

**Nile Basin Initiative  
Shared Vision  
Program**

**NILE  
TRANSBOUNDARY  
ENVIRONMENTAL  
ACTION**

**DRAFT GEF PROJECT  
BRIEF**

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*Council of Ministers of Water Affairs  
of the Nile Basin States*



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## DRAFT PROJECT BRIEF

### Burundi, D.R. Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda:

#### Nile Transboundary Environmental Action Project

#### 1. IDENTIFIERS

<b>Project Number</b>	
<b>Project Name</b>	Nile Transboundary Environmental Action Project
<b>Duration</b>	5 years
<b>GEF Implementing Agencies</b>	UNDP for components 1.1, 3, 4, and 5 World Bank for Component 1 (except 1.1) and Component 2
<b>Executing Agencies</b>	Nile Secretariat with UNOPS
<b>Requesting Countries</b>	Burundi, D.R. Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda
<b>Eligibility</b>	Eligible under para 9 (b) of GEF Instrument
<b>GEF Focal Area</b>	International Waters
<b>GEF Programming Framework</b>	OP 9, Integrated Land & Water

#### 2. SUMMARY

The Nile River is one of the world's great assets. Throughout history it has nourished livelihoods, an array of ecosystems and a rich diversity of cultures in ten countries. The Basin encompasses 3 million square kilometers—one-tenth of Africa's total landmass—and serves as home to an estimated 160 million people. These people face considerable challenges, with half of the riparian states being among the world's ten poorest countries and much of the region characterized by instability and rapid population growth. Efforts to relieve poverty by promoting more rapid economic development in the Basin are being undermined by increasingly severe environmental degradation.

Despite these constraints, the Nile holds significant opportunities for cooperative development and the riparian states have come to recognize the benefits to be gained from greater regional integration. Various subgroups within the Basin have engaged in cooperative activities during the last 30 years and in 1997 the riparian states began, with UNDP support, to work towards a permanent legal and institutional framework for the Basin. In 1999 the riparians took a further key step by launching the *Nile Basin Initiative* (NBI), a transitional mechanism that includes all of the Nile countries as equal members in a regional partnership to promote economic development and fight poverty<sup>1</sup>. The NBI is comprised of the Council of Ministers of Water Affairs of the Nile Basin (Nile-COM), a Technical Advisory Committee (Nile-TAC), and a Secretariat (Nile-SEC). The NBI is guided by a Shared Vision "to achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources."

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<sup>1</sup> Eritrea attended its first Council of Ministers Meeting in August 2000 and has indicated its intention to participate.

The Nile countries are now moving forward to implement a Strategic Action Program through the NBI, comprised of a number of basin-wide activities as well as subsidiary programs geared towards joint investment opportunities. Financing for these activities is being sought through the International Consortium for Cooperation on the Nile (ICCON). An initial set of seven basin-wide projects (the Shared Vision Program or SVP) has been endorsed by Nile-COM and is being prepared for implementation in these sectors: environmental action (this proposal), power trade, efficient water use for agriculture, water resources planning and management, communications, applied training, and socio-economic development and benefit sharing. The total cost of these projects is expected to be about US\$122 million.

At the same time, two groups of Nile countries - one in the Eastern Nile and the other in the Nile Equatorial Lakes region - are identifying joint and mutually beneficial investment opportunities (Subsidiary Action Programs or SAPs). Project preparation will begin during 2001 in these areas: irrigation in a regional context; integrated water resources management/watershed management; wastewater treatment, pollution control, and water quality management; water use efficiency improvement; flood and drought management; water hyacinth and water weed control; hydropower development and power pooling; and sustainable management and conservation of lakes and linked wetlands. The total cost of these projects is expected to be in billions of dollars, but this will be more clearly defined as the program unfolds.

### ***PROPOSED PROJECT***

The Nile countries recognize that future development of the Basin must be environmentally sustainable. Identifying the environment and development synergies, and thus the sustainable development opportunities in the Basin, has therefore emerged as a major priority. A Transboundary Environmental Analysis (TEA) has been carried out by the Nile riparians with funding from GEF PDF resources and support from UNDP and the World Bank. The TEA report constitutes a collective synthesis of basin-wide environmental trends, threats and priorities. The TEA also identifies the elements of an Agenda for Environmental Action in the Nile Basin, to be implemented over the next decade or more under the NBI's Strategic Action Program in coordination with other development activities.

