation at this level could be identified through sharing experiences and identifying best practices that can be replicated. Some particular areas to explore include:²⁸

- Ensuring effective stakeholder involvement
- Ensuring effective coordination with national agencies
- Ensuring efficient operation of water user groups and or committees.

Raising Community awareness is crucial in inciting effective participation within the basin. Opportunities for joint Transboundary development need to be disseminated to the understanding and appreciation of the common people. Local political leaders and women must be targeted in awareness programs

There is quite a consensus amongst technical personnel that areas necessary for transboundary cooperation include:

- 1 Development and exchange of sound environment and agro forestry management practices
- 2 Management of flooding
- 3 Enhancement of crop research
- 4 Disease control for both crops and livestock along the borders (foot and mouth disease, banana bacteria wilt). This includes the development of joint transboundary livestock vaccination programmes and animal watering sources
- 5 Development of marketing opportunities
- 6 Food security programmes across the borders

²⁸ These areas were identified during the Kagera TAMP consultation with Local Authorities in October 2007.

- 7 Water supply (Gravity water schemes) for both domestic use, industrial use and irrigation
- 8 Management of the water hyacinth and river pollution control
- 9 Development of agro meteorological stations

10.4.2 The policy framework for the riparian countries

The policy framework for all the riparian countries provides for the participation and involvement of stakeholders. Although stakeholder involvement has been seen in Uganda, Tanzania and to a certain extent Rwanda, stakeholder participation in transboundary integrated water resource management, is not very significant particularly amongst community based institutions and lower local governments.

The basic limitation has been:

- Inadequate funding to bring on board the active participation of all key stakeholders and address issues of poverty
- Limited knowledge on the importance of water resources management amongst stakeholders. Water resource management is not prioritized as a result.
- Inadequate Human Resource capacity to reach out and mobilize the support.

10.5 Strategy and Plan for Increasing Stakeholder Participation

The main objective for increasing stakeholder participation is to encourage and enhance broader and meaningful stakeholder participation and consensus building in the design and implementation of appropriate policy reforms and implementation measures within the Kagera basin catchments.

More participatory approaches are necessary in order to negotiate reforms which are both politically feasible and adapted to local circumstances. The main implications are to encourage and enhance local ownership of policy decisions, project designs, implementation processes and outputs.

10.5.1 Strategic Intervention Areas

Increased Stakeholder participation in transboundary water resource management within the Kagera Basin entails executing the following strategic intervention measures:

- 1 Stimulate the establishment of and enhance the CSOs, NGOs, CBOs and the private sector capacity to participate in water resource management planning and activity implementation within the Kagera Basin
- 2 Provide targeted training and information to build the information base of key CSO, NGO, CBO and private sector capacity within the Kagera Basin
- 3 Enhance the operational Capacity of local governments to be able to plan and effectively monitor the implementation of transboundary water resource management
- 4 Strengthening collaboration and support initiatives made by existing projects and national stakeholders in addressing poverty in the basin.

10.5.2 Proposed Tasks and Activities

Task 1: Stimulate the establishment of and enhance the CSOs, NGOs, CBOs and the private sector capacity to participate in Integrated Transboundary water resource management planning and activity implementation within the Kagera Basin

Activity 1.1: Set up a Grant Mechanism and Funding organization for coordinating support to the activities of CSOs, NGOs and CBOs.

This organization must set out thematic areas of support based on transboundary water resource management needs identified as critical to address in different areas of the basin. It must also have a well laid up monitoring and evaluation framework to ensure that funding to CSOs, NGOs, and CBOs is effectively absorbed.

Activity 1.2: Establishment of a network for Water Resource Management organizations.

This should serve as a platform for stakeholder actors to share information and best practice as well as constitute a lobby front for more Resources to the CSOs, NGOs, and CBOs within the Water Resource management field in the Kagera basin. The Network for Water Resource management organizations should constitute an umbrella organization through which stakeholders' representatives can be supported to

- Actively participate and be involved in regional programmes;
- Be involved in delivery of activities and advocacy; and
- Promote awareness raising in terms of democratic principles and key cross-cutting issues (in particular gender, environment, HIV/AIDS and corruption)

Activity 1.3: Establishment of a Network for private sector stakeholder support to investment within the Kagera river basin.

This Network should have a research centre for developing information on investment opportunities within the Kagera basin. The Network needs to have links with Financial Institutions to permit generation of opportunities for capital investment. It will be necessary to identify stakeholders who will champion innovative ideas and processes. Resources will also need to be set for this purpose.

Task 2: Provide targeted training and information to build the information base of key CSO, NGO, CBO and private sector capacity within the Kagera Basin

A thorough needs assessment will need to be conducted targeting the CSO, NGO, CBO and private sector stakeholders. This is for the purpose of addressing the different needs from one part of the basin to the other. Apart from data collection and analysis, capacity building activities need to emphasise supporting action/delivery/implementation of pilot/demonstration projects and scaling up of successful models. Capacity building must focus on the promotion of integrated approaches to resource management and regional/transboundary cooperation²⁹ with particular emphasis on the Kagera River Basin.

Task 3: Enhance the operational Capacity of local governments to be able to plan and effectively monitor the implementation of transboundary water resource management

By far, local governments have not been able to play a significant role in Integrated Water Resource management even in the event that they are directly responsible for the development of those areas of the Kagera basin that fall within their jurisdiction. The basic area of support that may be required here must be determined from the operational needs provided by these local governments. Local governments will need to be supported

- To conduct transboundary water resource management problem identification, analysis and resource mapping
- To develop and implement integral plans for transboundary water resource management
- To Develop and enforce bye laws that ensure the effective management of the basin catchments
- Develop a monitoring and evaluation framework to support the effective implementation of integrated water resource management plans
- To effectively participate in regional policy and program reviews

²⁹ The KTIWRMD project Document sites Sida's existing International Training Programmes which focus on e.g. environmental management, strategic environmental assessments and transboundary water resources management. Two specific courses on Transboundary Water Resources Management and Integrated Water Resources Management (IWRM) are recommended here.

Task 4: Strengthening collaboration and support initiatives made by existing projects and national stakeholders in addressing poverty in the basin.

There have been several initiatives towards addressing poverty based on development of the agriculture sector and integrated resource management within the basin. One key initiative has been the *The Transboundary Agro-ecosystem Management Programme for the Kagera River Basin (Kagera TAMP)*. Others have already been described amongst key national and project stakeholders. Collaborative arrangements will need to be established for developing a common front for addressing poverty in the basin. Resources need to be set aside and; collaborative mechanisms developed, to support and enhance these initiatives.

Monitoring and Evaluation

Monitoring and evaluation of the progress of implementation of the planned activities by the stakeholder agencies will be coordinated by the proposed KBMU supported by the respective country ministries and agencies.

11 Plan and Strategy for Gender Mainstreaming

11.1 Introduction

Efficient and effective Water Resource Management admissibly requires the coordinated effort and commitment of all stakeholders. Amongst these stakeholder, one of the largest visible stakeholder groups can be identified by gender i.e., at least half of those people are women - women managing domestic water supply, women farmers and entrepreneurs using water resources for production, and women acting in their socio-cultural roles as community natural resource managers and guardians of traditional knowledge.

Modern development practice recognises the fact that women form the majorities in most African social settings. In essence, they must be allowed to play effective roles as managers and decision-makers if their own plight has to be addressed.

But, women cannot be expected to play effective roles as managers and decision-makers in water resource management if their position is undermined by the wider society. Hence, their status in society, their self-confidence as managers, the development of their technical skills and their autonomy to act as independent, capable members of the human race, have to be supported.

For this to happen, a gender approach in integrated water resources management needs to be adopted. Argue ably, this will support realize:

- **Effectiveness:** the infrastructure, as well as valuable freshwater resources, will be more widely and optimally used and sustained by all user groups, rich and poor, women and men
- **Efficiency:** with limited funds and resources, sector agencies can reach more individuals
- **Development:** the service and its social processes will not only bring water, it will increase consumption, production, income, environmental security, health and overall family welfare. Since women are generally more concerned with family nutrition hygiene than men, their greater autonomy

over water use will boost health. A gendered approach will also spread concern for nutrition, child-care and health among men.

- **Sustainable use in freshwater ecosystems:** Women's and men's direct and fair participation in research and project implementation can increase the potential flexibility and creativity in responding to environmental insecurity and changes in resource systems. Broader social participation will result in more effective use of existing water resources through rehabilitation activities, waste reduction and innovative arrangements. Women's involvement in a wide range of activities will facilitate freshwater ecosystem maintenance and protection, and some potential water conflicts can be resolved. An improvement in strategies for water conservation, pollution protection and demand management can be expected.
- **Equity:** Burdens and benefits will be shared more equitably between women and men in the household and in the community at large. Also, a larger share of community responsibility for women tends to increase mutual respect within communities and families. It unlocks creative potential currently imprisoned by the pressures of maintaining artificial hierarchies, and relieves men of the stress of sole responsibility for the family vis-à-vis the wider community. It allows natural skills and talents to flow to the surface, where they can contribute to community and national development. Skills levels in general increase, leading to a rise in incomes.

This chapter focuses on strategies and plans for addressing gender disparities in effectively coordinating the activities and raising capacity for integrated water resource management and development across the Kagera River basin. Gender inequality is seen as one leading cause of poverty exacerbating the detrimental impacts this has had on women, who account for almost 70 per cent of those living in poverty.

The strategy and plan for Gender mainstreaming as proposed in this chapter, recognizes the realization of gender equality and the participation of women not only as a means to more effective policy making and programming, but also as a key goal of integrated Water Resource management approaches. Key in this plan and strategy, is the quest to

- Develop an enabling environment³⁰ and build technical capacity for gender mainstreaming
- Inculcate positive values and attitudes amongst women to recognize their full potential to participate in deliberate efforts towards integrated trans-boundary water resource management and development

³⁰ Enabling environment in this context of gender mainstreaming in water resources development, management and use includes policies and laws that institutionalize the equitable participation of men and women; and steady and secure resources to support the necessary structures and programs.

- Advance and reconcile the triple goals of social equity and participation (by and between men and women as well as among different groups within the basin) towards environmental sustainability economic efficiency and poverty eradication. Under this is also the quest to advance equal opportunity for land ownership and the use of natural resources in the bid to promote social and economic equity.

11.2 Challenges to Gender Equality

11.2.1 Some General Observations common to the Four Riparian Countries

Across the dominantly rural countryside of the four riparian countries, there are marked water related gender disparities that place an exceptional burden to women.

Women constitute the bulk of the agricultural labour force in all the four riparian countries. Only supported by children, the bulk of food and other agricultural crops are grown by women. Men tend to concentrate in cattle keeping and trade.

The provision of water for fulfilment of fundamental human needs has continued to be the responsibility of women. Women spend an estimated 40 billion hours every year hauling water from distant and frequently polluted sources. Women have been reported to spend as much as 8 hours per day carrying up to 40.8 kg of water on their heads or hips. Women are responsible for preparing food, washing clothes, cleaning. Family hygiene is in their hands - and caring for the ill when hygiene is insufficient.

Women are the managers of the community water supply. They are the ones who select water sources and determine which should be used for drinking water and which for bathing and watering animals. They monitor water quality and devise strategies to conserve supplies in times of scarcity. They protect and manage water sources and quality standards. Many water supply projects have revealed that, when there are opportunities to improve water supplies, women participate avidly, contribute labour, and are more diligent than men in maintaining installations and sources.

Yet women and their concerns remain mostly invisible in decision-making and governance structures, planning, policy-making, infrastructure and technology development, as well as in the institutions that control and manage water across the world. This invisibility persists despite widespread recognition—at least at the rhetorical level - that women must be involved in water resources management and development.

Contrary to expectations, most of these decision making faculties are overwhelmingly dominated by the male members of the community.

Studies on Water source management in Tanzania and Uganda show that most villages have established what are generally known as Village Water (User) Committees. These committees are charged with the responsibility for all matters related to water supply issues. But even here, women are greatly underrepresented on these³¹.

Discussions held with several stakeholders reveal that the main factors leading to such a situation are associated with women's lack of self-confidence, which again is mainly influenced by cultural limitations, and the low level of literacy relative to the men. Parallel to this is the factor of women's commitment to other domestic roles, which are paramount to their social welfare, and that of their family members' e.g. cooking, childcare, general sanitation etc.

Water rights are often closely tied to land tenure arrangements and are often transferred with land. And yet land tenure is a key factor in resource related conflict and has an impact on water management activities at the community level. Women tend to be disadvantaged in terms of tenure and this could have a link to their lack of visibility in management. In most parts of the four countries, land rights are passed from father to son. Thus, though women may be working on the land, they often have no right to participate in organizations that take decisions regarding its use.

Where women are able to attend meetings, they often do not speak the national language with ease and feel restrained by their lack of education and cultural barriers. They are thereby seen *as good listeners than active participants leaving the talking to the men*³².

Women are also less familiar with the public sphere. They have little experience in public debates, and even women councillors have been found to express themselves less freely or frequently than men. Men travel more widely on business and attend political and religious meetings while women's mobility is restricted largely to visits to relatives, the dispensary, market, or flour mill."

Because of this gender disparity and their back stage engagements, women are often less informed about technical projects. In many cases, water projects involve introduction and maintenance of new technology and construction work. These are not regarded as activities for women and they find themselves out of the list of trainees for these fields.

³¹ The policy in Uganda is that at least one member to a Water User Committee must be a woman. (*A Community Resource Book for the Water and Sanitation Sector*, Directorate of Water Development, Ministry of Water and the Environment, 2007). In practice, most committees have just one female representative only as a means of fulfilling this requirement. The rest of the members often comprise of assertive men!

³² It has been observed that in social situations where women in domestic and social contexts are not given decision making status, placing them in committees with men rarely succeeds. Probably women-only committees with the water management agenda can be a first step in building the confidence and capacity of these women. This has been seen to succeed in other national contexts e.g. in peacetime Somalia.

11.2.2 Gender Issues in Conflict situations – the case of Rwanda

Rwanda is a patriarchal society, which influences not only the relationships between men and women, but also women's social and cultural position. Gender relations have changed since the genocide, not only because of its direct consequences, but also because the Government of Rwanda (GoR) has used the post-conflict period to address gender issues. GoR initiatives include: increasing female participation in political life, changing the discriminatory inheritance rule to allow women to own clear title to land, and improving the female literacy rate. National civil society organizations and international NGOs and donor agencies have put the improvement of the position of women on their agendas. Their development initiatives have played an important role in raising awareness and funds for gender justice issues, but have focused less on developing a gender-sensitive approach to conflict. Moreover, socially- and culturally-embedded values and notions of gender still influence gender relations in practice. Women remain in inferior positions to men, are not expected to play an important or assertive role, and are regarded as dependents of male relatives; their social roles are as mothers and wives.

Although violence during the genocide was inflicted upon both men and women, women were often specifically targeted and extreme and widespread sexual violence against women, including rape, characterized the genocide. It was especially aimed at the femininity of Tutsi women, and employed explicitly to meet the political goal of total destruction of the Tutsi. Hutu women married to or affiliated with Tutsi men were also targeted, since they would give birth to Tutsi children. The consequences of the widespread sexual violence have included harm and violence that were both gender-skewed (disproportionately affecting women) and gender-multiplied (precipitating further impacts). Sexual violence caused trauma, forced pregnancies resulting in 'unwanted children,' health problems, mutilations, infertility and HIV transmission.

With the genocide's immense death toll among the men, women often became heads of households, but often with very few resources. Since the inheritance rules were still guided by customary law, many women had trouble accessing property of husbands or fathers. Women's inferior public position and lower levels of literacy and education contributed to their vulnerability. In addition, during the genocide women were not only victims but also perpetrators, a fact which further complicates co-habitation for surviving women.

11.3 Existing Gender Mainstreaming Policy Framework

Gender mainstreaming was endorsed as a strategy for promoting equality between women and men by the [Fourth World Conference on Women](#) in Beijing in 1995. The [United Nations Economic and Social Council \(ECOSOC\)](#) adopted agreed conclusions in 1997/2 on mainstreaming the gender perspective into all policies and programmes in the United Nations system at its coordination segment on 18 July 1997. The importance of the gender mainstreaming strategy was reiterated by the [General Assembly](#) at its [twenty-third special session](#) in June 2000 and in subsequent resolutions. In 2004, the Council reviewed the implementation of agreed conclusions of 1997/2. The most recent resolution on

gender mainstreaming was adopted at the 2006 substantive session of ECOSOC (Council resolution 2006/36). In this a definition of Gender mainstreaming was adopted in which Gender mainstreaming is seen as

“... the process of assessing the implications for women and men of any planned action, including legislation, policies and programmes, in all areas and at all levels, and as a strategy for making women’s as well as men’s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and social spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.”

The Commonwealth Plan of Action (PoA) for Women³³ recognizes that Gender inequality causes and exacerbates the impact of poverty on women. The PoA proposes critical areas for which Gender mainstreaming is essential for all Commonwealth nations to address.

Though it is accepted that natural resource conservation and management cannot be achieved without the involvement of both men and women as stakeholders, women often miss out with regard to environmental education, extension services and job opportunities. A reversal of these trends, therefore, can be meaningful in promoting social economic development within the Kagera Basin.

Today all International development agencies, both the multilateral and bilateral, continue to put emphasis on promoting gender mainstreaming in IWRM. This has witnessed various attempts to ensure that all nations including Rwanda Tanzania, Uganda and Burundi, develop gender responsive policies and programmes to ensure that gender issues are put in the forefront in the implementation process.

11.3.1 The Policy Framework in Rwanda

Rwanda has had a Gender Policy since 2003 together with a vibrant Ministry of Gender and Family Promotion based in the Prime Minister’s Office, as well as the National Women Council. By the time of visiting Rwanda in August 2006, the ministry was proposing to conduct a gender policy analysis to support the process of developing a stakeholder understanding of the policy and its implementation.³⁴

Women representation at all levels is a fundamental principle of the 2003 Rwanda Constitution with a firm commitment to both the rule of law as well gender equality. The Constitution provides a mandatory 30 percent fixed proportion for women. Before Rwanda’s civil war in the early 1990s and the geno-

³³ The Commonwealth Plan of Action (PoA) for Women Area 3 and 4

³⁴ Statement made by John Mutamba, the Director in charge of Gender to *The New Times* (15th-August 2006), during a workshop at Hotel Novotel on August 10 2006.

cide in 1994, women had never held more than 18 percent of seats in the country's parliament.