The objective of this project is to provide a strategic environmental framework for the environmentally sustainable development of the Nile River Basin, to improve the understanding of the relationship between water resources development and environmental conservation in the Basin, and to provide a forum to discuss development paths for the Nile with a wide range of stakeholders. Focusing on transboundary issues provides the riparian countries with a major opportunity to make significant progress towards their economic and environmental goals in ways that have proved difficult to achieve independently.

This project will strengthen riparian cooperation and coordination by supporting a series of measures focusing on various aspects of transboundary environmental management. Project activities include capacity building, training, education and awareness raising, knowledge and information sharing, development of a decision support system, communications, environmental monitoring and field activities at selected pilot sites. Diverse stakeholder groups will be encouraged to work together, both within their own countries and with counterparts in other

riparian countries, to help build the mutual understanding, relationships and trust that are essential to joint problem-solving.

***A PROGRAM APPROACH***

The GEF program will encourage more effective basin-wide stakeholder cooperation on transboundary environmental issues by supporting priority actions in five main areas: (1) institutional strengthening, (2) community-level land, forest and water conservation, (3) environmental education and awareness, (4) wetlands and biodiversity conservation and (5) water quality monitoring.

The design of the GEF intervention has been based on a phased programmatic approach, to allow early progress and successes to be identified, nurtured and consolidated prior to further expansion. The first phase of the program will consist of full implementation of two components – institutional strengthening (component 1) and water quality monitoring (component 5), together with partial implementation of two components – land, forests and water conservation (component 2) and environmental education and awareness (component 3). Once this first phase has achieved its benchmarks, a second phase will launch and complete an additional component – wetlands and biodiversity conservation (component 4) – and will complete components 2 and 3.

*Phased Programmatic Approach to GEF Program*

	<u>Phase 1</u>	<u>Phase 2</u>
(1) Institutional strengthening	X	Ongoing
(2) Community-level land, forest and water conservation	X	X
(3) Environmental education and awareness	X	X
(4) Wetlands and biodiversity conservation	X	
(5) Water quality monitoring	X	

In the context of the SAPs, distinct GEF interventions are also envisaged in the areas of (a) watershed management, (b) wetlands, biodiversity and protected areas management, and (c) water hyacinth control. However, these subsidiary action interventions are not yet mature and will need further dialogue and capacity building to materialize. The funding requested in the present proposal covers Phase 1 of the GEF Nile program. Based on performance of the program, a second submission for Phase 2 as well as for some of the suitable SAP projects may be made to the GEF.

### 3. COSTS AND FINANCING (US\$)

#### **GEF**

Project Costs (Phase 1 – the present proposal)	\$19.28 million
Project Costs (Phase 2 to be requested at a later stage)	\$7.37 million
Sub-total	\$26.65 million

#### ***Co-financing for Nile Basin Initiative (NBI)***

##### *Relevant SVP Projects*

NBI/SVP Socio-Economic Development - Macroeconomic Integration	\$11.00 million
Water Resources Planning and Management	\$24.40 million
Nile River Basin Cooperative Framework, Phase I (UNDP)	\$3.50 million
Nile River Basin Cooperative Framework, Phase II (UNDP)	\$0.50 million
NBI/SVP Efficient Water Use for Agriculture	\$5.00 million
NBI/SVP Confidence Building & Stakeholder Involvement	\$7.00 million
NBI/SVP Applied Training	\$20.00 million
NBI/SVP Transboundary Environmental Action <sup>2</sup>	<u>\$12.70 million</u>
Sub-total	\$84.10 million

**GEF + Co-financing Subtotal** **\$110.70 million**

##### ***NBI/SVP program preparation costs***

PDF B (GEF)	\$0.35 million
UNDP	\$0.15 million
World Bank	\$2.57 million
ESMAP	\$1.02 million
Canada	\$0.67 million
Denmark	\$0.20 million
Finland	\$0.30 million
Germany	\$0.06 million
Netherlands	\$1.00 million
Norway	\$0.97 million
Sweden	<u>\$0.22 million</u>
Sub-total	\$7.51 million

**GRAND TOTAL** **\$118.39 million**

(Total Baseline \$403.0 million)

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<sup>2</sup> Under discussion with Canada



The present project is a joint GEF Implementing Agency submission on behalf of UNDP and the World Bank. The two IAs will continue to work in close partnership for the implementation of this project. The two agencies have established a joint International Waters Partnership located in Washington DC consisting of Bank and UNDP staff at the premises of the World Bank through which all their joint work on the Nile is coordinated. The present project will be implemented through the Partnership.

The project will be managed as an integrated whole, with the two agencies holding responsibility for the components and funds as indicated below:

COMPONENT	GEF IA	GEF Financing		UNDP	WORLD BANK
		Phase 1	Phase 2		
<b>1. Institutional Strengthening</b>					
1.1 Regional capacity building	UNDP	6.94		6.94	
1.2 Knowledge management	WB	1.15			1.15
1.3 Decision Support System – River Basin Model	WB	3.65			3.65
1.4 Macro/sectoral policies and the environment	WB	0.44			0.44
<i>Component Sub-total</i>		<b>12.17</b>		<b>6.94</b>	<b>5.24</b>
<b>2. Land, Forests and Water Conservation</b>	UNDP	<b>1.72</b>	<b>2.00</b>	<b>3.72</b>	
<b>3. Environmental Education and Awareness</b>	UNDP	<b>2.46</b>	<b>1.00</b>	<b>3.46</b>	
<b>4. Wetlands and Biodiversity Conservation</b>	UNDP		<b>4.37</b>	<b>4.37</b>	
<b>5. Water Quality Monitoring Basin-wide</b>	WB	<b>2.92</b>			<b>2.92</b>
<i>GEF Phase 1 - total</i>		<b>19.28</b>		<b>11.12</b>	<b>8.16</b>
<i>GEF Phase 2 - total</i>		<b>7.37</b>		<b>7.37</b>	
<b>TOTAL</b>		<b>26.65</b>		<b>18.49</b>	<b>8.16</b>

#### 4. FOCAL OPERATIONAL POINTS ENDORSEMENT

##### Burundi

**Jerome Karimumuryango**, Directeur General de l'INECN, Ministry of Environment

##### Congo

**Salomon Banamuhere Baliene**, Ministère des Affaires Foncières, Environnement, Conservation de la Nature, Pêche et Forêts

##### Egypt

**Ibrahim Abdel Gelil**, Chief Executive Officer, Egyptian Environmental Affairs Agency

##### Eritrea

**Mebrahtu Iyassu**, Executive Director, Eritrea Agency for the Environment, Ministry of Foreign Affairs

##### Ethiopia

**Tewelde Berhan G. Egziabher**, General Manager, Environment Protection Authority

**Kenya**

**Benard O. K'Omudho**, Director, National Environment Secretariat, Ministry of Environment & Natural Resources

**Rwanda**

**Nsanzumuganwa, Emmanuel**, Secretary General, Ministry of Energy, Water and Natural Resources

**Sudan**

**Yassin Eisa Mohamed**, International Cooperation Directorate, Ministry of Finance and National Economy

**Tanzania**

**A.R.M.S. Rajabu**, Permanent Secretary, Vice President's Office

**Uganda**

**Chris K. Kassami**, Permanent Secretary, Ministry of Planning and Economic Development

**5. IA CONTACT**

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UNDP-World Bank International Waters Partnership

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## ACRONYMS AND ABBREVIATIONS

CG	Consultative Group
DSS	Decision Support System
EAC	East African Cooperation
EN-SAP	Eastern Nile riparian grouping for project development: includes Egypt, Sudan and Ethiopia
FAO	United Nations Food and Agriculture Organization
GEF	Global Environment Facility
HEP	Hydro-Electric Power Development
ICCON	International Consortium for Cooperation on the Nile
ILWM	Integrated Land and Water Management Program for Africa
IMS	Information Management System
IUCN	World Conservation Union
LVEMP	Lake Victoria Environmental Management Project
NBI	Nile Basin Initiative
NEL-SAP	Nile Equatorial Lakes Region – riparian group for project development: includes the six countries in the southern portion of the Basin – Burundi, D.R. Congo, Kenya, Rwanda, Tanzania and Uganda – as well as the downstream riparians, Sudan and Egypt
NGO	Nongovernmental organization
Nile-COM	Council of Ministers of Water Affairs of the Nile Basin
Nile-TAC	Nile Basin Initiative Technical Advisory Committee
Nile-SEC	Nile Basin Initiative Secretariat
NRBAP	Nile River Basin Action Plan
PCC	Project Coordination Committee
PCU	Project Coordination Unit
SAP	Subsidiary Action Program
Sida	Swedish International Development Agency
SVP	Shared Vision Program
TEA	Transboundary Environmental Analysis
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WWF	World Wide Fund for Nature