Women have since met and exceeded the minimum target since the 2003 elections. It was only during the nine-year period of a post-genocide transitional government, from 1994-2003, that women representation reached 25.7 percent in the bicameral parliament and a new gender-sensitive constitution was adopted. Today, the Rwanda government has developed a strong policy on gender equality. The country has 48% of women in Parliament, the highest percentage in the world. There is a significant number of women at all levels of decision making, in cabinet as well as in central and local administration. The promotion of women in Rwanda reflects the pivotal role women played in the reconstruction of the country after genocide in 1994.

It is recognized in Rwanda that genuine policies for gender equality are sustainable only if they are developed and implemented in a broader context of democratic reforms. **There is a very strong commitment in Rwanda** by the government to promote gender equality. This evidenced by the integration of gender in all the policies of Rwanda today.

The Rwandan parliament today has a cross-party caucus, the Forum of Women Parliamentarians, known by its French acronym, the FFRP. Originally composed of not more than 15 members, the forum is a sound platform through which women views throughout the country are aired.

FFRP has since established itself as an organ that unites women parliamentarians together irrespective of political party affiliation. Today all female MPs from the upper and lower houses including those elected on the "women's ballot" - are members. Together they have become a solid block that has cautiously but resoundingly taken their stand on any bill that comes up to ensure that gender equality is respected. To date the Forum has helped review existing laws, introduced amendments to change discriminatory statutes, and examined proposed laws, all with the aim at promoting gender sensitivity in the country. The FFRP adopted in 2005 a five-year Strategic Plan to guide its activities through 2009 and reach its goal of developing policies, laws, programmes, and practices that ensure equality between men and women and gender equity.

However, while FFRP is directed at women policy makers' capacity, the actual implementation requires institutions all the way down to the village which support women's capacity development. This orientation to gender considerations is lacking in Rwanda as is in the other riparian countries as well. Also, there is little evidence to show that Gender mainstreaming in transboundary water resource management has been fully developed and incorporated in all relevant policies in Rwanda.

11.3.2 The Policy Framework in Tanzania

The 2025 development vision for Tanzania, which aims to attain a standard of livelihood for its people, recognizes the importance of water resources in the

attainment of this vision. Water is regarded as a main ingredient in poverty reduction through ensuring food security and self-sufficiency among other things. The 2025 development vision promises to direct efforts towards ensuring the adequate provision and supply of water resources on an equal and equitable basis. This presents major challenges for government and other stakeholders regarding the planning, management and conservation of water resources. The need to equitably distribute water resources must among other things take due recognition of gender disparities in the allocation and accessing of the resource.

The government of Tanzania has assented, ratified and is a party to several conventions, international declarations and organizations that advocate gender equity and human rights.

These include the:

- The 1975 World Conference of the International Women's Year in Mexico;
- Beijing Declaration and Platform of Action of 1995;
- Universal declaration of human rights;
- The 1985 Convention on the elimination of all forms of Discrimination against Women ;
- The SADC Declaration on Gender and development of 1997 and;
- African Conferences on Women held in 1975, 1980, 1984, 1994 and 1999.

The government has taken affirmative actions in formulating national policy guidelines that advocate on gender equity in response and as a commitment towards achieving the international Conventions on gender equity.

At the national level, women's rights have been conceptualized in the Tanzanian Constitution that was reviewed in 1984. This constitution bans discrimination on whatever grounds. At national level there are key policies that have been formulated which have a gender commitment in development include the National Development Vision of 2025, the National Poverty Eradication Strategy (NPES) of 1996 and the Poverty Reduction Strategy Paper (PRSP).

The Vision 2025 has identified in one of its attributes that division in society must be equitable and free from inequalities and effective democratic and popular participation of all social groups. While the PRSP articulates several indicators of poverty reduction that are to be measured on a 3 - year basis, it also commits itself to gender equity and encourages farmers to organize themselves in Cooperatives or groups. The main objective of the National poverty Eradication Strategy (NPES) is to eradicate poverty by the year 2025. Other specific objectives include promoting equal opportunities for men and women to lead a

decent productive life and to ensure full participation of women initiatives in poverty eradication.

Tanzania's National Gender Policy has led to enacting a land law that gives rights of ownership to women. There is also the Ministry of Community Development, Women Affairs and Children that is the institution that ensures the implementation of the gender policy supported by the National Population policy. The Population Policy states that its plans for the promotion of women's rights will be implemented by a considerable number of Ministries, in whose docket specific issues fall. In Tanzania, the quota system/"special" parliamentary seats for women were introduced first during the one-party era in order to increase female representation in the legislature (other groups that received the same included the youth, the army and workers). This was to ensure that the voices of the special categories of citizens were heard- in this case the women. However, this did not translate into an increased number of women in parliament. A constitutional amendment in 2000 resulted in the percentages of special seats being increased. However, these commitments are however yet to reach the 30% target set by the Beijing Platform for Action.

Despite the low numbers of women in parliament, their presence has had a modest impact on debates in Tanzania. Women MPs have been able to push for laws that address women's needs in several areas: Maternity leave for both married and unmarried mothers; the revision of the law that demanded high school leavers to stay home for two years before attending university, to allow female candidates to enter university directly after high school; the sexual offence bill on increasing the severity of the punishment of sexual offenders; and the land reform incorporation of a clause that declared unconstitutional customary practices that discriminated against women. However, there is the challenge of removing customary laws (that are based on discriminatory practices), from the statute books.

For Tanzanian women, the path to politics seems clearer with calls for increased participation, and with specific programmes being organized for women to contest in Tanzania's elections.

Milestones in realizing the Human Rights of the Tanzanian Woman.

Being party to a number of international and regional instruments the Tanzanian constitution provides for various human rights institutions and mechanisms that ensure the human rights of Tanzanians are observed. This includes a policy on women in development that ensures the right to equality in land ownership. Even with this, women's civil rights are limited by the existence of a dual legal system, which includes both statutory and customary laws.

There has been growing tension between the refugee population and the local Tanzanians in the region that has led to women's increased vulnerability. Women face sexual and domestic violence as reprisal to violence that erupts between the two different populations. In addition, women refugees face violence within the overcrowded camps and lack areas of redress for their grievances, despite the Tanzanian government having an affirmative obligation to

protect women refugees from sexual and domestic violence and to ensure that women who are subjected to these assaults have full access to the Tanzanian legal system.

Gender equity is addressed in most sector policies and development programmes of which most of the concerns contained in International conventions on gender are also reflected. These policies include the Women Development and Gender policy, Agricultural Development policy, Cooperative Development Policy and the National Land Policy as explained below:-

The Women Development and Gender policy

The National policy on Women Development and Gender is the key policy document that is responsible to other sectors on how to achieve gender equity. The Policy aims at empowering women and men to utilize available resources for their development, on an equitable basis. This envisages the need for mainstreaming gender issues in all development plans.

Some of the attributes of the policy includes:-

- enhancing gender equality by giving women and men equal opportunities , equal rights and equal obligations in all spheres of life;
- to improve the participation of women at all levels of development;
- and men and women to participate effectively in identifying their problems and assess their practical means of solving them so as to alleviate poverty.

The National Water Policy

In the National Water Policy, the gender dimension of the National Water Policy for the allocation, access and supply of water resources needs to be addressed seriously because 80% of the Tanzania population resides in rural areas with a 50% water services coverage in some parts of the country women and children walk long distances to fetch water for domestic and livestock consumption. It is therefore necessary that women are actively involved

The Poverty Reduction Strategy Review

The Poverty Reduction Strategy Review held in 2001/2002 indicated the following progress from the Gender Policy:

- A draft national strategy for gender development and a framework for implementation of the Women and Gender development policy have been developed;
- Secondly mainstreaming gender in the Public Expenditure Review; and the Inheritance and Marriage Act and laws relating to children are in a process of being reviewed to address key gender concerns.

The Agricultural Development Policy

An important policy that is related to rural development is the Agricultural development policy of 1997. In the Agricultural Development policy, emphasis is placed to ensuring that extension services are provided to women farmers in recognition of the critical role they play in family household management and food production.

Cooperative Development Policy

Cooperatives have been regarded as the major players in rural development and poverty alleviation in the country. The importance of this sector led to the formulation of the Cooperative Development Policy of 1997 and thereafter its review in 2002. Some of the attributes that reflect gender are indicated in the mission statement and some of its objectives are that:

- Cooperatives to become economic empowerment tool of the vulnerable members of the society such as small producers/ farmers, women and youth who otherwise cannot compete as individual players in the field;
- To encourage sustainable operation and development of cooperatives by ensuring that they carry out activities that respect gender equality and environmental Protection;
- To ensure effective participation of women, by encouraging them to become members in line with the cooperative principle of voluntary and open membership. Women will be encouraged to take up leadership positions and employment in the cooperative society.

The National Land Policy (1995)

National Land policy of 1995 envisaged the need of women to have access to productive resources like land, water etc. Apart from the policies discussed above, other policies that reflect gender issues include the NGO policy of 2002, the National Trade policy of 2003, the Microfinance policy of 2000 and the Small and Medium Enterprise Development policy of 2003. All these policies provide an equal opportunity to both men & women in development endeavours.

Sector strategies

One of the sector strategies that advocate rural development is the Rural development strategy which is a framework of the draft Rural Development policy of 2001. The objective of this strategy is to provide a strategic framework for coordination of strategies concerned with the development of rural communities. It envisages the need for both men and women to participate in rural development so as to alleviate poverty in a holistic manner. It has linkages with major policy related initiatives.

These policies have made progress in the gender mainstreaming process that is continuous though it is slow and it also has a low impact. The process of gendering and its outcome is legitimated by religion, law, science and the society's entire set of values. As these values change so do the gender roles.

11.3.3 The Policy Framework in Burundi

The Constitution of Burundi provides for a 30% quota for women in Parliament. In application, too, women comprise 30% of those holding senior government positions. Burundi has a National Gender Policy. However, there is little evidence that Burundi started implementing its National Gender Policy, probably because of lack of resources and the heavy financial cost of the War and absence of a strong political will and genuine commitment to gender issues. Little information was available by the time of visiting Burundi that show significant plans to mainstream Gender into the other national policies

11.3.4 The Policy Framework in Uganda

As part of the PEAP implementation process, Uganda formed a working group that focuses on some of the key cross cutting issues, in particular gender, environment and HIV/AIDS.

Gender issues arise under all aspects of the PEAP and commitments of the Programme of Action. Uganda recognizes that while gender inequalities reproduce the poverty of families, communities and nations from one generation to the next, they also have an impact on growth performance and therefore have direct and indirect consequences on poverty and poverty reduction. Gender inequalities mediate the relationship between macroeconomic and trade policies, on the one hand, and the outcomes of these policies, on the other. Furthermore, gender-based inequalities in control over resources such as land, credit and skills not only hinder women's ability to take advantage of new opportunities created by trade liberalization, but also constrain the output response and thus the export capacity of the whole economy. Gender inequalities in education, health and access to farm inputs often dampen output, productivity and growth rates, and thus hinder export performance, particularly in agricultural economies like Uganda dominated by smallholders.

Key progress includes; revising the National Gender Policy and refocusing its objectives and also developing a gender and equity budgeting strategy to ensure that all government budgets are gender and equity focused.

Uganda has an aggressive approach to addressing gender. In addition to the development of a Gender policy, deliberate efforts have been made to implement the policy on affirmative action in higher education and the political sphere. Several attempts have been made to provide sensitization at both upper and lower governments on the need for gender mainstreaming. Attempts at gender mainstreaming have been set as bench marks in the evaluation of development plans together with other cross cutting issues such as HIV/AIDS and the Environment.

Like Tanzania, Uganda has assented, ratified and is a party to several conventions, international declarations and organizations that advocate gender equity and human rights

These include the:

- The 1975 World Conference of the International Women's Year in Mexico;
- Beijing Declaration and Platform of Action of 1995;
- Universal declaration of human rights;
- The 1985 Convention on the elimination of all forms of Discrimination against Women ;
- The SADC Declaration on Gender and development of 1997;
- Convention on the Elimination of All Forms of Discrimination Against Women (CEDAR) in 1995and;
- African Conferences on Women held in 1975, 1980, 1984, 1994 and 1999:

Evidence of this can be seen in the influence this has had on the following

Constitution of the Republic of Uganda (1995):

The Constitution of Uganda in general, provides for total gender equality and prescribes affirmative action measures for women to reverse the gender inequalities arising from past governments. The Constitution further outlaws cultures, traditions and practices that undermine the welfare, dignity and interests of women (Articles 32 and 33) and makes the following specific provisions related to gender mainstreaming:

- (i) Article 21(1) provides that "All persons are equal before and under the law in all spheres of political, economic, social and cultural life and in every other aspect and shall enjoy equal protection of the law.
- (ii) Article 32(1) provides that "... the State shall take affirmative action in favour of groups marginalized on the basis of gender, age, disability or any other reason created by history, tradition or custom for the purpose of redressing imbalances which exist against them.
- (iii) Article 33(1) provides that "Women shall be accorded full and equal dignity of the person with men".
- (iv) Article 33(4) provides that "Women shall have equal treatment with men and that right shall include equal opportunities in political, economic and social activities".
- (v) Article 33(6) provides that "Laws, cultures, customs or traditions which are against the dignity, welfare or interest of women or which undermine their status, are prohibited under this Constitution".

Despite the good intentions of the above Constitutional provisions, women in Uganda are still marginalized, especially in the rural areas, and are still subject to some oppressive customary laws for example regarding women's ownership and control over land, assets and transfer of such. In addition, women still lag behind in employment, education and participation in decision-making.

National Gender Policy

The National Gender Policy developed in 1997, has since then been revised. The policy provides the overall policy framework for addressing all gender issues in Uganda. The overall policy goal is to mainstream gender concerns in the national development process in order to improve the social, legal, political, economic and cultural conditions of the people in Uganda in particular women. The revised policy marks a move away from treating gender as an 'add-on' issue to treating gender as a 'hard-core' issue that is at the centre of Uganda's social and economic transformation processes. This will ensure that gender issues are part and parcel of all structures, institutions, policies, programmes, procedures and practices of Government and all its stakeholders. The four thematic priority areas viz. livelihoods, rights, governance and macro-economic management, shall be pursued through specific objectives.

Livelihood

This Policy reaffirms that the PEAP pillars are essential drivers of poverty eradication and sustainable livelihoods but also reinforces them by pointing out the critical gender and poverty concerns that will help to accelerate achievement of PEAP targets. It is therefore important that all poverty-eradication policies seek to tackle gender-based inequalities, not only to promote equity and justice, but also to promote economic growth and efficiency. The following specific objectives will be pursued under this area:

- To ensure that sectoral and local government plans include strategies and activities that reach out to and respond to diverse gender livelihood needs
- To ensure that sectoral ministries, CSOs and the private sector prioritize the development and promotion of technologies that reduce time poverty
- To increase the earning potential of poor women and men and ensure that sector and local government plans for improved productivity and income are gender responsive

Right to Human Development

The policy requires comprehensive reform of laws and the legal system to remove obstacles that constrain women and men from enforcing their rights. There are several key areas that need to be tackled. For instance it is recognized that a large part of women's contribution at household level tends to be non-monetary and hence does not directly go into what is generally understood as property. These gender disparities in rights to property and livelihood undermines the future of the country as a whole. In this regard, the fast implementation of the Domestic Relations Bill (DRB) so that it can respond to the gender realities in the family setting is an important issue. In conflict areas, ending

conflict and insecurity is a key landmark in the achievement of gender equality. For all this to happen there is a need for extensive legal literacy that will be necessary in order to change gender discriminatory values and create an enabling environment for all women and men to know and demand for their rights. The following specific objectives will be pursued:

- To improve women's and men's access to justice
- To eliminate gender discriminatory practices, norms and values at all levels
- To ensure safe living conditions for the physical and mental security of all, both at household and community levels
- To improve sexual and reproductive health rights

Governance

Through this Policy, the Uganda Government is committed to making gender an integral aspect of good governance, thereby consolidating and strengthening the gains already made. To date, affirmative action has increased the number of women to nearly 25% of Parliament and a minimum of 30% in local councils. These percentages place Uganda well above the Sub-Saharan Africa regional average of 14.3%. However, it is recognized that there are capacity deficits on the part of women, including public speaking, resource mobilization, networking and knowledge of public issues. It is also acknowledged that sufficient mainstreaming of gender in the determination of policy choices and how these affect the quality of life for both women and men is still lacking. The following specific objectives will guide action in this area:

- To strengthen the capacity of women to participate in decision making and leadership
- To eliminate gender discrimination in elective and administrative structures
- To retain Affirmative Action and improve on its performance in order to reduce existing and emerging gender gaps

Macro-economic Management Uganda faces a serious macro-economic dilemma because government's expenditure is much higher than its domestic revenues, and donors support about 48% of its budget. In 2004/5, Uganda's fiscal deficit was estimated at about UGX 1.6 trillion which is about 10.9% of GDP. This high fiscal deficit, which is financed by donors, means that there is a significant amount of domestic money supply that is not generated by the economy. When the amount of money in the economy exceeds the demand for that money, inflation occurs. However, the Government, through the central bank, sells foreign exchange in the market or sells government securities to reduce the amount of money supply in the economy.

The effect of these measures is that inflation has been kept in check, which is very important for macro-economic stability. It is also important in securing livelihoods of women and men because their money will be able to purchase the same goods for over a long period without excessive increases in costs. It is clear from this scenario that the Government needs to reduce its dependency on donor resources and increase domestic revenue. This requires Government to raise more revenues to finance public expenditures. Hence it is not just the size of the national deficit that Government needs to concern itself with but also the combination of revenue and expenditure that produces it. The gender implications of this scenario are not fully understood hence the Policy commits the following objectives to be implemented to further develop understanding and action in this area:

- To build national capacity for conducting research in the area of Gender and Macro Economics
- To establish on-going gender analysis in budgetary allocations of all public expenditures at national and local government levels
- To promote the use of effective revenue generation mechanisms that ensure gender responsiveness

The National Gender Policy recognizes women and children as the main carriers and users of water. It anchors the importance of gender responsiveness in terms of planning, implementation and management of water and sanitation initiatives.

The Ministry of Gender, Labour and Social Development (MoGLSD)

The Ministry of Gender, Labour and Social Development is the government lead agency responsible for implementing the National Gender Policy and ensuring that gender mainstreaming takes root and becomes an integral part in the planning and implementation of development activities in all government sectors. The Ministry plans, coordinates and monitors the delivery of gender mainstreaming programs in Uganda through an elaborate institutional structure that spans all levels of government (i.e. national, district and lower local government levels) to the local communities.

The main gender related functions of the Ministry include the following:

- 1 Plan, coordinate and monitor the delivery of gender mainstreaming programs in Uganda.
- 2 Appoint a Gender Focal Person in each government Ministry to oversee gender mainstreaming in the policies and plans of their respective Ministries.
- 3 Appoint a Gender Officer in each district to support districts in ensuring gender mainstreaming in all their planning and development activities.

- 4 Coordinating the establishment of Women Councils at national and local levels, as provided for under the National Women's Council Act (1993), that are aimed at fostering social and economic development of women at all levels. The women council starts at the village level and go up to the district and national levels.
- 5 Advocate for increases in budget allocations for gender mainstreaming activities.

The Uganda Water Sector Gender Strategy

In order to operationalise the provisions of the National Gender Policy, the

Ministry of Water, Lands and Environment developed the Water Sector Gender Strategy in 2003. The overall goal of the Strategy is:

“To develop empowering approaches that will enhance gender equity, participation and access and control to resources in the water sector leading to poverty alleviation”.

The Strategy provides stakeholders with operational guidelines on how gender principles should be mainstreamed within the water sector planning and development activities.

The objectives of the strategy include the following:

- 1 Commit adequate resources for gender mainstreaming activities in the water sector;
- 2 Strengthening the planning, monitoring and evaluation systems to design, develop and implement projects using gender disaggregated data.
- 3 Strengthen the capacities of water sector agencies to mainstream and support gender balance of staffing in the sector.

Under the strategy, the following targets or benchmarks were identified as critical for attaining gender mainstreaming in WRM.

These include (among others) the following:

- Women and men will be represented in all decision making forums of the sector including the Water Sector Co-ordination Committee, bilateral/multilateral reviews, the Water Policy Committee, the District Water and Sanitation Committee and at community level within all Water User Committee.
- Commitment will be secured from top management and investors in the sector to work for change towards greater gender equality.

- Undertake revision of job descriptions for water sector staff, especially for senior staff, to incorporate gender-mainstreaming roles and responsibilities.
- Conduct capacity building for water sector staff at national and local government levels to enhance their gender mainstreaming knowledge and skills.

Gender Mainstreaming in Local Governments

Section 10(c) of the Local Government Act CAP 243 provides that District council shall consist of “women councillors representing one third of the council. Section 52(2) of the Uganda Water Act 1997 mandated Local authorities to organise the formation of water user groups and associations within their areas of jurisdiction. Under this mandate, Water and Sanitation Committee at district and sub-county levels are formed with the same requirement that at least thirty percent of the members are women.

Challenges in the implementation of Gender mainstreaming in Uganda

- ***Emphasis on representation without commensurate empowerment*** While it is recognized that women play a central role in water resource management, gender mainstreaming often stops at getting women onto the different committees but without necessarily empowering them and creating an enabling environment for them to effectively contribute in the discussions and decision-making processes. Some of the women on these committees are often intimidated by the male members and cannot freely participate in the discussions and put across their views. This has often left women as passive members on these committees thus undermining the very purpose for which these provisions were made.
- ***The value based nature of the concept:*** Gender Equity as a concept is difficult to operationalise unless it is grounded in values. Established male dominance and cultural traditional beliefs and attitudes compound the problem. The positive constitutional and legal provisions notwithstanding, gender in Uganda is still largely perceived by many sections of society as an elite affair. Some perceive it as one of those social concepts driven by foreign ideas of feminism that have not been contextualised locally.
- ***The multiple cultures due to the multiplicity of tribes in Uganda:*** Gender roles being products of society vary with cultures. Uganda being composed of many tribal units with attendant sub-cultures does not make the gender implications any less complicated.
- ***Absence of a strong of political will:*** The apparent absence of a strong political will to implement some of the gender related Constitutional provisions. A case in point is Section 32 (2) of the Uganda Constitution which provides for Parliament to establish an Equal Opportunities Commission which to date has never come up for debate in Parliament. This would have given full effect to the spirit of Section 32 (1) which commits Government to implement affirmative action in favour of groups marginalized on the

basis age, disability and gender among others, created by history, tradition or custom.

- ***Absence of Institutional/Organisational Leadership on Gender Mainstreaming:*** Presently most of the institutions with gender labels, both local and international, are working under the assumption that women are socially, economically and politically disadvantaged and are accordingly actively engaged with women empowerment. They are using a strategy of providing targeted assistance for women to enable them achieve equal rights and status with men. While this is a very worthwhile approach, attaining equal rights for both genders is the more sure way to attain equal rights for both genders. Makerere University's Department of Gender and Women Studies who would be expected to be among those institutions to take a lead role in demonstrating best practices in gender has only recently established a gender mainstreaming division.
- ***Finding the Right Intensity:*** In a zeal to address the gender imbalances affirmative action has tended to focus too much on women and sometimes overlooked the disadvantages that equally affect men. In the context of an economically poor country like Uganda it is often a very tantalising task making decisions on who should/should not be empowered where both men and women are disempowered. Ensuring the right balance or intensity, in front of the socio economic and socio political disadvantages facing Uganda as a developing country, remains a big gender mainstreaming challenge.
- ***Resource Constraints at the implementation level.*** Although Local Governments are expected to implement gender mainstreaming strategies, they lack the necessary financial and technical resources to do so.

11.3.5 CSO and Private sector participation in Gender Mainstreaming

Private sector stakeholders and Non-Government Organizations (NGOs) particularly in Tanzania, Rwanda and Uganda have played an important role in advocating and ensuring that local authorities adopt gender mainstreaming strategies in their implementation processes and structures. NGOs such as CARE International, World Vision, Africare and Water Aid have promoted gender mainstreaming methodologies as central in their approaches to community mobilization and behavioural change..

11.4 Proposed Gender Mainstreaming Plan for the Kagera Transboundary Integrated Water Resource Management and Development Project

11.4.1 The Aim and Objective of the Gender Mainstreaming Plan

Gender concerns in water are not just about making right the balance of past discriminatory policies which adversely affected women. The goal is to achieve a proper balance in the roles of both men and women. The development of IWRM strategies and plans presents unique opportunities for enhancing the equal participation, representation, and rights of women in the water sector - and thus for improving the effectiveness and sustainability of those strategies.

The aim of the plan is *to ensure that both men and women within the Kagera Basin catchments realize equitable benefits from productive sharing and management of the Kagera basin resources based on sound environmental practices.*

The main objective of the Gender mainstreaming Plan is *to establish a comprehensive mechanism for improving the degree to which both women as well as men are involved in and become an integral part of the strategy formulation process, a resourceful knowledge base, and an essential component of effective monitoring and evaluation of fully integrated transboundary water resources management and development initiatives, policies and programmes in the Kagera Basin catchments.*

11.4.2 Recommendations for implementing Gender Mainstreaming as part of the plan and strategy for integrated transboundary Water Resource Management

Legal, Policy and Institutional reform and harmonization

The emphasis on mainstreaming gender perspectives in the water resource management sector must reflect recognition that the interests and needs of women as well as those of men must be systematically pursued in the development of all national/regional policies and programs. This will require Legal frameworks, institutional reform and Policy changes within all riparian countries, bilateral and multilateral organizations to ensure that gender mainstreaming is part of the strategy for water resource management in all the four countries. This requires taking gender equity concerns in all policy, program, administrative and financial activities, and in organizational procedures, thereby contributing to profound organizational transformation. Specifically, it brings the outcome of gender socio-economic and policy analysis into all decision-making processes of the individual countries making sure that all the outcomes are well tracked.

Capacity Building

There is need to increase the understanding of gender implications for water management. This will involve

- Gender training for men and women working in water-related national and regional bodies, non-governmental organizations and private water companies
- A proactive effort to gender sensitize water management approaches at senior policy making levels in national structures as part of a strategy to ensure equity and increased women's involvement in these processes. This can be part of an effort to empower women so that they can acquire the skills to enter water management at a senior level. This involves an increase in technical and scientific education offered to women so that women are able to perform managerial functions. This includes the development of skills in financial management, decision-making, community participation, leadership, confidence building, peace building and communications³⁵.

Gender stratification in research and planning

Most current investigations on water resource use and management and their needs fail to collect data differentiated along gender lines. This results in faulty assessment of levels of use and patterns of need. It is recommended that in-depth gender -sensitive research approaches and consultation processes be undertaken that allow participation of both women and men in decisions regarding location of water installations, technology and price implications³⁶.

Addressing the poverty status of women and men

Given that the majority of people in the basin are quite poor and women often carry the burden of family welfare single-handedly, it is important to delineate ways in which women's income is and can be proactively linked to WRM. Poverty is identified as an inhibiting factor in restraining action towards the reversal of a cycle that has led to degradation and reduced economic productivity.

11.4.3 Strategic Intervention areas

Gender mainstreaming in the formulation of strategies and plans in practice therefore essentially entails seven tasks:

- Mobilize and support integrated Water Resource management Initiatives amongst women groups
- Support Local Government Gender mainstreaming Initiatives in integrated Water Resource Management

³⁵ Care needs to be taken in ensuring gender balanced participation in management at community levels. Since the provision of water has so long been a women's responsibility in many societies, there is a great danger that efforts to increase community participation can have the grotesque effect of increasing the work women are expected to undertake. Women continue to provide unpaid, manual work, while men secure any managerial or decision-making roles that become available.

³⁶ Where it is necessary, this may require separate meetings to ensure that women feel free to offer their opinions, and the use of female as well as male project staff.

- Resource mobilization through raising awareness amongst policy makers, managers, and the local communities in the Kagera Basin catchments on the relevance of gender mainstreaming to the socio-economic development of the catchments and in achieving the objectives of IWRM.
- Support further Research as a basis for creating a knowledge base for identification of water related challenges, determine where change is needed, and set a basis for monitoring progress and impact
- Development of Consensus and harmonization of existing legal, institutional provisions, and policies in relevant country ministries/sectors to provide an enabling framework for integration of Gender mainstreaming in transboundary water Resource Management
- Training of technical staff (responsible for planning and implementation of Integrated Water Resource management activities) on approaches methods, skills/knowledge for
 - carrying out gender analysis³⁷, advocacy and gender mainstreaming particularly in enhancing the outcome of the decision-making and planning process;
 - Developing sex disaggregated indicators and incorporating them for use in monitoring and evaluation systems
 - Effective Negotiation and Resource Mobilization for Gender mainstreaming in Water Resource Management
- Support the recruitment and deployment of Women in key managerial positions within the Water Resource Management sector

11.4.4 Proposed Tasks and Activities

Task 1: Resource Mobilization for Gender mainstreaming

Resource mobilization will basically comprise of stepping up the campaign and advocacy for increased budget allocation to Gender mainstreaming as well as strengthening capacity for monitoring value for money in the implementation of gender mainstreaming activities.

Task 2: Mobilize and support integrated Water Resource management Initiatives amongst women groups

Activity 2.1: Facilitate formation of Women Groups in the Kagera Basin catchment where the need and interest is expressed in the local communities. As part of this activity, local communities will be sensitised on the importance and

³⁷ Gender analysis is an examination of women's as well as men's roles, resources, needs and priorities in relation to water. The Gender Analysis framework is now widely used for situation analysis and pre-project research, especially in project based development interventions.

benefits of forming Women Groups and will also be given some basic training and financial support to facilitate their water related activities.

Activity 2.2: Support water related income-generating activities of Women Groups in the Kagera Basin catchment to empower them economically and reduce their reliance on men for financial support.

Activity 2.3: Support both formal and informal skill and knowledge acquisition for women in planning and decision-making processes in their communities. Deliberate efforts may need to be made to place women in positions where they have to take responsibility for example in collection of water dues at the village level. This can effectively increase their practical knowledge and skills effectively. Also, the importance of more advanced training for example at the tertiary level where young women at university or college level could be encouraged to engage in studies related to water management could be highlighted. Also, specific training may need to be imparted to women aimed at building their confidence to clearly articulate their interests and concerns and express themselves with confidence among men.

Activity 2.4: Support networking and exchange visits between women groups in the catchment to enable them share experiences and learn from each other.

Activity 2.5: Support Micro-finance and credit facilities to women in the Kagera Basin catchment through their respective Women Groups to finance income generating activities and acquisition of property such as land, equipment, houses, etc which will raise the socio-economic status of women in their communities.

Task 3: Support Local Government Gender mainstreaming Initiatives in Integrated Transboundary Water Resource Management

There are several development aspirations that were expressed by Local governments sharing common boundaries. A forum needs to be provided to allow problem identification, analysis and prioritization of key actions at local government levels. Based on a transboundary perspective, activities that indicate proposed action areas need to be supported where the need and interest is expressed and agreed upon between neighbouring local governments.

Task 4: Sensitization of policy makers, managers, and the local communities in the Kagera Basin catchments on gender mainstreaming in IWRM and its relevance to the socio-economic development of the catchments.

Activity 4.1: Carry out targeted gender awareness campaigns through seminars, workshops, and meetings targeting Civic./Political/Opinion leaders, Policy and Decision-makers, Managers, Technical staff, NGOs and CBOs, Media, Women and Youth Groups, and Local Communities.

Activity 4.2: Development and implementation of an inclusive Information, Education and Communication Strategy for Gender mainstreaming highlighting the importance of gender equality in achieving sustainable water resources management and development in the Kagera Basin catchments.

Activity 4.3: Support Curriculum development for inculcating Gender mainstreaming values for effective water resource and environment management in Primary schools. This includes promotion of in school clubs for water resource and environment management.

Task 5: Support further Research as a basis for creating a knowledge base for identification of water related challenges, determine where change is needed, and set a basis for monitoring progress and impact

Activity 5.1: Sponsor open Dialogue and Research related activities in key Tertiary institutions (Water Resource Management related disciplines in Colleges and Universities) on Gender in Water Resource Management in the Kagera Basin catchments focusing on

- Identification of gender related challenges in water resource management;
- Appropriate approaches to gender mainstreaming in the water resource management sector
- Policy issues in the gender mainstreaming process for integrated transboundary Water resource management
- Participatory monitoring processes and approaches for Gender mainstreaming in transboundary Water Resource management
- Conflict Resolution and management for effective Water Resource management
- Harnessing indigenous community involvement and support in integrating and implementing sound environmental practices in the Kagera Basin catchments

Task 6: Development of Consensus on and harmonization of legal, institutional provisions, and policies in relevant country ministries/sectors to provide an enabling framework for integration of Gender mainstreaming in transboundary water Resource Management

Experience has shown that mainstreaming gender in the policy formulation process requires that following:

- The commitment of politicians and others in power. Without the stated political commitment and support of leaders of key institutions, gender mainstreaming is rarely implemented;
- A stated focus on gender in key written documents (including identification of gender gaps in the water sector, clear statements on how these gaps will be reduced or closed, and a roadmap for how this will be achieved in the short, medium and long run);
- Clarification of the entitlements and responsibilities of water users and water providers (specified by gender);

- Clarification of the roles of government, private sector and civil society institutions (specifying the rights, duties and obligations of men and women, where appropriate);
- Legal status for water management institutions of government and water user groups, stipulating the proportional share of women in participation and employment;
- Multi stakeholder consultations that include women and women's organizations;
- Indicative budgetary allocations showing proportions to be spent in proactive measures that directly benefit and/or indirectly support women.

Because of the need to have a well coordinated approach to Gender mainstreaming in the Kagera Basin, a consensus and harmonized position needs to be developed guiding the entire process of gender mainstreaming across the Kagera basin. All riparian countries must give commitment to this as the entry point. This will require the implementation of the following activities:

Activity 6.1: Conduct Country specific Research on existing policies and how they impact on Gender mainstreaming in the water Resource management sector (from both the national and transboundary aspect)

Activity 6.2: Conduct policy review and harmonization workshops targeting high profile officials and managers responsible for policy development and harmonization in the sectors related to water resource management (water supply, health/sanitation, environment, agriculture, energy, livestock, gender/women, community development, fisheries, tourism, meteorology, peace building etc)

Activity 6.3: Conduct policy review and harmonization workshops on manpower recruitment, deployment and development with the view of increasing and empowering women to take charge of key water resource management positions.

Activity 6.4: Support country specific policy and legal reform process activities related for integration of Gender mainstreaming in Water Resource management (particularly for ministries and sectors relevant to Water Resource Management)

Task 7: Training of technical staff (responsible for planning and implementation of Integrated Water Resource management activities) on approaches methods, skills/knowledge for

- Carrying out gender analysis³⁸, advocacy and gender mainstreaming particularly in enhancing the outcome of the decision-making and the planning process;
- Developing sex disaggregated indicators and incorporating them for use in monitoring and evaluation systems
- Effective Negotiation and Resource Mobilization for Gender mainstreaming in integrated Water Resource Management

This training may require identification of competent training institutions for this purpose and development of a comprehensive programme.

Task 8: Support the recruitment and deployment of Women in key managerial positions within the Water Resource Management sector

Recruitment and deployment of Women in key managerial positions will need to be supported by deliberate efforts to develop women specialists in Water Resource Management disciplines. A harmonized position on this can be obtained after conducting country by country assessments on this by the relevant country ministries in charge of manpower recruitment, development and deployment.

Recruitment and Deployment of women Water Resource managers must become an integral element of the strategy for transboundary water resource management and development.

11.4.5 Implementation Strategy

Coordination Mechanism

It will be an integral responsibility of all Basin stakeholders to implement planned activities. We recommend here that a specific officer be designated within the established KBMU with a mandate to carry out coordination, monitoring and evaluation of Gender mainstreaming activities.