## PREFACE

In an historic effort, the ten countries of the Nile have come together within the Nile Basin Initiative to realize a shared vision “to achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources.” Recognizing the tremendous benefits that can be reaped from cooperation, yet fully aware of the challenges ahead, the Nile countries have embarked on a remarkable journey to translate their shared vision into concrete activities and projects that will build confidence and capacity across the basin (the Shared Vision Program), as well as initiate concrete investments and action on the ground at local levels (Subsidiary Action Programs).

Presented herein is one of the projects within the Shared Vision Program. The full project portfolio includes:

- Nile Transboundary Environmental Action
- Nile Basin Regional Power Trade
- Efficient Water Use for Agricultural Production
- Water Resources Planning and Management
- Confidence-Building and Stakeholder Involvement (Communications)
- Applied Training
- Socio-Economic Development and Benefit-Sharing.

As a whole, the Shared Vision Program aims to create an enabling environment for cooperative development and management. Though each project is different in focus and scope, all contribute to building a strong foundation for regional cooperation by supporting basin-wide engagement and dialogue, developing common strategic and analytical frameworks, building practical tools and demonstrations, and strengthening human and institutional capacity.

The seven projects of the Shared Vision Program build upon each other to form a coordinated program. They address the major water-related sectors and cross-cutting themes deemed critical by the Nile riparians to ensure an integrated and comprehensive approach to water resources development and management, and that this development serves as a catalyst for broader socio-economic development and regional cooperation. Together, the projects of the Shared Vision Program seek to forge a common vision for - as well as build the capacity to achieve - the sustainable development the Nile Basin for the benefit of all. They pave the way for the realization of the Vision through investments on the ground within the Subsidiary Action Programs.

The detailed preparation of the Shared Vision Program was accomplished through a unique, multi-country, multi-sectoral and highly participatory process led by the Nile Council of Ministers and Technical Advisory Committee and executed by the Nile Secretariat. More than seventy national experts, including eight technical specialists from nine countries, were involved

in detailed project preparation. For many, it was the first time that they were able to discuss common concerns with their colleagues from neighboring and co-riparian countries. The energy and hope for the future engendered by this preparation process were a visible demonstration of the power of cooperation, strong riparian ownership, and the commitment of the Nile countries to jointly pursue their common goal.

But the preparation of the Shared Vision Program is just a beginning. Implementing these projects and ensuring that tangible benefits are realized is the next challenge. It is a challenge that requires deepening partnerships with the international development community. Promoting cooperation among the countries of the Nile will inherently be a complex process. However, such cooperation is essential if sustainable development and management of the Nile Basin are to be achieved.

## **DRAFT PROJECT BRIEF**

### **BACKGROUND**

1. The Nile River is one of the world's great assets. From ancient human civilizations until today, the flows of the river system have nourished livelihoods and played a central role in a rich diversity of cultures. Evidence of persistent human endeavor is apparent throughout the Basin. While this endeavor has brought significant benefits, the task of developing and managing the Nile River on a sustainable basis for the Basin's peoples remains daunting. Famine, extreme poverty, instability, rapid population growth, and accelerating environmental degradation are characteristic features of the Basin today. Half of the Nile Basin states are among the 10 poorest in the world. Facing these considerable threats to human welfare requires visionary and courageous leadership as well as the emergence of a regional perspective on the management and development of the Nile.

2. Ten riparian countries share the Nile River: Burundi, D.R. Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda. This transboundary character poses a considerable challenge: achieving truly sustainable management of a river system whose development potential for so many different people has created sharply different aspirations and expectations both within and beyond the Basin. At the heart of the challenge is the imperative of poverty eradication. The sustainable development of the Nile River can help alleviate poverty by providing enhanced food, power and water security as well as employment, although the magnitude of this task intensifies as populations in the Basin continue to grow and urbanization and industrialization continue to intensify.