Respective ministries and local government departments responsible for Gender will provide technical backstopping support to ensure that implementation of the gender mainstreaming activities are compliant national gender policies and strategies.

³⁸ **NB:** We wish to emphasise here that Gender analysis is the backbone of gender-sensitive policy development. Prior to formulating a formal water policy, baseline studies should be conducted to identify use patterns disaggregated by sex, as well as gaps between men and women in terms of ownership/control, representation, access and entitlements in relation to water resources. It is important that both staff of the proposed KBMU, government officials, CSO relevant and key in the implementation process (as key stakeholders) be trained in Gender analysis.

A Gender Coordination committee will be set up as recommended by participants drawn from each country (comprising of government officials, CSO/NGOs and private sector stakeholders) as part of the policy harmonization process.

Monitoring and Evaluation

Coordinated by the officer designated under the proposed KBMU, the monitoring and evaluation function will be the responsibility of the Gender Coordination committee as stated above.

12 Capacity Building Plan for Sustainable Management of the Kagera River Basin

This chapter provides an insight into the key capacity issues relating to the four riparian countries in the Kagera River Basin.

Essentially, Capacity building encompasses a “country’s human, scientific, technological, organizational, institutional and resource capabilities. A fundamental goal of capacity building is to enhance the ability to evaluate and address the crucial questions related to policy choices and modes of implementation among development options, based on an understanding of environment potentials and limits and of needs perceived by the people of the country concerned”³⁹.

The appreciation of capacity building in this chapter addresses the creation of an enabling environment throughout the process of:

- Organizational development, the elaboration of management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community).
- Institutional and legal framework development, making legal and regulatory changes to enable organizations, institutions and agencies at all levels and in all sectors to enhance their capacities, including community participation (of women in particular);
- Human resource development, the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively and strengthening of managerial systems.

It is emphasized here that all the riparian countries have instituted legal, policy, administrative and institutional mechanisms to address water resources management challenges. However, the existence of unsustainable practices such as encroachment on wetlands, deforestation, cultivating up to the river banks and

³⁹ *Capacity Building - Agenda 21's definition (Chapter 37, UNCED, 1992.)*

lakeshores and water pollution still point to the need for further action. This is of further concern where divergent practices exist across borders that need to be harmonized if Water Resources Management in the Kagera Basin has to be enhanced.

12.1 Situation Assessment

12.1.1 Hydrological Monitoring

Hydrological data are essential for water resources management. Establishing and running a network in a transboundary context requires not only good cooperation between the national agencies responsible, but also modern equipment, databases and technical expertise. Traditional hydrometric instruments are expensive to operate and maintain and they are also prone to vandalism. As pointed out by an FAO Project (INT/752/ITA) and by the KBMP Project Document, it is better to employ modern sensors, data loggers, GSM networks and portable Acoustic Doppler Current Profilers.

In addition to the equipment there is a need for international expertise in designing the networks, establishing the stations and providing related training. It may be possible to find a local company with relevant expertise (e.g. in the monitoring equipment and SCADA systems used by industries) who can service the equipment.

In 2003 the KBMP Project Document estimated the input for this capacity building activity at 16 months of international specialist assistance; USD 165,000 for equipment and stations; plus transport and training. These figures need to be reviewed and updated.

12.1.2 Water Quality Monitoring

Overall the water quality of the Kagera Basin is good. The main water problems are due to microbiological contamination (sewage), impacts from agriculture including soil erosion and transport of sediment and nutrients. At the moment wetlands in the basin remove a large proportion of the sediments and nutrients and the LVEMP concluded that by far most of the nutrients in the lake are deposited from the atmosphere.

However, there is a scarcity of data. There are only few industries in the basin (most in Kigali), but it is reported that industrial wastewater is not treated and there is also pollution from mining. Some of these water pollution problems are of a local nature, but not all. Pressures on the land are very high and are increasing rapidly and industrialisation will also increase.

In order to monitor the water quality in the basin and establish trends, it is necessary to establish a network of regular water sampling stations, including the key stations of the hydrometric network. The samples should be analysed for standard parameters such as BOD, total-N, total-P, suspended solids as well as

potential pollutants from mining and industries such as arsenic and heavy metals.

The monitoring programme will be coordinated by the KBMU and but sampling will be carried out by national partners or private companies. The capacity building input required for this.

12.1.3 GIS

It is recommended that the KBMU uses a standard GIS package such as Map-Info or ArcGIS to present spatial information. GIS is also to be used in connection with planning and modelling.

A GIS database has been compiled in connection with the preparation of the Kagera Monograph. This will hopefully be made available to the KBMU. To the extent that the GIS database needs to be further developed, the work will be outsourced.

The KBMU staff should be able to use GIS in its presentations and reports and it is suggested that it employs a technical assistant who can use GIS.

The GIS data will also be used for the Decision Support System.

12.1.4 Decision Support Systems

A Decision Support System is basically a hydrological model and the accuracy of the forecasts depends entirely on the quality of the data input. Most hydrological models require long time series and such data do not exist for the basin.

The Project Document for the KBMP includes a review of Decision Support Systems and states that although considerable resources have been spent on DSS, many DSS in developing countries are underutilised. It therefore concluded that, at least in the early stages, systems should be kept as simple as possible by omitting operational modules and focusing on requirements for planning and assessment of scenarios. It further recommended that efforts should be made to design a GIS database and WEAP in such a way that they can be consistent with the work done by FAO and Nile-SEC.

The consultant proposes that work on simple DSS such as WEAP or MIKE Basin should be undertaken in cooperation with national institutions e.g., diploma courses to be instituted on DSS technology in the Basin countries.

12.1.5 The Policy and Institutional Environment

It has already been highlighted elsewhere in this report that a desirable effort is needed to improve the policy and institutional environment for effectively cascading meaningful transboundary water resource management interventions. Of particular concern is the status in Burundi and, to a lesser extent, Rwanda. Suc-

cess is demonstrated in Tanzania highlighting the important link between the existence of a vibrant policy environment and the development of both institutional and human resource capacity.

12.1.6 Existing Capacity Building Policies

In the riparian countries, the ministries responsible for public services are responsible for providing policy guidelines for human resources development in general and training in particular in all public service institutions. It is also responsible for coordinating staff development and training. On the basis of the national training policy, each ministry develops its own training program based on their mandate, specific training needs and budget. On staff recruitment, all ministry staff is recruited through their respective public service commissions.

In Uganda, local governments are responsible for recruitment of their personnel through their respective District Service Commissions. However, the terms and conditions of service are determined nationally and similar to those for central government employees.

In Tanzania, staff recruitment at both ministry and local government level is done upon securing permission from the President's Office and Ministry of public Service Management. It should be noted that Local Governments (LGs) in riparian countries largely depend on central government transfers for their staff salaries.

12.1.7 Coordination of Water Sector Training Programs

In all the riparian countries, the ministries responsible for water have a specific department for human resources development, which is responsible for staff training needs and capacity building. In Tanzania for example, Training is coordinated by the Directorate of Human Resources and Administration. The major challenge in all the four countries is the inadequate training budget which cannot meet capacity building needs of the ministries.

At District level, apart from Uganda, district level staff training activities is coordinated by respective line ministries, which are responsible for deploying, appraising staff performance and training of their staff operating at district level. In Uganda, each local government has a Human Resources Management Division under the Management Department, which coordinates all capacity building activities. As a requirement for LGs to access capacity building funds from central government, each LG has to prepare an Annual Capacity Needs Assessment Report and a Capacity Building Plan.

12.1.8 Existing Capacity Building Initiatives

Tanzania.

There are various institutions providing water related training in Tanzania, the major ones are:

- University of Dar es salaam-The Civil Engineering department under the faculty of technology is the main education institution in Tanzania providing undergraduate and graduate level training in civil engineering. The university is currently offers, among others an MSc in Water Resources Management. The department of geography also offers undergraduate and graduate training in geology.
- Arid University- also offers among others environmental engineering
- Sokoine University for Agriculture offers a wide range of water related training programs. These include the following undergraduate and graduate courses; Water Resources Management, Natural Resource Management, Forest Management and Wildlife management
- Rwegarulila Water Resources Institute (RWRI), is mandated to train water sector personnel and offer courses at ordinary diploma. The institute provide the following diploma courses; Water Supply and Sanitation Engineering, Hydrology, Hydrogeology, Water well drilling and Water Laboratory Technology.
- Eastern and Southern African Management Institute (ESAMI) based in Arusha, is a specialized management institute which provide generic management training in areas of Project planning and Management, human resources Management, information management.
- Water Sector Development Program: the government of Tanzania is implementing a Water Sector development Program for the period 2006-2025. The program has four components and one of the components is Capacity Building Development. The component will provide training for both technical and professional staff. The program will also provide tools and equipment to ministry, Water Basin offices and local governments. It will also rehabilitate dilapidated monitoring stations and networks including those located in Kagera River Basin.

Uganda

- Makerere University - The Civil Engineering Department under the Faculty of Technology is the main major institution in Uganda providing undergraduate and graduate level training in Civil Engineering, Water Resources Engineering and Environmental Engineering. The department currently offers, among others, BSc Civil Engineering, MSc Water Resources Engineering, MSc Environmental Engineering and PhD Civil Engineering. The Faculty of Science offers graduate level training in hydrology, hydrogeology and Meteorology and awards MSc degrees in these areas of specialization.
- Makerere Institute of Environment and Natural Resources – The Institute offers graduate level training courses in Environmental Management and Wetlands Conservation.

- Kyambogo University – This was formerly a technical training institute, which was recently upgraded to a University and currently offers, among others, undergraduate level training in Civil Engineering.
- National Meteorological Training Centre – Offers certificate and diploma level technical and practical training to meteorology observers, technicians and officers.
- Water Resources Institute - The Faculty of Technology of Makerere University is currently undergoing restructuring at the end of which it will transform into a College of Engineering and Technology. Under the proposed college, an Institute of Water Resources Research and Management will be created to provide specialized undergraduate and graduate level training in the following areas; Water Resources Engineering, Water Resources Planning and Management, Water Resources Assessment, Hydrology, Groundwater Hydraulics, Water Supply and Sanitation, Wastewater Management, River Engineering, Hydraulic Engineering, The major challenge to the successful launch of the proposed Water Institute is financial, physical infrastructure and human resources constraints.

Burundi

At present the available indigenous institutions have very limited competence in developing capacity in water sector disciplines. This is compounded by limited opportunities for overseas training for staff.

Rwanda

Generally speaking the country has low capacity in human resources required for water resources management and there is a need for comprehensive training in this area. The country has few qualified staff. Despite the recent introduction of a course in water management at the National University of Rwanda, There is a lack of national institutions capable of training in these fields and the country lacks adequate resources with which to send students overseas; the result is that the country has to buy-in expensive foreign experts, supervised by civil servants who also lacks skills in water resources management.

There is limited financial resource capacity to develop institutional structures for integrated Water Resource Management across the board in all the countries in the Basin. However, the University of Rwanda is building its capacity to play its role as a provider of vital Human resources as well as become a haven for research. Already, a Master of Science (Water Resource, Environment and management) course was started in 2006 with a capacity intake of 30 students. Also, a Masters programme has been introduced in Soil Science and Agro forestry (started in 2006) with a capacity of 23 students. This, in addition to the Faculty of Social Sciences is virgin ground for involvement of Educational and Research institutions in Water Resource management.

There is need, however, to support inclinations that allow the University disciplines to focus on:

- Water policy for Trans boundary management
- Regulatory practice for Fisheries, water utilization, etc as a necessary component in international relations
- A technical count of available resources and how they are being used and wasted (e.g. quantity and quality of water, both surface and underground), the rate of evaporation etc.
- Estimation of consumption needs for water (in Rwanda) based on both the development, domestic and Water for Irrigation needs

Other Water Resources Management Training Opportunities

Apart from the above training institutions in the Kagera River Basin Countries, there are regional and international training institutions which have distinguished in WRM training. These include but not limited to: University of Nairobi, Moi University, Jomo Kenyatta University, Egerton, the Kenya Water Institute and the Delft in Netherlands.

The Shared Vision Programme of the NBI

Under the Shared Vision Programme of the NBI, there is a comprehensive programme of technical assistance and capacity building provided to all the Nile Basin countries, including those in the Kagera basin. This programme should increase the availability of trained staff.

12.2 Capacity Needs Assessment

12.2.1 Institutional Challenges

The institutions involved in water resources management at all levels (national, regional/catchment, district, and community level) face a number of challenges that are affecting performance of their service delivery obligations. Most of the challenges are related to funding, staffing, equipment and relationships as discussed below.

12.2.2 Staffing at National Level

Staffing gaps were reported at the ministries responsible for water resources management in the four countries⁴⁰. In Tanzania for example, the Water Re-

⁴⁰ The multitude of donor-financed projects now being launched within the broad framework of the NBI, including the NELSAP projects, is posing a risk of brain drain to the water departments particularly of qualified personnel, an unintended (but entirely foreseeable) negative effect of the large infusion of external resources. This is a strategic matter that may need to be addressed by the riparian countries.

sources Department of the Ministry of Water has a staffing gap of 63 professionals and 32 technicians at both national and basin level. This was attributed to inadequate supply of professionals from the training institutions. Close to 20 years, the training program (which had started in early 1970s) for hydrologists at the Dar es salaam University had come to a halt. It has only been reactivated in late 1990s. Burundi was reported to be the most affected due to inadequate supply of skilled labour and inadequate funding.

The Directorate of Water Resources Management (Uganda) is newly created and has been marginalized for a long period of time as a department of Directorate of Water Development (DWD). This denied it access to required resources to fulfil its mandates and recruiting staff. The Transboundary Division which is critical to the Kagera River Basin is grossly under staffed. There is currently one staff manning the division.

12.2.3 Capacity Building Needs

12.2.4 Local Government Level Capacity Needs

The staffing level in the catchments districts is low. In the case of Uganda, this situation is attributed to the restructuring exercise of LGs which resulted into reduction in numbers of staff due to lack of qualifications and skills. Local Governments (LGs) have not been able to recruit new staff due to lack of funds. The Ministry of Local Government (MoLG) has advised LGs to recruit 65% of their staffing levels. Low staffing levels were also attributed to the creation of new districts. The new districts reduced staffing levels of mother districts because these (staff) were shared between the old and new districts. They lack experienced staff especially at the level of Heads of Department (HoD). Discussions with district political leaders during field visits revealed that senior civil servants are reluctant to work in new and remote districts. It was established that most Heads of Department are in acting positions.

The divisions under the production department (these include Agriculture, Fisheries, Veterinary and Livestock) face low levels of staffing due to the fact that they were not covered during the restructuring exercise of LGs. There is currently a freeze on recruitment in the production departments.

In Rwanda as is the case in Burundi, local authorities have no staff handling the Water Resource management function. These functions are supported by central government staff from the responsible ministries.

In Tanzania, the Lake Victoria Water Basin which is responsible for the Kagera River Basin is grossly under staffed. There are more technicians than professional staff deployed to carry out water resource management functions.

12.2.5 Insufficient Funds

The most commonly cited challenge in all partner institutions is lack of sufficient funds to enable effective implementation of activities. This is manifested in lack of tools and equipment, lack of transport and facilitation for field work and delay in the implementation of various projects. The Basin and Sub-Basin offices where they exist in Tanzania, for instance, are poorly resourced both financially and logistically. The Directorate of Water Resources Management in Uganda is hardly six months in existence but has been marginalized for many years as a department under the Directorate of Water Development (DWD). The district local governments have a very low local revenue base hence activities planned for implementation are not executed. The major cause of this problem is the general poverty in the community, the absence of a positive attitude amongst taxpayers, and political interference. In addition the central government transfers are highly earmarked and not released as per schedule impacting negatively on planning and implementation.

12.2.6 Skills Gap

At the national level, especially in the divisions in charge of transboundary issues, skills gaps in areas of water law, negotiation and conflict management were reported lacking. At the catchment/basin level (in the case of Tanzania), most of the staff are technicians. Even the few staff with engineering background was reported to be lacking skills in social mobilization and participatory skills-for mobilizing Water Users. They also reported inadequacies in areas of law especially for Water Rights Officers

As noted earlier, all the staff at LG level lack skills in integrated water resources management due to the fact that WRM is a centralized function in the four riparian states. In some districts, some of them possess basic qualifications but lack specialized skills to perform their duties.

In the specific context of proposed institutional framework and its functions, focus needs to be placed to developing technical skills within the proposed KBMU and the key national partner organizations in the following technical fields:

- Hydrological monitoring.
- Water quality monitoring.
- Decision support systems.
- Basin planning.
- GIS.
- EIA review.

12.2.7 Lack of Tools and Equipment

The performance of basin/local government level institutions in their respective functions was reported to be compromised by inadequate relevant basic tools and equipment such as computers and efficient means of transport, which are needed for performance of tasks by the staff. Even where equipment exists, they are neither well maintained nor rationally utilized. Most of the existing equipment is at various stages of disrepair. Because of lack of transport most staffs whose work is field-based are unable to go to the field.

12.2.8 Insecurity

Some parts of Burundi have for the last couple of years experienced civil unrest. Consequently, activities aiming at conservation of the catchment could not be carried out.

12.2.9 Lack of awareness of WRM issues at lower local government and Community levels

Field level consultations showed that there is limited knowledge of water resources management at district and lower levels of local governments. Both technical and political leaders demonstrated limited knowledge and appreciation of water resources issues during the consultative meetings held during the development of this capacity building plan. Most attributed the low priority given to water resources management issues in the LGs to this fact. This meant that water resources issues cannot be integrated in LG development plans and budgets.

12.2.10 Limited Participation of CSOs in WRM

Whereas there are many NGO and CBO implementing and promoting programs/projects on water supply services. There was no serious CSO identified involved in WRM during field consultations. They had little knowledge about water resources management. Indeed, most of them could not see the linkage between their activities and water resources management.

12.2.11 Inter-departmental Cooperation

At district level, there are established structures for departmental coordination and planning. Although organs for Planning exist and bring Heads of Departments together to plan, discussions with heads of departments, however revealed that departmental coordination and collaborations cannot be realized through such structures due to the inherent sectoral thinking among departmental heads. Genuine sharing of information was reported to be inadequate.

12.2.12 Absence of cross Border coordination

Field level consultations revealed that there is no established mechanism for inter district and cross boarder coordination and collaboration on transboundary

water resources management. This was attributed to the artificial national borders and laws governing the respective countries. These do not allow joint implementation of projects and resolution of conflicts between border local governments. The situation is also exacerbated by lack of data sharing mechanisms between the riparian countries.

12.2.13 Training Needs⁴¹

Capacity needs assessments were arrived at through a consultative process which involved officials of the respective ministries responsible for water in the four riparian countries, local governments in Kagera catchment, NBI, PMU (KRB) and CSOs. During the consultative process, specific training needs were raised by different stakeholders' agencies. Below are the findings.

Stakeholder Group	Training Needs
National Level WRM Institutions	
Transboundary Division, Regulation, Water Resources Monitoring and Assessment	Principles and practice of Conflict management Water and environment law Communication Needs Negotiation skills Integrated Water Resources Management Compliance Data Base Management(introduction to HYDATA, HYMOS, ARCGIS) GIS and remote sensing in environment planning and management Computation hydrology Integrated water resources management Principles and practice of Conflict management Processing of climatic data from conversion instrument Analytical Pumping test and ground water assessment Aquifer protection technical policy and regulatory strategies Water and environment law Regulation of hydraulic works Social communication Customer care and public relations Use of hydro geological assessment tools

⁴¹ The order of presentation of training needs does not suggest their order of priority. It is anticipated that the prioritization will be made based on the stakeholder appreciation which may differ from country to country.

Stakeholder Group	Training Needs
	Water balance computations Water resources Assessment Techniques Environment impact assessment Micro biological techniques Modelling and GIS processing systems
Basin/Catchment Level	Operation of Auto-met stations Operation of data-loggers for hydrometric stations Participatory assessment for water resources management Water quality monitoring Discharge measurement Geophysics Data Acquisition processing and interpretation for ground water Borehole geophysics Introduction to ground water soft ware Integrated water resources management (IWRM) Public prosecution/law for Water Rights Officers Finance management Transboundary WRM planning and management
Basin/Catchment Boards and committees	Leadership and management Aspects of the law i.e. Water Act 2002 Principles and practice of Conflict resolution Environment management Transboundary issues
Water Services Providers	Financial management Records keeping Operations and maintenance Customer care
Water Users Associations	Leadership training Finance management skills Project planning, Monitoring and management Report writing Training of Trainers (ToT) for management committee members Hygiene and sanitation Operative procedures and maintenance Introduction to the principles of IWRM

Stakeholder Group	Training Needs
Non Government Organizations	Resource mobilization Introduction to integrated water resources management Training of Trainers in IWRM Advocacy and lobbying Participatory methodologies Community Mobilization and Sensitization Project Identification and Management
Applying to all stakeholders (Cross Cutting)	Resource Mobilization skills Project Planning, design and management Conflict resolution Negotiation Communication Computer and software management skills PRA training Gender and IWRM Gender and Water Advocacy

12.3 Capacity Building Strategy and Plan

The recent efforts to reform the policies, laws and institutions in the water sector are an important step but cannot alone achieve the water sector goals and objectives unless appropriate technical and financial resources are made available to facilitate implementation of the policies and enforcement of the enacted laws.

In this section, a Capacity Building Plan is proposed to augment the proposed Policy, Legal and Institutional Framework for the management of the Kagera Basin water resources. Considering the various capacity needs, the key focus of the Capacity Building Plan will be to the realization of:

- Effective and results oriented coordination of TIWRM programmes/projects across the Kagera basin;
- Decentralized and efficient management of TIWRM activities within each riparian state
- Active mobilization and meaningful Involvement of all key stakeholders

The successful implementation of the Capacity Building Plan (CBP) will strengthen the capacity of the relevant institutions responsible for water re-

sources management related issues in the Kagera catchments and will promote effective stakeholder participation in the management and development of the water resources.

The Capacity Building Plan is targeted at the following key stakeholders in the Kagera River Basin as:

- national level staff in the Ministries responsible for water resources management e.g. the Ministry of Water and Environment in Uganda;
- water Resources Management Departments/Directorates staff especially those in Transboundary Division or involved in transboundary policies;
- regional water resources management authority staff e.g. the Water Basin Boards in Tanzania;
- local government staff in departments relevant to integrated water resources management;
- local government political leaders such as district/county council members;
- water users committee members;
- civil society organizations relevant to integrated water resources management; and,
- Local communities.

12.3.1 Strategic Focus of Capacity Building

The strategic focus of the Capacity building component will be:

- Strengthening the established Institutional framework – (The KBMU). This should basically strengthen capacity for Hydrological monitoring, Water quality monitoring, Decision support systems, Integrated Basin planning and coordination, GIS and EIA and review.
- Harmonization of Policies/legal provisions and enforcement mechanisms Across the Riparian countries to ensure Effective Trans boundary Water Resource Management
- Human Resource development (To be derived from harmonized policy and include Recruitment, orientation and training)
- Joint planning and implementation of Trans boundary development activities (involving all key stakeholders including private sector, NGOs & CSO)

- Periodic Monitoring and Evaluation

12.4 Strategic Objectives of the Capacity Building plan

The proposed Capacity Building Plan entails five strategic intervention measures to be implemented over a three year period. Their implementation will address the most critical existing capacity needs in the Kagera River Basin stakeholder agencies to ensure sustainable management and development of the transboundary water resources of the catchment. They include:

- Promoting functional public awareness and sensitisation campaigns on IWRM to enhance community knowledge and appreciation of Integrated Transboundary Water Resources Management and its contribution to socio-economic development; Public awareness programs may also be used to mobilize action on poverty in the basin.
- Strengthening capacity of relevant stakeholder institutions at national and local government levels to sustainably plan, manage and develop the shared water resources of the Kagera catchment;
- Supporting and promoting collaboration with Educational, Research, and other Training institutions relevant to the Kagera Catchment to strengthen their skills/knowledge and resources in the provision of continuous training and technical support required for sustainable management and development of the Kagera River water resources;
- Strengthening capacity and promoting collaboration with relevant NGOs, CBOs, and the private sector as key partners in the mobilisation and delivery of water related services to the local communities; and,
- Promoting and supporting the collection, management and sharing of water resources management data and information to support the planning and decision-making processes in the Kagera catchment.

It should be noted that the proposed intervention measures are extensive and will require substantial financial resources for their implementation. It is recommended here that their implementation be phased, with the scope of activities in each phase depending on the amount of financial resources available. We further suggest that the activities be prioritized to begin with the most critical ones that are likely to make immediate impact in the catchment.

12.4.1 Capacity Building Activities

It has been observed elsewhere in this report that the social economic development levels together with the level of establishment of Water Resource management policies, institutions and manpower within each of the riparian countries are all at different levels (probably with Tanzania showing marked superiority). In order to enhance benefit sharing, activities aimed at capacity building must be tailored to suit the development level of each country. In all, these ac-

tivities must focus on the following five strategic areas as guided by the Strategic objectives:

- Country policy development (where this is lacking);
- Policy harmonization and enforcement;
- Human resource planning, recruitment, deployment and development;
- Strengthening institutional capacity (proposed KBMU) for sustainable/integrated planning, management and development of the shared resources of the Kagera basin (to include provision of necessary tools/logistics)
- Stakeholder participation (including resource mobilization), promotion of good practice and information sharing.

Table 12.1 below summarises the key activities under each of the strategic intervention measures.

Table 12.1: Capacity Building Interventions

Intervention Measure	Key Activities
Promoting functional public awareness and sensitisation campaigns	<p>Produce IWRM Information, Education and communication materials such as posters, booklets and radio messages for dissemination to stakeholders and the general public.</p> <p>Organise and carry out information sharing seminars, workshops, messages and media for community leaders, CBOs, NGOs and the public.</p> <p>Promote and facilitate exchange visits between farmers groups, youth groups, environmental groups, women groups and politicians to share experience and learn from best practices.</p> <p>Organise sensitisation seminars for leaders in local authorities in IWRM.</p> <p>Carry out community sensitisation through public media, seminars and meetings, songs and drama intended to raise awareness on specific water resources related topical issues and practices like household sanitation and hygiene, water purification, control of soil erosion and water permit application.</p> <p>Organise annual “Water Fairs/Open days” to show case different activities in the catchment with a view of sharing new ideas, services, information dissemination and networking. The Management Unit could consider establishing prizes/rewards for catchment-wide competitions in good farming practices, water conservation techniques, good sanitation and hygiene practices, good fishing practices and wetland management practices.</p> <p>Facilitate community mobilization and participation in planning and implementation of integrated water resources management activities such as tree planting, sustainable harvesting of wetland products, fishing and harvesting of forest products. Community participation is likely to result into increased community</p>

Intervention Measure	Key Activities
	<p>contributions for IWRM projects and water related conflict resolution.</p> <p>Establish the Kagera River Basin website and quarterly newsletter to promote information dissemination.</p>
<p>Strengthening capacity of relevant stakeholder institutions</p>	<p>Conduct study visits to international transboundary water resources management institutions with a purpose of learning from good management practices and explore opportunities for future collaboration with Kagera Basin Management Unit</p> <p>Train staff of local authorities on a needs based assessment for IWRM functions</p> <p>Sponsor training of relevant central and local government technical officers in IWRM through formal graduate training and short professional training courses.</p> <p>Sponsor officers from relevant central and local government institutions, NGOs and CBOs, and the private sector to undertake short professional training courses to enhance their skills in IWRM and other transboundary water resources management related fields.</p> <p>Facilitate Local authorities to develop effective IWRM plans</p> <p>Organize short practical refresher Courses for extension workers and Technicians. The training could include; hydrological and meteorological observers; hydrological and meteorological technicians in data collection, quality control and analysis; Operation and maintenance of simple irrigation field equipment, hydrological, hydro-geological, water quality and meteorological monitoring equipment and instrumentation</p> <p>Collaborate with local/central governments to strengthen extension services in the catchment through training, equipping and facilitation of the operations of extension workers to deliver field practical training to farmers and other stakeholders</p>
<p>Strengthening capacity and promoting collaboration with relevant NGOs, CBOs, projects and the private sector</p>	<p>Support Training of Women and Youth Groups - Train and facilitate women and youth groups to carry out community sensitisation on sanitation and hygiene, riverbank protection, catchments afforestation and income generating activities</p> <p>Facilitate national agencies to put in place coordination mechanisms for departments and agencies in IWRM.</p> <p>Facilitate and equip NGOs and CBOs to carry out on-site demonstrations of good farming and water conservation practices in different water resources management related activities</p> <p>Training of Trainers for NGOs in IWRM</p> <p>Facilitate staff of local authorities and NGOs to undertake exchange visits within and outside the catchment area.</p> <p>Facilitate the formation of regular forums for NGOs, CBOs, Special Interest Groups for networking and collaboration on WRM</p> <p>.</p> <p>Support Training of NGO/CBO Personnel - Train and equip specific NGOs/CBOs to deliver local community training and information dissemination/translation, sensitisation and conflict reso-</p>

Intervention Measure	Key Activities
<p>Supporting and promoting collaboration with Educational, Research, and other Training institutions</p>	<p>Identify and strengthen Training Institutions in the region providing IWRM related courses</p> <p>Develop collaboration mechanisms with international, regional and national training institutions in IWRM for joint training</p> <p>Attend international, regional, national seminars and workshops on IWRM</p> <p>Support education institutions to include WRM related topics in their syllabus</p> <p>Support Curriculum Development for Universities, research institutions and other institutions of higher learning to improve their curriculum for undergraduate and graduate training to make it more responsive to the IWRM challenges in the basin.</p> <p>Introduce and support inclusion of IWRM related topics in primary and secondary schools syllabus and curriculum.</p> <p>Support Staff Development Programs in collaborating Universities and Research Institutions to improve on the quality of teaching. The support could be targeted towards further training and professional development of staff teaching water related courses. This would also include supporting specific research projects, participation in international conferences and preparation of publications in international journals.</p> <p>Provide teaching aids and equipment to collaborating education and research institutions. The support could lead to the establishment, equipping, operation and maintenance of water related Research Laboratories and resource centres.</p>
<p>Promoting and supporting the collection, management and sharing of water resources management data and information</p>	<p>Develop and Provide uniform data collection guidelines, standards, and formats, storage, and dissemination procedures for the Kagera catchment implementing institutions.</p> <p>Train the Management Unit staff and staff of partner institutions both at local and national level in data collection, processing and reporting.</p> <p>Strengthen River Catchments Monitoring Network by rehabilitating gauging stations and equipping them with modern gadgets.</p> <p>Establish a catchment based resource and information centre in best practices in IWRM</p> <p>Provide financial support to local and catchment based authorities to procure computers, internet, printers, and vehicles to support data collection, management, storage, analysis and reporting for effective data sharing.</p>

12.5 Capacity Building implementation Strategies

The experience of implementation of capacity building strategies provides the opportunity to explore some of the well tested capacity building strategies within the riparian countries. Based on this experience, the following capacity building implementation strategies can be easily adopted for use in all the riparian countries.

12.5.1 Tailored, on-the job, hands-on training:

The strategies that will be used to address the identified needs are wide ranging but the major focus will be given to on-the job/hands on training/mentoring that will be provided at the work place. The immediate supervisors of staff will be responsible for giving on the job training to the subordinates and will be complemented by Technical Assistance.

12.5.2 In-house workshops

Depending on the number of staff in need of a particular skill and for purposes of minimizing costs, the strategy to be used will involve organizing in-house workshops bringing together all the stakeholders who need a particular training. As much as possible the workshops should be facilitated by either senior staff or experienced resource person

12.5.3 Training resource pool

To build the capacity of the partner institution to sustain the capacity building activities, as far as possible, the Kagera River Basin Management Unit shall train a resource pool (from partner institutions) to facilitate public awareness on IWRM and training with the out-sourced external facilitators and offer mentoring. To complement the efforts of partner institutions, measures will be taken to include staff of NGOs operating in Kagera Basin both as facilitators and participants in the in-house workshops.

12.5.4 Exchange visits, secondment and attachments

This will be done for appropriate periods with specific terms of reference as other strategies that will be used by the partner institutions to develop the capacity of its staff. Local Governments (LGs) with excellent performance in different thematic areas will be identified for attachment. Good performing officers especially at LG level will be seconded to backstop weak LGs for short periods of time.

12.5.5 Career development courses

External course for career development such as those offered in water resources management functional areas such as hydrology, hydrogeology, water quality assessment, water regulations and compliance monitoring would be considered on a case-by-case basis

12.5.6 Phased Implementation

Given the broad scope of the proposed interventions, and substantial heavy financial resources required, and recognizing that the required resources are not available at the moment, the activities will be prioritized and the plan will be implemented in phases. The activities deemed critical will be implemented first. We propose that the first phase of the plan (2008-2009) could be em-

barked on immediately, under the auspices of the current Kagera River basin Project. The Capacity Building Plan is dynamic in nature and will be reviewed regularly to incorporate emerging capacity needs in the catchment. At the end of the first phase, the PMU will carry out a comprehensive review of the capacity building plan and roll it over to the second phase.

12.6 Monitoring and Evaluation Strategy

Evaluation of a capacity building activities will be done to obtain information on the effects of a training programme and assess their value in the light of that information. Evaluation will be done to measure success or failure of the capacity building activity, justify resources used for the activity and to help in deciding on how to improve it.

12.6.1 Levels of monitoring and evaluation

Evaluation of training activities will be done at four levels (reaction, learning, job-behaviour and functional level)

12.6.2 Reaction level

The trainees' reaction to the training, deals with the following aspects; their attitudes about the trainers, methods of presentation and usefulness of the subject matter. The facilitators as well as organizers of every training programme will be required to assess the reaction of the participants and to produce a report on the CB activity. The KBMU will be furnished with CB reports

12.6.3 Learning level

An assessment will also be done to ascertain what participants have learnt, (knowledge, skills and attitudes and can be translated in behaviour within the training situation). The facilitators will be required to give participants practical exercises to test acquisition of knowledge skills and positive attitudes.

12.6.4 Job behaviour/intermediate level

This will assess the application of learning in the form of changed behaviour when trainees go back to the job. Supervisors of participants of every capacity Building (CB) activity who participated in the identification of the CB needs will be required to assess the change in work behaviour of the participants after participating in a CB activity. This can be done through regular staff performance appraisal exercises.

On retooling, an appraisal will be done to assess whether the performance of the Staff has improved due to the equipment and tools provided

12.6.5 The functional/ultimate level

It is imperative that an assessment be made on how the changed behaviour of training participants affects the functioning of the organization. This will be gauged from the annual performance reports and staff performance appraisals.

Training should be evaluated at all the four levels because the chain can be broken at any of its links: a trainee may react correctly but fail to learn; or he/she may learn but fail to apply the learning on the job; or he/she may change his/her behaviour, but this may have no effect on the functioning of the organization.

12.6.6 Specific Monitoring and Evaluation Strategies

12.6.7 Action Planning

All participants of training programmes will be expected to develop action plans detailing activities they are going to carry out to put into practice knowledge and skills gained during the training and the support they require. Periodic reviews of performance against action plans should be carried out between the concerned staff and his/her supervisor

12.6.8 Activity reports

For every capacity building activity carried out, an activity report shall be written. The report should capture issues like participants, objective of the activity, issues addressed, facilitation and action plan. Copies of the activity reports will be submitted to the Secretariat by the organizers

12.6.9 Monthly summary reports

The Officer in charge of the capacity building at KBMU shall prepare a summary report to cover all capacity building activities conducted in the entire river basin against the work plan. This report will be used as a tool of assessing performance and identifying gaps in the implementation of the plan.

12.6.10 Quarterly reports

Quarterly reports will be compiled and submitted to the Committee responsible for capacity building in the KBMU so as to keep the committee informed and to use it during the monitoring of projects in the basin. It will also help them make decisions on remedial actions.

12.6.11 An annual report

To inform the annual rolling of the Capacity Building Plan, a report will be prepared by the officer in charge of capacity building, highlighting activities that were implemented and those that should be carried over to the following financial year.