3. The transboundary nature of the Basin also provides an extraordinary opportunity to promote regional economic development in one of the world's poorest regions. The Nile above Aswan is one of the least developed rivers in the world. Effective water and environmental management can bring benefits to all involved riparians, which means that there is real "win-win" potential in the Basin. There is an opportunity to transform the Nile, through collaborative and visible actions on the ground, into a unifying force that builds on regional and international interdependencies and promotes economic activities enabling co-Basin states to participate as partners in emerging regional and global trade. Continued unilateral development of the river, however, is more likely to engender unsustainable development, which in the long run could perpetuate poverty and promote contention.

### **STRATEGIC AND INSTITUTIONAL CONTEXT**

4. Cooperative management of the Nile River Basin is one of the greatest challenges of the global international waters agenda. The Nile has enormous potential to foster regional social and economic development through advances in food production, transportation, power production, industrial development, environmental conservation and other related activities. To realize this potential, the riparians have come to recognize that they must take concrete steps to address current challenges and that cooperative, sustainable development holds the greatest prospect of delivering mutual benefits to the region.

## ***EVOLVING REGIONAL COOPERATION***

5. Appreciating the benefits of cooperation, various sub-groups within the Nile Basin have engaged in cooperative activities over the past thirty years. An early regional UNDP-funded project, Hydromet, was launched in 1967 with involvement of most of the riparian states. This project terminated in 1982 and the participating countries continued the activities with their own funding. In 1992 the Council of Ministers of Water Affairs of the Nile Basin (Nile-COM) launched the Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile Basin. In 1993, the first in a series of ten annual Nile 2002 Conferences sponsored by the Canadian International Development Agency (CIDA) provided an informal mechanism for dialogue and exchanges of views among the riparian countries as well as with the international community.

6. The Nile River Basin Action Plan (NRBAP) was prepared in 1995 with support from CIDA, comprising 22 technical assistance projects totaling US\$100 million. One of the projects prioritized in the Action Plan aims to establish a Nile River Basin Cooperative Framework. This US\$3.4 million project was initiated in 1996 with UNDP funding, enabling the Nile riparians to establish a forum for a process of legal and institutional dialogue aimed at reaching agreement on core legal principles and institutional arrangements. A draft “Cooperative Framework” was produced in early 2000, encompassing general principles, rights and obligations, and institutional structure. This draft framework has moved the riparians a long way and important compromises have been reached. However, some key issues remain to be resolved, and the process is continuing.

7. In 1997 the World Bank agreed to a request by the Nile-COM to lead and coordinate donor support for this Committee’s activities, and to organize a donor meeting—the International Consortium for Cooperation on the Nile (ICCON)—to raise financing for cooperative projects. As “cooperating partners,” the Bank, UNDP, and CIDA have subsequently facilitated dialogue and cooperation among the riparians, to create a climate of confidence within which a cooperative framework can be established and sustained.

## ***THE NILE BASIN INITIATIVE***

8. In 1998, recognizing that cooperative development held the best prospects of bringing mutual benefits to the region, all riparians (except Eritrea) joined in a dialogue to design a transitional institutional mechanism until a permanent cooperative framework is in place. In an historic step they jointly created an inclusive regional partnership, to facilitate the common pursuit of the sustainable development and management of Nile waters. The transitional mechanism, launched in 1999, is comprised of the Nile-COM, a Technical Advisory Committee (Nile-TAC), and a Secretariat (Nile-SEC) based in Kampala, Uganda. The overall process is known as the Nile Basin Initiative (NBI)<sup>3</sup>. The formation of the NBI and ongoing riparian dialogue was initially supported by the World Bank, the United Nations Development Programme (UNDP), and CIDA as the original “cooperating partners,” but the circle of donors is rapidly expanding (see also para. 17.).

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3 The NBI is a transitional institutional arrangement until a formal Cooperative Framework is established.