12.6.12 Self Assessment

All participants in CB activities will be required to develop a self assessment checklist based on areas of identified needs and should periodically assess improvements in performance.

12.6.13 Work Plan and Budget

The first phase capacity building activities will be implemented during 2008 and 2009. The phase one activities will be decided and concretized by the KBMU. The activities that could be implemented during the first phase of the Capacity Building Plan, including their tentative timing, are shown in the table 13.1 below. Table 13.2 shows the logical framework for implementation of the Capacity Building plan and Table 13.3 provides the Tentative Budget for capacity building.

Table 12.2: Tentative Work plan

Activity	2008			2009			2010		
Policy Harmonization Advocacy Workshops	■	■	■						
Regional Transboundary Planning Harmonization Training Workshops for Relevant Ministry Technical Staff							■		
Produce IWRM IEC materials such as posters, booklets									
Workshop for information sharing		■							
Seminar for local leaders		■	■						
Media Activities		■	■	■	■	■	■	■	■
Catchment competitions in good practice							■		
Establish the Kagera River Basin website			■						
Production of quarterly newsletter			■	■	■	■	■	■	■
Orientation Workshop for Staff in Local Authorities			■						
Study Tour for national and local staff						■		■	
Transboundary IWRM Planning workshops for Local Authority Staff									
Exchange Visits for Local Authority staff		■		■	■	■			■
IWRM Planning and Resource mobilization training workshops for National Level Institutions			■				■		■
Exchange Visits for National Level Institutions				■				■	
Short Professional Training Courses			■		■	■		■	
Progress and Strategy Review Workshop			■				■		
Orientation training for			■	■	■	■			

Activity	2008		2009				2010				
Extension Staff, Technicians and Mechanics on Key Implementation issues in Transboundary IWRM											
Orientation Workshop for NGOs on Transboundary IWRM											
Training of Trainers for NGOs Staff											
Facilitate the formation of regular forums for NGOs, CBOs, Special Interest Groups for networking and collaboration on IWRM											
Curricular Development and Development of Training Materials											
Consultative meetings for International, Regional and National training Institutions											
Internal and National Conferences, Workshops and Seminars											
Develop manual for Guidelines, Standards and procedures for Data sharing											
Train the Management Unit and Staff of partner Institutions in data collection, Processing and reporting											
Rehabilitation and Expansion of Monitoring Network											
Procurement of Computers and Printers											
Procurement of Vehicles											

Table 12.3: Logical framework for implementation of the Capacity Building plan.

Narrative Summary	Objectively verifiable indicators	Means of verification	Important assumptions	Responsible Person
Strategic Objective 1: Promoting functional public awareness and sensitization				
Activities				
1. Produce IWRM Information, Education and communication materials such as posters, booklets and radio messages for dissemination to stakeholders and the general public.	Number of communication materials produced Number of people listening to radio message	Copies of posters and booklets Listenership survey	Availability of resource persons and consultants to produce materials Availability of radio stations in remote areas	PMU/KBMU
2. Organise and carry out information sharing seminars, workshops, messages and media for community leaders, CBOs, NGOs and the public.	Number of seminars and workshops organized Number of community leaders sensitised	Training reports	Willingness of community leaders to attend seminars and workshops	Local Governments/consultant firms
Promote and facilitate exchange visits between farmers groups, youth groups, environmental groups, women groups and politicians to share experience and learn from best practices.	Number of exchange visits	Exchange visit reports	Cooperation by community groups	Local Governments/PMU
Organise sensitisation seminars for leaders in local authorities in IWRM.	Number of sensitization seminar organized Number of local leaders trained	Sensitisation/training reports	Availability of resource persons/firms	Local Governments/PMU/NGOs/Consultant firms
Carry out community sensitisation through public media, seminars and meetings, songs and drama intended to raise awareness on specific water resources related topical issues and practices	Number of songs and drama composed and performed Number of meetings and seminars organised	Minutes of meetings Seminar reports Receipts and contracts with media companies Listenership survey	Positive community response	NGOs/consultancy firms/local governments

Narrative Summary	Objectively verifiable indicators	Means of verification	Important assumptions	Responsible Person
Organise annual “Water Fairs/Open days” to show case different activities in the catchment with a view of sharing new ideas, services, information dissemination and networking.	Number of annual Water fairs/open days organised	Annual reports	Positive community response	Local governments and Ministries responsible for WRM
Facilitate community mobilization and participation in planning and implementation of integrated water resources management activities	Number of community mobilization meetings organised	Mobilization reports M&E reports	Availability of resources	PMU/Local governments
Establish the Kagera River Basin website and quarterly newsletter to promote information dissemination.	Website established Number of newsletter produced	Checking the website Copies of newsletters	Availability of resource persons to develop the website	PMU/Consultant firms
Strategic Objective 2: Strengthening capacity of relevant stakeholder institutions				
Activities				
Conduct study visits to international transboundary water resources management institutions with a purpose of learning from good management practices and explore opportunities for future collaboration with Kagera Basin Management Unit	Number of study visits conducted	Study visit reports	Cooperation from international transboundary water resources management institutions	PMU
Train staff of local authorities on a needs based assessment for IWRM functions	Number of local authority staff trained in IWRM	Training reports Copies of academic reports such as certificates and diplomas	Availability of training institutions	PMU
Sponsor training of relevant central and local government technical officers in IWRM through formal graduate training and short professional training courses.	Number of central government staff trained in IWRM	Training reports Copies of certificates for degrees and diplomas	Availability of training institutions	PMU
Sponsor officers from relevant NGOs and CBOs, and the private sector to undertake short professional training	Number of NGOs and private sector staff	Training reports Copies of	Availability of training institutions	PMU/Local Governments

Narrative Summary	Objectively verifiable indicators	Means of verification	Important assumptions	Responsible Person
courses to enhance their skills in IWRM and other transboundary water resources management related fields.	trained in IWRM	academic reports such as certificates and diplomas		
Facilitate Local authorities to develop effective IWRM plans	Number of local authorities supported	Copies of IWRM Plans	Availability of resource persons	PMU/Consultants
Organize short practical refresher Courses for extension workers and Technicians.	Number of refresher courses organised	Training reports	Availability of resource persons	PMU/Local authorities
Collaborate with local/central governments to strengthen extension services in the catchment through training, equipping and facilitation of the operations of extension workers to deliver field practical training to farmers and other stakeholders	Number of extension staff trained Number of extension staff provided with equipment and facilities	Training reports Stores register	Availability of resource persons	PMU/KBMU
Strategic Objective 3: Supporting and promoting collaboration with Educational, Research, and other Training institutions				
Activities:				
Identify and strengthen Training Institutions in the region providing IWRM related courses	Number of training institutions supported	Memorandum of understanding	Cooperation from training institutions	PMU
Develop collaboration mechanisms with international, regional and national training institutions in IWRM for joint training	Number of international and regional training institutions collaborating with the program	Memorandum of understanding	Cooperation from training institutions	PMU/KBMU
Attend international, regional, national seminars and workshops on IWRM	Number of staff attending workshops	Workshop reports	Availability of timely information on international conferences	PMU
Support education institutions to include WRM related topics on their syllabus	Number of institutions supported	Copies of upgraded syllabus	Institutional support and cooperation	PMU/ministries in charge of education

Narrative Summary	Objectively verifiable indicators	Means of verification	Important assumptions	Responsible Person
Support Curriculum Development for Universities, research institutions and other institutions of higher learning to improve their curriculum for undergraduate and graduate training to make it more responsive to the IWRM challenges in the basin.	Number of training and research institutions improved their curriculum	Copies of upgraded curriculums	Institutional support and cooperation	PMU/ministries in charge of education
Introduce and support inclusion of IWRM related topics in primary and secondary schools syllabus and curriculum.	Syllabus and curriculum integrated with IWRM	Copies of upgraded curriculums	Institutional support and cooperation	PMU/ministries in charge of education
Support Staff Development Programs in collaborating Universities and Research Institutions to improve on the quality of teaching.	Number of staff trained Number of research projects supported Number of conferences attended by staff Number of publications in international journals	Training reports Copies of academic awards	Availability of goodwill on the part of university leadership	PMU/ministries in charge of education
Provide teaching aids and equipment to collaborating education and research institutions.	Number of water related laboratories and resource centres equipped. Number of teaching aids provided	Observation Stores register	Availability of funds	PMU
Strategic Objective 4: Strengthening capacity and promoting collaboration with relevant NGOs, CBOs, and the private sector				
Activities				
Train and facilitate women and youth groups to carry out community sensitisation on sanitation and hygiene, river-bank protection, catchments afforestation and income generating activities	Number of women and youth trained	Training report	Availability of resource personnel	NGOs/local authorities

Narrative Summary	Objectively verifiable indicators	Means of verification	Important assumptions	Responsible Person
Facilitate and equip NGOs and CBOs to carry out on-site demonstrations of good farming and water conservation practices in different water resources management related activities	Number of on-site demonstration established	Site visits	Availability of community cooperation	PMU/Local authorities
Training of Trainers for NGOs in IWRM	Number of NGOs staff trained as ToTs	Training reports	Availability of resource personnel	PMU/Consultant firms
Facilitate staff of local authorities and NGOs to undertake exchange visits within and outside the catchment area.	Number of exchange visits organized	Exchange visits reports	Existence of inter-district cooperation	PMU
Facilitate the formation of regular forums for NGOs, CBOs, Special Interest Groups for networking and collaboration on WRM	Number of forums formed	Memorandum of understanding Membership register	Appreciation of IWRM by the civil society	PMU/Local authorities
Support Training of NGO/CBO Personnel - Train and equip specific NGOs/CBOs to deliver local community training and information dissemination/translation, sensitisation and conflict resolution	Number of NGO/CBO Personnel trained	Training reports	Availability of resource personnel	
Strategic Objective 5: Promoting and supporting the collection, management and sharing of water resources management data and information				
Activities				
Develop and Provide uniform data collection guidelines, standards, and formats, storage, and dissemination procedures for the Kagera catchment implementing institutions.	Guidelines and standard for data collection in place	Copies of manuals for guidelines and standards	Availability of competent resource persons and consultants to develop the manuals	PMU/KBMU
Train the Management Unit staff and staff of partner institutions both at local and national level in data collection, processing and reporting.	Number of staff trained	Training reports Copies of certificates	Availability of competent training institutions	

Narrative Summary	Objectively verifiable indicators	Means of verification	Important assumptions	Responsible Person
		and diplomas		
Strengthen River Catchments Monitoring Network by rehabilitating gauging stations and equipping them with modern gadgets.	Number of monitoring network rehabilitated	Observation Completion reports receipts	Availability of funds	
Establish a catchment based resource and information centre in best practices in IWRM	Resource centre in place	Observation Completion certificates	Donor support available	
Provide financial support to local and catchment based authorities to procure computers, internet, printers, and vehicles to support data collection, management, storage, analysis and reporting for effective data sharing.	Physical items procured i.e. computers, vehicles	Financial reports Receipts	Donor support available	PMU

Table 12.4: Tentative Budget for capacity building

	Activity	Quantity	Rate	Total \$
1.0	Public awareness and Information Dissemination			
1.1	Produce IWRM IEC materials such as posters, booklets	50,000	0.5	25,000
1.2	Workshop for information sharing	15	1000	15,000
1.3	Seminar for local leaders	2,250	20	45,000
1.4	Media Activities	1		50,000
1.5	Catchment competitions in good practice			50,000
1.6	Establish the Kagera River Basin website	1		12,000
1.7	Production of quarterly newsletter	4	1,500	6,000
	Sub-Total			203,000
2.0	Strengthen capacity of relevant IWRM stakeholder institutions at National and local government levels			
2.1	Orientation Workshop for Staff in Local Authorities	200	100	20,000
2.2	Study Tour	10 staff and one consultant		100,000
2.3	IWRM Planning workshops for Local Authority Staff	15	1000	15,000
2.3	Exchange Visits for Local Authority staff	80	350	28,000
2.4	IWRM Planning workshops for national Level Institutions	4	1000	4,000
2.5	Exchange Visits for national Level Institutions	40	350	14,000
2.5	Short Professional Training Courses	4	30,000	120,000
2.6	Refresher training for Extension Staff, Technicians and Mechanics	100	100	10,000
	Sub-Total			791,000
3.0	Strengthen Capacity of NGO and CSOs in IWRM			
3.1	Orientation Workshop for NGOs on IWRM	100	100	10,000
3.2	Training of Trainers for NGOs Staff	20	400	8,000
3.3	Facilitate the formation of regular forums for NGOs, CBOs, Special Interest Groups for networking and collaboration on IWRM			23,000
	Sub- Total			41,000
4.0	Support and promote collaboration with Educational, Research, and other Training institutions relevant to the Kagera Catchment			
4.1	Curricular Development and Development of Training Materials			50,000
4.2	Consultative meetings for International, Regional and National training Institutions	10	5,000	50,000
4.3	Attend Internal and National Conferences, Workshops and Seminars	10	3,000	30,000
	Sub-Total			130,000

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5.0	Support the Collection, Management and Sharing of IWRM data and Information			
5.1	Develop manual for Guidelines, Standards and procedures for Data sharing			20,000
5.2	Train the Management Unit and Staff of partner Institutions in data collection, Processing and reporting	50	1,000	50,000
5.4	Rehabilitation and Expansion of Monitoring Network	10	5,000	50,000
5.5	Procurement of Computers and Printers	15	3,000	45,000
5.6	Procurement of Vehicles	6	25,000	150,000
	Sub-Total			345,000
	Grand Total			\$1,510,000

Appendix 1: Terms of Reference for the Assignment

1. Introduction

1.1 Background

The Nile Basin Initiative

The Nile Basin Initiative (NBI) is a partnership of the riparian states of the Nile⁴². The NBI seeks to develop the river in a cooperative manner, share substantial socioeconomic benefits, and promote regional peace and security to achieve its shared vision of “sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources”. The NBI’s Strategic Action Program is made up of two complementary programs: the basin wide Shared Vision Program to build confidence and capacity across the basin, and Subsidiary Action Programs to initiate concrete investments and action on the ground in the Eastern Nile and Nile Equatorial Lakes sub-basins focuses on building regional institutions, capacity, and trust, to lay the found b-basins. The programs are reinforcing in nature. The Shared Vision Program for unlocking the development potential of the Nile, which can be realized through concrete investments, carried out under the subsidiary action programs.

The Nile Equatorial Lakes Subsidiary Action Program (NELSAP)

The countries of the Nile Equatorial Lakes Subsidiary Action Program - Burundi, D.R. Congo, Egypt, Kenya, Rwanda, Sudan, Tanzania, and Uganda - have identified a number of projects to promote poverty alleviation, economic growth, and the reversal of environmental degradation in the sub-basin. The projects are grouped into two major areas: Natural Resources Management and the Environment and Hydropower Development and Trade, and target investments in agricultural development, fisheries development, water resources management, water hyacinth control, hydropower development and transmission interconnection. A small NELSAP Coordination Unit (NELSAP-CU) based in Kigali, Rwanda, in collaboration with the NBI Secretariat in Entebbe, Uganda, coordinates and facilitates the activities of the program.

The Kagera Transboundary Integrated Water Resources Management and Development Project

The Kagera Transboundary Integrated Water Resource Management and development project is one of the three river basin projects implemented under the NELSAP. Others include the Mara River basin Project and the Sio-Malaba-Malakisi Transboundary Integrated Water Resources Management and Development Projects located in Kenya and Tanzania respectively. The Kagera region contains some of the world’s poorest countries and is marred by conflict and civil strife. The basin is characterized by low productive peasant agriculture and endemic poverty. There is continuing land degradation and loss of soil fer-

⁴² Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda. Eritrea is participating actively in the NBI in an observer.

tility caused by population pressure and primitive farming methods. There is ongoing deforestation and an almost total absence of reforestation activities. Virtually the only source of energy is biomass, contributing to the deforestation. The soil erosion results in an increased nutrient load in the river and also in Lake Victoria, leading to problems with water hyacinth and eutrophication. In the basin area there is also insufficient water for household use and for grazing. Wetlands are exploited and degraded, and there are unplanned migrations across borders of pastoralists with their cattle causing friction in the border zone.

Current Water Resources Situation in the River Basin

The Kagera basin is spread over Burundi, Rwanda, Tanzania and Uganda with a total area of 59, 800 sq.km. It is the principal contributor of water to Lake Victoria and is regarded by many as the source of the White Nile. Within the Kagera catchment's lies 75 % of the land area of Rwanda and 52 % of Burundi. The Kagera basin area in Tanzania conventionally includes the area draining to Lake Ikimba, although this is in fact a closed basin. Only the lowest reaches of the Kagera flow through Uganda, although the southern parts of several Ugandan districts drain into the river and therefore lie within the basin. The Kagera is the largest of the 23 rivers that drain into Lake Victoria and it carries 34% of the annual river inflow to the lake. This proportion drops to 24% when the input of rain less evaporation on the lake surface is taken into account.

The Kagera basin has a general elevation of 1,200 – 1,600 m but rises above 2,500 m in the west, with peaks reaching 4,500 m. Rainfall is less than 1,000 mm over most of the eastern half of the basin but rises to over 1,800 mm in the west, where most of the runoff is generated. Although the west is partly forested, much of the basin has become intensively cultivated resulting in erosion and sediment loading of rivers in the high rainfall areas. The upper tributaries are generally steep but include flatter reaches, where swamps have formed. The middle course of the river and its tributaries above Rusumo Falls is extremely convoluted, this reach reflecting regional warping and drainage reversal, with some tributaries retaining the appearance of flowing towards the Congo. Several side valleys enter the river with their courses filled either with lakes or swamps. The river then turns east and flows across a plain in an incised channel before entering Lake Victoria through huge papyrus swamps.

The swamps and lakes along the lower Kagera form the Ibanda Arena game reserve in Tanzania and Kagera National Park in Rwanda, once an important area for rhinos (now locally extinct) and still important for birdlife. The estuary where the Kagera enters Lake Victoria has the characteristics of an inland delta and is covered by the Minziro swamp forest, at times under 50 cm of water for extended periods of time. The forest is considered a significant environmental asset and an important source of fishing for the local people.

The dense settlement and intensive cultivation in the Kagera River catchments has resulted in heavy pollution loads in tributary rivers. In addition, human encroachment on already fragile watersheds has led to loss of forests, soil erosion and high sediment load reaching the river systems. On the other hand, there are

opportunities to develop the rivers of the Basin so that agriculture can be practiced more sustainably, forests protected from destruction and the water is shared equitably between different groups and countries.

Towards a Framework for Transboundary Cooperation

The IWRM approach to planning in the Kagera River basin entails selecting a development path that maximizes the benefits from development across the broad spectrum of water dependent sectors. For this development to take place, an institutional framework for transboundary cooperation is required, involving all four basin countries. This framework would be hierarchical in the sense that it would provide for decisions by high officials just below the political level as well as local government representatives. It would ensure that each of the four countries has the capability to carry out agreed actions with the part of the basin within its own territory.

A high-level political framework for cooperation would be important, but it would likely be a slow and cumbersome process essentially involving centralized government. In all four countries an emphasis on decentralization of governance has shifted the apex of decision-making to regional and district organizations as well as elected local bodies. Since river basin planning and management essentially is an activity that spans several districts, there is greater need for coordination between management entities as central, regional and district levels. According to the subsidiarity principle, decision-making should take place at the lowest possible level needed to carry out a given task, but the process must be linked to the central ministry of water resources (equivalent) in each country and probably other national departments because of the national implications. The Project would create an institutional framework focusing on national and international cooperation at all level. The Project would help create the enabling framework that would allow such district to district cooperation to prosper, where the situation is appropriate.

1.2 Project Objectives, Outputs and implementation mechanisms

Overall project objectives

The overall Project Objective is “To develop tools and permanent cooperation mechanisms for the joint, sustainable management of the water resources in the Kagera River Basin in order to prepare for sustainable development-oriented investments to improve the living conditions of the people and to protect the environment.” Specific objectives include (i) establishment of a sustainable framework for joint management of the shared water resources of the Kagera River Basin (ii) development of an investment strategy and conducting pre-feasibility studies (iii) building capacity at all levels for sustainable management and development of Kagera River Basin and (iv) implementing small-scale investment projects.

Project Outputs

Project outputs include the following (i) A transboundary management framework including a management strategy established for the Kagera River Basin (ii) A Kagera monograph and information management database established. A simple model for assessing development scenarios and selection of preferred development strategies available. Pre-feasibility studies conducted (iii) A common strategy for the joint management of the water resources of the Kagera river basin developed and pre-feasibility studies for proposed investments conducted (iv) Staff trained and capacity at national, catchment and local levels for the sustainable management and development of the Kagera catchments strengthened (v) Community awareness about environmental management issues and development options increased. Basin-wide sustainable hydro-meteorological network and a water quality baseline established and (vi) Small-scale investment projects identified and implemented.

Implementation mechanisms

The project which is jointly funded by Sida and NORAD is implemented within a period of four years as part of the NELSAP portfolio. Coordination is maintained between this and other NELSAP projects through the NEL-CU office in Kigali, Rwanda. The project is managed by a small Project Management Unit (PMU) based in Kigali in Rwanda. The project is supervised by a Regional Project Steering Committee (RPSC) constituted by representatives of the national government agencies of Tanzania, Rwanda, Burundi and Uganda. The RPSC reports to the Nile Equatorial Lakes Technical Advisory Committee (NEL-TAC). In order to co-ordinate and facilitate the implementation of projects and activities at the national level, part-time National Liaison Officers (NLOs) have been appointed by the respective governments. They will devote 30% of their time to the project activities.

2. Consultancy Objectives

Project objectives

The primary objective of the study is to assess the relevant policy, legal and institutional framework of each country as background for developing a common institutional framework for transboundary cooperation in the Kagera basin. The specific objectives of this consultancy will include the following

To assess the legal, policy and institutional frameworks for implementation of Kagera transboundary integrated water resources management and development Project

To review the legal, policy and institutional frameworks for integrated water resources management and development in the Kagera River Basin

To provide recommendations on areas for harmonization of the legal, policy and institutional frameworks for implementation of the Kagera River Basin Project

To develop and recommend a joint cooperative framework for the management and common strategy for the development of the Kagera basin.

3. Scope of Services and Task Assignments

Scope of Services

This Consultancy which will be based in Kagera Basin region, will review the policy, legal and institutional frameworks for integrated water resources management and development in the four countries Burundi, Rwanda, Tanzania and Uganda. The Consultant is required to develop a common cooperative framework for the management and development of the wide Kagera and water resources. The consultancy will encompass all aspects pertinent to the implementation of IWRM and shall include but in no way limited to the stakeholders' status, legal, policy and institutional aspects of integrated water resources management and development at catchments level.

Tasks Assignments

Task 1: Review the present policy, legal and institutional setup for management of Transboundary water resources and identify areas of commonality and disparity between the countries at regional, national and catchments level.

Activities will include the following:

Gather relevant information and data on experiences in the catchments, at national and regional level on integrated water resources management and development

Assess, based on gathered information and experience in integrated water resources management and development, the policy, legal and institutional frameworks for implementation of integrated water resources management and development at catchments level.

Review operational plans within the river basin as made by the water resources authorities with a view to come up with an inventory that would complement the institutional framework.

Carry out a comprehensive stakeholder Analysis for stakeholders involved in IWRM within the basin and prepare comprehensive plan for consultations at all levels within the basin. The consultations are aimed at dialogue on the type of cooperative framework developed.

Outputs: Report on information and experiences existing on implementation of integrated water resources management and development in the basin at local, catchments, national and regional level.

Task 2: Review the policies in the four riparian countries with regard to integrated water resources management and development and identify gaps.

The consultant will be expected to address the following aspects in the policy review pertaining to implementing transboundary Water Resources Management in Kagera basin:

Review the present policy, legal and institutional setup management of national and transboundary water resources; identify areas of commonality and disparity between the four counties.

Evaluate past performance of the water sector in the four countries under the existing policy, legal and institutional framework; review past experiences of national and international programs, national plans; highlight success, failures, threats and challenges. Attention will be paid to the following :

Water Resources Development project selection and approval criteria

Water allocation and transfers if any exist within basin countries of Burundi, Rwanda, Uganda and Tanzania.

Provisions for gender mainstreaming and stakeholder participation in implementation of IWRM within the river basin.

Assessment of Linkages with other economic, land, environment policies etc

Assess the adequacy of existing policy, legal and institutional setup; identify weakness and gaps.

Propose harmonized improvements to policy, legal and institutional frameworks in the four countries; outline a stepwise process and time frame for transformation from present situation to end situation

Review of water use and water right applied in each country of Kagera region

Gaps for water resource management in the transboundary sites

Provisions for stakeholder participation in implementation of IWRM within the river basin.

Assessment of Linkages with other economic, land, environment policies etc

Outputs: Recommendations on the appropriate policy frameworks for the sustainable utilization, management and development of the shared water re-

sources at local, catchments, national and regional level but with particular emphasis on catchments planning and management.

Task 3: Review of experiences of institutional frameworks including past initiatives like the Kagera Basin Organization, CEPGL, EAC, etc. and national institutions to aid in development of an institutional framework for Transboundary cooperation in the Kagera basin.

The experience of regional organizations will be analyzed in order to highlight the success and gaps that can help in putting in place a new institutional framework for the management of the Kagera basin. The study will be focus on the following aspects:

Review of the organizational framework of regional organizations (KBO etc) for transboundary water resources management in the Kagera basin

Review of the KBO functions, agreement and implementation arrangements clearly pointing out weaknesses, opportunities, and threats

Review the role of the participation of the different partners and stakeholders (Public and private sectors, gender, NGOs, Civil society, etc.)

Review typical Joint Project Development Agreements like the Regional Rusumo hydropower and multipurpose project.

Outputs: Synthesis of lessons learnt from implementation of regional institutional frameworks in transboundary IWRM in the Kagera Basin.

Task 4: Review and recommend for harmonization the policy, legal and institutional frameworks in the two countries and outline a stepwise process and timeframe for transformation towards an apex institution.

The assessment will include but not limited to the following aspects in the four riparian countries in a transboundary context

The hydrological resource endowment of the Kagera river basin

The present competing uses of the water and their patterns of use differentiated by sector, public and private uses, gender, and income level etc

Formal and informal institutional arrangements for sharing water between uses within the basin and the provisions or potential for satisfying the unmet water needs of vulnerable groups.

The present formal and informal arrangements for allocating and managing water between uses and how it affects equity and productivity of sectoral uses within the river basin.

The nature of conflicts between uses and the means for conflict resolution within the basin

The trends and scenarios, with reference to the future of sectoral allocations and access to water resources by the vulnerable groups within the Kagera basin.

Examine appropriate anchors for the transboundary institutional framework so developed with due recognition of emerging regional initiatives like the Lake Victoria basin Commission and the Nile Basin Initiative.

Examine the principles and practices of institutional design in IWRM, in particular, issues of the institutional matters associated with transboundary, national and inter sector water allocation management, institutional relationships with environmental agencies, and with other related natural resource agencies and managers.

Review the options for establishing water usage rights; review historic/traditional means of resolving competition over water and recommend guidelines for efficient resolution of such claims, keeping in mind cultural implications.

Review legal coverage of water and related resources in a transboundary context, provisions for water rights in the water acts that affect transboundary WRM, provisions for conflict resolution in water use in transboundary basins and how they can be applied to the Kagera river basin.

Review the legal Scope for public/private sector participation in transboundary WRM

Centralized regulatory mechanisms and integration of the overall legal framework within the water law.

Principles and practices of managing water resources in the context of its role as an economic good for comprehensive IWRM

Assessment of resources required to operationalise the cooperative framework

Provide input to the harmonization of the legal, policy and institutional process to ensure that the policies and accompanying strategies present a well-developed and agreed upon position on the institutional issues of IWRM in the basin. This is to include consideration of the formation of a coordinating or integrating mechanism taking into account matters of catchment management in an IWRM context.

Propose an institutional framework for Transboundary cooperative of the Kagera basin and develop the agreement to be signed by the riparian countries,

Outputs: Recommendations on the appropriate legal and management frameworks for the sustainable utilization, management and development of the shared water resources at local, catchment, national and regional level but with particular emphasis on catchment planning and management.

Task 5: Outline capacity building needs in the different stages of the above process.

This will include but not limited to identifying formal organizations, organizational procedures, financing mechanisms and information management systems of the organizations as input into a proposed cooperative framework for the river basin.

Review of reforms and national strategies for IWRM Management and development

Outline capacity building needs in the different stages of the above process.

Provide advice on human resources needed for an expanded IWRM function in the basin in the future, and identify the capacity-building and training needs to be addressed

Provide advice on financial resources needed for an expanded IWRM function in the basin in the future

Outputs: Capacity building needs assessment and Capacity building strategy/plan for transboundary IWRM in the Kagera Basin.

4. Summary of Outputs

The consultant will be required to submit a report both in soft copy and 15 bound copies to the PMU highlighting an assessment of the policy, legal and institutional frameworks for integrated water resources management and development and providing recommendations for harmonization of the policy, legal and institutional frameworks for the joint management and development of the shared water resources with emphasis to catchments planning. The specific outputs of this consultancy include the following:

Recommendations for a joint cooperative framework and clear strategy for the common management and development of Kagera River Basin and agreement to be signed by the riparian countries.

Clear proposals and recommendations for legislative, policy and institutional reviews for integrated water resources management and development

Recommendations for harmonized legal, policy and institutional frameworks for integrated water resources management and development.

Strategic Action Plan for Capacity building in IWRM and investment requirements.

Strategic Action Plan for gender mainstreaming and investment requirements.

Strategic Action plan for stakeholder participation and investment requirements.

5. Study Duration

The duration of the consultancy will be 10 Calendar months effective January 2007. It is envisaged that at the end of the consultancy, dialogue will continue towards establishment of a cooperative framework so as to ultimately facilitate the subsequent process of development of the river basin.

6. Organization and Co-operation Arrangements

The Consultant will be directly supervised by the Kagera Project Management Unit on behalf of the Nile Basin Initiative. A Regional Project Steering Committee which consists of 12 high ranking Government Officers from the Governments of Rwanda, Burundi, Uganda and Tanzania will oversee the work of the consultant, while 4 National Liaison Officers (one from each riparian country) will coordinate the consultations at the national levels and liaison with the relevant institutions. The outputs from the study will be regularly communicated to the funding agencies (Sida NORAD and the European Union) through the Nile Equatorial Lakes Subsidiary Action Program Coordination Unit. The client will hold discussions with the consultants at certain stages in the consultancy to ensure that work is proceeding along acceptable lines. For the purpose of these meetings the consultant will produce brief progress reports on the status of his/her work, which will be incorporated into formal records of the meeting.

6.1 Responsibilities of the Consultant

Preparation of the program of work

Study and review of all documents relevant to the assignment and the NBI

Hold discussions with the PMU staff, NEL-CU staff and facilitate consultations with staff of the national governments of Burundi, Uganda, Rwanda and Tanzania and other stakeholders within the project area.

Propose harmonization of the legal, policy and institutional frameworks for integrated water resources management and development towards a cooperative framework for the Kagera river basin.

Develop a Transboundary cooperative framework for Kagera River Basin riparian countries.

6.2 Responsibilities of the Client

Provide all the relevant documents for the assignment in both hard copy and soft copy

Facilitation of the consultant through arranging consultative meetings

Collection of comments from all stakeholders and submission of comments to the consultant.

Organize meetings of the RPSC for validation of reports.

6.3 Facilities and Services

The Consultant will operate their own project office, accommodation, local transportation, visas, interpretations services and similar costs as may be deemed to suit the assignment.

7. Reporting and Documentation

The Consultant will report to the Project Manager Kagera TIWRM Project who will be responsible for approving the outputs. The following reports will be submitted (10 copies each) by the Consultant. Specific outputs will include the following:

An inception report one month after signing the contract containing a clearly articulated work plan and elucidating the methodology. The report will be presented to the PMU for discussions, comments and approval.

Monthly progress reports during the entire duration of the assignment.

A draft report on the proposed institutional, legal and policy framework for management of the transboundary water resources 6 months after commencing the assignment)

A final report on the proposed institutional, legal and policy framework for management of the transboundary water resources (one month after receiving comments from the Project Management Unit) and other stakeholders including RPSC, donors (Sida and Norad), etc

All reports and communication materials developed by the consultant during this assignment shall revert to Project Management Unit. In addition, soft copies (MS Word and Ms Excel) of the reports will be submitted on 2 CDs when submitting the draft and final reports of this assignment.

All reports will be submitted in 15 copies including the original. In addition, soft copies (MS Word and Ms Excel) of the reports will be submitted on 2 CDs when submitting the draft and final reports of this assignment

All reports and communication materials developed by the consultant during this assignment shall revert to PMU. The executive summary of all the reports shall be in both English and French.

8. Linkage to Regional Initiatives

In carrying out this consultancy, the consultant should review and make use of results of related initiatives to avoid duplication. Initiatives or reports of particular interest include among others;

Draft Protocol on Environment and Natural Resources of the East African Community

Strategic Action and Investment Plans for Rural and Urban Water Sectors in Burundi, Rwanda , Tanzania and Uganda (2000-2015)

EIA Guidelines for Shared Ecosystems under the East African Community

Report on harmonization of environmental laws and regulations under the Lake Victoria Environment Management Program

Cross border Biodiversity Component under the National Environment Management Authorities (NEMA).

Protocol on sustainable management and development of the Lake Victoria Basin

The Espoo Convention on the implementation of Transboundary Environmental Impact assessment.

9. Reference Materials

Water Policy baseline assessment for the Nile Basin Initiative prepared by the Water Resources Planning and Management project (Water Policy Component)

Nile Equatorial Lakes Subsidiary Action Program (NELSAP) Project Document

Water Sector Reform Documents

National Water Policy Documents

Land Use Policy

Wetlands Policy Documents

Forestry Policy Documents

Eco-Tourism and Environmental Policy Documents

National Planning Policy Documents

Poverty Eradication Policy Documents

Protocol for the Lake Victoria Basin Commission

Lake Victoria Environmental Management Program

Recommendations of international conventions like the Rio-Declaration (1992), the Dublin Principles and the World Summit on Sustainable Development

Legislations relevant to Integrated Water Resources Management

UN Convention on non-navigable uses of water 1997

Relevant Treaties of the East African Community

10. Profile of the Consultant and Staffing Requirements

The consultancy is expected to take 10 calendar months. The firm-Consultant should demonstrate past experience in carrying out reviews of institutional and policy frameworks in the water sector in the last three years. The consultant will demonstrate the availability of key experts who will include a Water Resources Management and land use specialist who shall also be team leader for this assignment, he/she will be required to have broad water resources management knowledge and skills, in addition to well-developed water policy and institutional analysis skills so that he/she can also successfully undertake the role of team leader, a legal expert with experience in review and drafting of legislation who must have prior working knowledge in developing a comprehensive legal framework for an IWRM and will be required to develop such framework to suit the needs of the catchment. The legal expert will also assist in developing a capacity building program to develop the understanding and capability to implement the legal framework, an institutional systems analysis specialist, a rural sociologist and a policy analysis specialist and any other staff as deemed relevant for this assignment. These personnel shall have the minimum basic degree but additional qualifications relevant to the assignment will be an advantage. The estimated man months input into the assignment for each of the specialist consultants identified is estimated as follows:

Water Resource management and land use specialist - 5 man months

Institution specialist - 4 man months

Water Law /Legal Expert – 3 man months

Rural Sociologist – 3 man months

Policy analysis specialist - 2

11 .Quality Assurance and Quality Control

The Consultant will be required to demonstrate in their proposal, evidence of adoption of use of a Quality Assurance System (ISO 9001 or equivalent) as

well as to describe how quality control will be implemented in the course of the project.