9. The NBI provides an agreed basin-wide framework to fight poverty and promote economic development in the region. The NBI also provides a process to facilitate substantial investment in the Nile Basin to realize regional socio-economic development. The Initiative is guided by a Shared Vision “*to achieve the sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources.*” The NBI represents a deep commitment by the Nile riparian countries to foster cooperation and sustainable development of the Nile River for the benefit of all. The primary objectives of the NBI are:

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

#### ***THE STRATEGIC ACTION PROGRAM***

10. The NBI provides a transitional institutional mechanism, an agreed vision and basin-wide framework, and a process to facilitate substantial investment in the Nile Basin to realize regional socio-economic development. The establishment of the NBI begins the complex, challenging and long-term process of building confidence and realizing mutual benefits through shared projects. To translate its Shared Vision into action, the NBI has launched a Strategic Action Program, which includes two complementary components: (1) a basin-wide Shared Vision Program (SVP), and (2) Subsidiary Action Programs (SAPs)<sup>4</sup>. While the SVP is comprised largely of grant-based activities to foster trust and cooperation and build an enabling environment for investment, the SAPs are the vehicle for the Nile Basin countries to engage in concrete activities for long-term sustainable development, economic growth and regional integration.

11. The first set of SAP actions identified for presentation to the first ICCON is but the start of a process, which is expected to grow and expand as economic gains from collaboration take root. The economic and intellectual linkages that the SVP and the SAPs will create across a number of sectors will provide the “glue” which will contribute to bringing about greater regional cooperation, stability and prosperity. As the NBI moves forward, it is anticipated that subsequent ICCONs will progressively expand from a meeting of riparians and donors to a meeting of riparians and investors as regional cooperation gains ground and the investment climate stabilizes.

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<sup>4</sup> In the Nile Basin context, the Transboundary Environmental Analysis is equivalent to the Strategic Action Program preparation process used elsewhere by the GEF. SAP has a different meaning in the Nile Basin context.

12. The SVP includes a series of technical assistance and capacity building projects to be implemented basin-wide to help establish an enabling environment for cooperative development. The SVP project portfolio will include seven projects (Table 1). Each project has been formulated through a multi-country, multi-sectoral, participatory process led by working groups, each of which included a Nile-TAC member and sector experts from the NBI countries. These projects address issues related to (a) transboundary water and environmental management (the subject of this proposal), (b) power trade, (c) efficient use of water for agriculture, (d) water resources planning and management, (e) confidence building and stakeholder involvement, (f) applied training, and (g) benefit sharing and integration. All projects aim to provide a common foundation—including common analytical frameworks, practical tools and demonstrations, and human capacity—to support regional cooperation; serving to forge a common vision and ensure long-term sustainability.

13. The SAPs will be initiated in parallel to the SVP, implementing investment projects that confer mutual benefits at the sub-basin level while following the guidance of the overall NBI Policy Guidelines endorsed by the Nile-COM (see Annex E). The Nile riparians have formed two SAPs. The Eastern Nile (EN-SAP) includes Egypt, Sudan and Ethiopia; while the Nile Equatorial Lakes Region (NEL-SAP) includes the six countries in the southern portion of the Basin -- Burundi, D.R. Congo, Kenya, Rwanda, Tanzania and Uganda -- as well as the downstream riparians, Sudan and Egypt.

**Table 1. Overview of Nile Basin Initiative Shared Vision Program Projects**

TYPE	FUNCTION	PROJECT	OBJECTIVES	INDICATIVE COST US\$MILLION
T E C H N I C A L	Building a Foundation for Transboundary Regional Cooperation: <ul style="list-style-type: none"> <li>• Basin-wide engagement and dialogue</li> <li>• Common strategic and analytical frameworks</li> <li>• Practical tools &amp; demonstrations</li> <li>• Institutional and human capacity building</li> <li>• Common vision and long-term sustainability</li> </ul>	1. Nile Transboundary Environmental Action Project	Provide a strategic framework for environmentally sustainable development of the Nile River Basin. Support basin-wide environmental action linked to transboundary issues in the context of the NBI Strategic Action Program	39
		2. Efficient Water Use for Agricultural Production	Provide a conceptual and practical basis to increase water availability and efficient water use for agricultural production	5
		3. Nile Basin Regional Power Trade	Establish the institutional means to coordinate the development of regional power markets among the Nile Basin countries.	12
		4. Water Resources Planning and Management	Enhance the analytical capacity for basin-wide perspective to support the development, management, and protection of Nile Basin waters.	28
F A C I L I T A T I V E		5. Confidence Building & Stakeholder Involvement (Communications)	Develop confidence in regional cooperation under the NBI and ensure full stakeholder involvement in the NBI and its projects.	7
		6. Applied Training	Strengthen institutional capacity in selected subject areas of water resources planning and management in public and private sectors and community groups Create or strengthen centers with capacity to develop and deliver programs on a continuing basis	20
		7. Socio-Economic Development and Benefit Sharing	Strengthen Nile River basin-wide socio-economic cooperation and integration through: (a) joint identification, analysis, and design of cooperative development options and priorities (b) development of criteria, methods, and frameworks for sharing benefits/costs, and managing attendant risks	11
<b>TOTAL ESTIMATED SVP PROJECT COSTS*</b>				<b>122</b>