Appendix 2: Cited References

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Appendix 3: List of Persons Met

1. Mr. Isah Nabidde, Programme Coordinator, Kagera Basin Project, NELSAP-CU
2. Tom Waako, Programme Officer, NBI Secretariat, Entebbe
3. Nicholas Azza, National Liason Officer, Uganda, (Water Resources management Department)
4. Dr. Tom O. Okurut, Executive Secretary, Lake Victoria Basin Commission OR Meraji Msuya, Deputy Executive Secretary, Lake Victoria Basin Commission
5. Dr. Gaspard Bikwemu, Deputy Project Manager, Nile Basin Initiative Kagera Basin TIWRM
6. Mr. Samuel Munyakyanza, Ministry of Foreign Affairs, Rwanda,
7. Remmy Mugunga, Office of the President, Rwanda
8. Mr Augustine Hayifayi, Solicitor General Rwanda
9. Dr. Rose Mukankomeje, Director General, Rwanda Environment Authority
10. John Metzger, Water Resources Management Expert / Team Leader, BRLi
11. Nichol Bagamba Nesto
12. Marie Rose Kabura, Director General, Forestry, Tourism and Environment Burundi
13. Gabriel Hakizibimana
14. Maurice Shiramanga, Advisor to the Director General, IGEBU
15. Eugene Nduwayo, Directeur, Programme Nationale Lutte Anti – Erosif (Burundi)
16. Dr Festus Bagoora, Natural Resources Management Specialist, National Environment Management Authority Uganda
17. Nsubuga Senfuma, Technical Advisor, Ministry of Water and Environment - Uganda
18. Eng Henry Bidasala, Commissioner for Energy, Ministry of Energy and Mineral Development, Uganda

19. Joel Okonga, Assistant Commissioner, Transboundary, Directorate of Water Resources Management, Uganda
20. Amandus Lwena, National Coordinator for Efficient Water use for Agricultural Production
21. Bwana Mwanawima, Assistant Director of Trunk Roads, Ministry of Infrastructure Development, Tanzania
22. Frederick Rugiga, Principal Environment Management Officer, National Environment Management Council of Tanzania
23. Wilbert T.K. Kaahwa, Counsel to the Community, East African Community
24. Mr. Frank Abineza, Programme Coordinator, Nile Basin Forum, Rwanda
25. Mr. Antoine Sendama, Coordinator, NELSAP-
26. Mr. Lister Kongole, Assistant Director (for Director), Water Resources Division, Email: lrek52@yahoo.com,
27. Saidi Faraji, Principal Hydrologist, Ministry of Water, Dar-es-Salaam, Email: saidifaraji@yahoo.co.uk, 0754685691,
28. Joseph M. Kubena, Environmental Coordinator, Ministry of Water, P.O. BOX 35066, Dar-es-Salaam
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30. Eng. Amandus David Lwena Senior Agricultural Engineer Ministry of Agriculture, Food Security & Cooperatives Dar-es-Salaam TANZANIA Ph +255 22 286
31. Mr. Jean Pierre, the Head of Department/Programmes for Energy in CEPGAL
32. Mr. Frank Abineza, the Coordinator of the Nile Basin Discourse Forum, Rwanda
33. Mr. Sendama, the Coordinator of NELSAP
34. Dr. Nyamajeje C. Weggoro, the Director – Productive and Social Sectors
35. Wilbert T. K. Kaahwa Counsel to the EAC
36. Gertrude Ngabirano, Regional Programme Manager LVI Sida

37. Leo Mwebembezi, Ag Principal Hydrologist Directorate of Water Resources Management, Uganda
38. Mr Kangenga Innocent, NBI Liaison Officer, Ministry of Water and Mines, Rwanda
39. Prof Muyanganizi Bikoro, Minister of State, Ministry of Water and Mines, Rwanda
40. Prof Gashagaza Mukhwaya, National University of Rwanda
41. Mr Maira Mukasa Joseph, Chief Administrative Officer, Kabale District Local Government, Uganda
42. Beda Mwebesa, Project Manager, CARE Uganda

Appendix 4: Case Studies of Transboundary River Basin Cooperation

The Consultant's work has been informed by comparative studies of a number of transboundary water management organisations. These include the Niger Basin Authority; Lake Chad Basin Commission; Organisation for the Development of the Senegal River Basin (OMVS); Permanent Indus Commission and the Mekong River Commission. Key findings of these studies are summarised in this chapter of the Report.

1.0 Lake Tanganyika Authority

The Lake Tanganyika Authority (LTA) was established by the Convention on the Sustainable Management of Lake Tanganyika ("the Convention"). The Convention was signed on 12th June 2003 by the four (4) basin states of Lake Tanganyika namely; Tanzania, Burundi, Zambia and the Democratic Republic of Congo. The Convention is a legal agreement identifying the rights and duties of all the four states concerning Lake Tanganyika.

1.1 Aims and Objectives of the Convention

The main objective of the Convention is to ensure protection and conservation of the biological diversity and the sustainable use of the natural resources of Lake Tanganyika and its basin by all the basin nations. The Convention envisages achieving its objectives on the basis of integrated and cooperative water management principles. In particular, the Lake Tanganyika basin states agreed to cooperate in the development and implementation of harmonized laws and standards concerning the management of Lake Tanganyika and its basin and also to ensure sustainable use of the lake's natural resources and amenities.

1.2 Management Principles and Obligations

The Convention defines management principles as well as other obligations of the basin states and specific procedures. The Convention adopts generally accepted principles of international law such as; the obligation to protect the environment; reasonable and equitable utilization of shared water resources; as well as sharing of information in respect of the use and protection of water resources. Specific obligations imposed on all the basin nations include prevention and control of pollution; prevention of sedimentation; conservation of biological diversity; exchange of information and appropriate reporting; and ensuring the carrying out of environmental impact assessments in respect of activities presumed to result in adverse impacts. These obligations are required to be enforced through appropriate legal, administrative and technical measures adopted by the basin nations, either separately or jointly.

1.3 Functions of the Lake Tanganyika Authority (LTA)

The LTA is established by Article 23 of the Convention. Its overall function is to co-ordinate the implementation of the Convention and to advance and represent the common interests of the basin nations in matters concerning the management of Lake Tanganyika and its basin. The Convention requires the LTA to have its headquarters in any country of the basin nations designated by the Council of Ministers. Upon such designation, the LTA is to enter into a headquarters agreement with the host nation, but subject to the approval of the Council of Ministers. The LTA is given power to, subject to approval of the Conference of Ministers; establish regional offices within the territory of any basin nation.

1.4 Institutional Structure of the LTA

The institutional structure of the LTA comprises of three organs namely; the Conference of Ministers, the Management Committee and the Secretariat.

The Conference of Ministers

The Conference of Ministers is the supreme body of the LTA. It is required, amongst other things, to regularly evaluate the implementation of the Convention and any protocols concerning the management of Lake Tanganyika and its basin.

The Management Committee

The Management Committee is made up of three (3) members appointed by each basin nation. The Executive Director of the LTA is the Secretary to the Management Committee. The functions of the Management Committee include supporting, coordinating and monitoring the implementation of the Convention. In particular the Management Committee is required to exercise various functions including:

- implementation of the policies and decisions of the Conference of Ministers;
- providing scientific and technical advice to the Conference of Ministers;
- preparing and proposing for approval of the Conference of Ministers a strategic program for Lake Tanganyika;
- coordinating and supervising the implementation of any strategic action program approved by the Council of Ministers;
- supervising the activities of the Secretariat; and
- undertaking any urgent or important tasks under the Convention as may be requested by the Conference of Ministers.

In exercising its functions, the Convention under Article 27 requires, the Management Committee to be assisted by four (4) committees namely; a Socio-Economic Technical Committee, a Fisheries Management Technical Commit-

tee, a Biological Diversity Technical Committee and a Water Quality/Pollution Control Technical Committee

The Secretariat

The Secretariat is under the direction of an Executive Director assisted by a Deputy Executive Director. The Secretariat is the executive organ of the LTA and is under the supervision of the Management Committee. The Executive Director is empowered to represent the LTA in the exercise of its legal personality and is answerable to the Management Committee. The Secretariat is entrusted with various functions listed under Article 26 of the Convention which include.

- carrying out tasks assigned to it by the Management Committee;
- providing technical and scientific services and advice required by the Management Committee and the Conference of Ministers;
- performing the financial and other administrative services for the proper operation of all the organs of the LTA;
- formulating work programs and budgets for the LTA;
- obtaining on a regular basis information relevant to the implementation of the Convention; and
- performing any other functions assigned to it under the Convention or as may be determined by the Conference of Ministers.

1.5 Financial Resources

According to the Convention, the financial resources of LTA come from contributions of the basin nations in equal proportions. In addition, the LTA is empowered to seek funds for its operations and projects from donors and other sources.

1.6 Legal Status

The Convention confers on the LTA legal capacity. Accordingly, in exercise of its functions the LTA has international legal personality. The LTA and its property, funds and assets enjoy privileges, immunities provided under diplomatic rules governing international organisations in each basin or contracting state. In exercise of its legal personality, the LTA is represented by the Executive Director.

2.0 Lake Chad Basin Commission

2.1 Objectives

On 22nd May 1964, Heads of States of the four countries which share Lake Chad, namely: Cameroon, Niger, Nigeria and Chad signed the Convention (“the Convention”) and Statutes (“the Statutes”) relating to the Development of the Chad Basin. Under Article 1, the Convention established the Chad Basin Commission (“the Commission”). The headquarters of the Commission were to be situated at Fort Lamy, the place of signing the Convention, or any other place considered suitable. Currently the headquarters of the Commission are located in Ndjamena, Chad.

The Convention was signed following the recognition by member states of the need to formulate principles for the utilisation of the resources of the Chad Basin for economic ends including harnessing of the waters. For this purpose, the Basin states considered it desirable to establish the Commission and entrust it with preparing general regulations, co-ordinating research activities of the member states, examining schemes prepared by the member states, recommending a plan with a view of the realisation of studies and works in the Basin as well as maintaining contacts between the member states.

Under Chapter 1 of the Statutes, the member states affirmed their determination to intensify cooperation and efforts towards the development of the Basin. In particular they agreed to cooperate through the Commission, in the utilisation of the surface and underground waters to meet the needs of domestic and industrial and agricultural development. In addition the member states agreed that any development of the water resources in their jurisdiction would only be undertaken after adequate notice to and prior consultations with the Commission.

2.2 Functions of the Commission

The functions of the Commission are set out in Article 9 of the Statutes. These include:

- assembling, examining and dissemination of information on the projects prepared by the member states;
- recommending the planning of joint works and research programmes within the Chad Basin;
- maintaining liaison between the member states with a view to the most efficient utilisation of the waters of the Basin;
- formulating common rules concerning navigation; and
- examining complaints and assisting in settling disputes.

The Convention empowered the Commission to draw up its own rules of procedure. However, the Commission can only validly conduct business if at least one member of each state is present. Decisions of the Commission have to be adopted unanimously.

According to the Convention, the Commission, in all respects enjoys the status of an international body. The members and the Executive Secretary are vested with diplomatic privileges and immunities granted by the member states.

3.0 The Mekong River Basin Commission

3.1 Agreement

In 1995, the Governments of Cambodia, Lao People's Democratic Republic, Thailand and Vietnam (but not China) concluded the Agreement on the Cooperation for Sustainable Development of the Mekong River Basin ("the Agreement"). The principal objective of the Agreement was to ensure continued cooperation in a constructive and mutually beneficial manner for sustainable development, utilisation, conservation and management of the Mekong River Basin water and related resources. To achieve this objective, the riparian countries concluded the Agreement setting out the framework for cooperation acceptable to all parties.

The Agreement is based on international law principles of cooperation, reasonable and equitable utilisation, obligation to protect the environment and sovereign equality in the use and protection of water resources. The member states agreed to apply these principles in ensuring sustainable utilisation and protection of the Mekong River Basin water resources.

The Agreement lists various areas of cooperation, including all fields of sustainable development, utilisation, management and conservation of water and related resources in the Mekong River Basin. Member states agreed to cooperate through joint and/or basin-wide development projects and programmes and on the basis of sovereign equality and territorial integrity as well as reasonable and equitable utilisation.

3.2 The Mekong River Commission

The Agreement established the Mekong River Commission to implement the objectives of the member states. The Mekong River Commission was given the status of an international body in exercise of its functions, including entering into agreements and obligations with the donor or international community. The Mekong River Commission succeeded the committee for the coordination of investigations of the lower Mekong Basin established in 1957, and the interim committee formed in 1978.

3.3 Institutional Structure

The institutional structure of the Mekong River Commission comprises three permanent organs namely: the Council; Joint Committee; and the Secretariat.

The Council

The Council is composed of one member from each participating riparian state empowered to make decisions on behalf of his or her government. The Council's main function is making policies and guidelines to ensure cooperation and coordination in the sustainable development, utilisation and protection of the basin water resources.

The Joint Committee

The functions of the Joint Committee include implementation of policies and decisions of the Council and carrying out any other tasks assigned by the Council. It is specifically entrusted with formulating plans for development of the basin, obtaining, updating and exchanging information and data, conducting studies and assessment and the protection of the environment and maintenance of the ecological balance of the basin, as well as assigning tasks and supervising activities of the Secretariat. The decisions of the Joint Committee must be unanimous.

Secretariat

The main purpose of the Secretariat under the Agreement is to render technical and administrative services to the Council and the Joint Committee. The Secretariat is under the supervision of the Joint Committee and headed by the Chief Executive Officer who is appointed by the Council from candidates selected by the Joint Committee. Functions of the Secretariat include:

- implementation of decisions and tasks assigned by the Council and Joint Committee under the direction of the Joint Committee;
- providing technical services and financial administration and advice as requested by the Council and Joint Committee;
- formulating the annual work plan and preparing all other plans, projects and programme documents as well as any required studies and assessments;
- assisting the Joint Committee in the implementation and management of projects and programmes as requested;
- maintaining data bases of information;
- making preparations for sessions of the Council and Joint Committee; and
- carrying out all other assignments as may be requested.

The Secretariat carries out its functions and duties upon request of either the Council or the Joint Committee.

4.0 Senegal River Basin

4.1 Objectives

The Organisation for the Development of the Senegal River Basin (OMVS) was established by the Convention (“the Convention”) in 1972. Member States are Mali, Mauritania and Senegal. The OMVS was established as successor to the Interstate Committee for the Development of the Senegal River, 1963, and the Organisation of the Senegal River Riparian States, 1968, comprising Guinea, Mali, Mauritania and Senegal. However, in 1972, only three of these four countries (with the exception of Guinea) signed the convention establishing the OMVS. Under the Convention the objectives of the OMVS are as follows:

- promoting inter-country cooperation;
- coordinating technical, economic studies and other activities related to the Senegal River development such as navigation, irrigation, hydro-power generation environmental protection and conservation.
- regulation of river flow for irrigation, flood control, power generation and other purposes.

The OMVS enjoys corporate legal personality. It has capacity to contract, acquire and own property, receive gifts, subsidies and legacies and be party to legal proceedings.

4.2 Institutional Structure

The institutional structure of the OMVS comprises the Conference of the Heads of State and Government, the Safety and Health Committee, the Council of Ministers, the High Commission and the Standing Committee of Water.

Conferences of Heads of State and Government	The Conference of the Heads of State and Government is the supreme authority of the OMVS. Its key function is the formulation of policy for cooperation and development of the Senegal River basin and general policy aspects of the OMVS.
Safety and Health Committee	The Safety and Health Committee comprises of the Council of Ministers, the Office of the High Commission and the Standing Committee of Water. Under the Agreement the functions of the Safety and Health Committees are not clear.
Council of Ministers	The Council of Ministers is amongst other functions entrusted with determining priority operations in regard to utilisation and development of the river basin resources. It determines the operational budget of the OMVS. The decisions of the Council of Ministers bind the member states.
Office of the High Commission	The Office of the High Commission reports to the Council of Ministers. Generally it is entrusted with executing or implementing the decision of the Council

of Ministers in all matters relating to the development of the Senegal River Basin resources.

Standing Committee of Water

The Standing Committee of Water is charged with functions specific to the utilisation of the water resources of the Senegal River. It is entrusted with defining principles and methods of distribution of water of River Senegal between the states and the sectors of use of water. It advises the Council of Ministers on matters relating to the use of Senegal River and also acts upon the direction of the Office of the High Commission.

5.0 Permanent Indus Commission

5.1 Objectives

The Permanent Indus Commission was established in 1960 by the Indus Water Treaty (“the Treaty”) to promote co-operation between the parties (India and Pakistan) in the development of the Indus system of Rivers. The Indus system of the Rivers comprises three Eastern Rivers (the Sutley, the Beas and the Ravi) and three Western Rivers (the Indus, the Jhelum and the Chenab).

Under the Treaty, the waters of the Eastern Rivers were allocated to India and those of Western Rivers were allocated largely to Pakistan. The Treaty also fixes and delimits the rights and obligations of India and Pakistan in relation to each other concerning the use of the waters of the Indus River system.

To ensure the implementation of the objectives of the Treaty, the parties agreed on regular exchange of data in respect to the flow and utilisation of the waters of the rivers of the Indus Basin. In addition the parties declared their intention to co-operate in respect of the use and protection of the basin resources upon recognizing that both parties have a common interest in the optimum development of the rivers.

5.2 Institutional Structure

The Permanent Indus Commission was established under Article VIII of the Treaty to effectively implement the objectives of the parties to cooperate in the use and protection of the waters of the Indus Basin. Both India and Pakistan agreed to create a post of Commissioner for Indus Waters. The two Commissioners together constitute the Indus Commission whose purpose is to establish and maintain cooperative arrangements for the implementation of the Treaty, to promote cooperation between the parties in the development of the waters of the Rivers and to settle promptly any disputes arising between the parties. Each Commissioner is a representative of his or her Government for all matters arising out of the Treaty, and serves as a regular channel of communication in all matters relating to the implementation of the Treaty. However, either Government can decide to take up any particular question directly.

The Commission is also required to undertake periodical inspection of the Rivers for ascertaining the facts connected with the various development and works of the river. The Commission is also required to meet regularly at least once a year alternately in India and Pakistan and to submit to the respective Governments before first of June of every year a report on its works for the year ended on the preceding 31st March, and may submit to the two Governments other reports at such times as may be considered necessary. The Commission may also meet when requested by the Commissioner.