14. The progress made by the EN-SAP and the NEL-SAP in identifying investment projects is summarized in Table 2.

**Table 2. Nile Basin Subsidiary Action Programs (SAPs)**

<b>Subsidiary Action Program Program Areas and Indicative List of Projects</b>		<b>Indicative Preparation Cost Million US\$</b>	<b>Indicative Implementation Cost Million US\$</b>
<b>NEL-SAP – Suggested Project Proposals<sup>5</sup></b>			
1. Water Use in Agriculture	1.1 Enhanced Agriculture Productivity through Rainwater Harvesting and Small Scale Irrigation.	1.2	45.0
2. Sustainable Management and Conservation of Lakes and Linked Wetlands	2.1 Fisheries Project for Lake Albert	1.0	15.0
3. Watershed Management	3.1 Development of a Framework for Cooperative Management of the Water Resources of the Mara River Basin		3.0
	3.2 Kagera River Basin Integrated Water Resources Management		4.0
	3.3 Malakisi-Malaba-Sio Basins Integrated Water Resources Management		3.0
4. Water Hyacinth and Water Weed Control	4.1 Water Hyacinth Abatement in the Kagera River Basin	0.7	4.0
5. Hydropower Development and Power Trade	5.1. Hydropower Development,	11.0	Tbd
	5.2. Transmission Interconnection	3.2	Tbd
<b>Subtotals</b>		<b>17.1</b>	<b>Tbd</b>
<b>ENSAP – Suggested Project Proposals<sup>6</sup></b>			
<b>Area of Cooperation</b>	<b>Sub-Projects</b>		
Integrated Water Resources Management	• Eastern Nile Planning Model Sub-Project	0.4	5 – 6
	• Baro-Akobo Multipurpose Water Resources Development Sub-Project	3.0	>400
Flood and Drought Management	• Flood Preparedness and Early Warning Sub-Project	0.4	7 – 14
Hydropower Development and Regional Power Trade	• Ethiopia-Sudan Transmission Interconnection Sub-Project	10	150
	• Eastern Nile Power Trade Investment Programme	2.6*	Tbd
Irrigation and Drainage Development	• Irrigation and Drainage Sub-Project	1.2*	Tbd
Watershed Management	• Watershed Management Sub-Project	2.1	>400
<b>Subtotals</b>		<b>19.7</b>	<b>Tbd</b>

\*Estimated costs – to be revised.

15. The activities of the Nile Basin Initiative also include an “international discourse” to promote international support for and dialogue on the sustainable development and management of Nile waters. A first meeting on the “international discourse” took place in January 2001 and was co-convened by the World Wide Fund for Nature (WWF), the World Conservation Union (IUCN) and the World Bank with funding from the Rockefeller Foundation. The meeting included participants from 27 nongovernmental organizations (NGOs), academia, professionals and institutions from within and outside the Basin. The meeting offered a good chance to begin a

5 Nile Equatorial Lakes investment project totals are early indicative figures subject to revision.

6 Eastern Nile SAP investment projects are still under definition and investment totals will be further refined. These figures are therefore not included in the Incremental Cost Analysis.

dialogue on development options and a second “international discourse” meeting is scheduled for June 2001.

16. The ICCON is being established to support the NBI’s Strategic Action Program. Its first meeting is scheduled for June 2001. The ICCON will be a unique forum, organized by the World Bank at the riparians’ request, and envisioned as a long-term partnership of the riparian states and the international community. The first meeting of the ICCON will seek funding for a portfolio of basin-wide Shared Vision projects and for the preparation of the first set of projects identified under the SAPs. The first ICCON meeting will also celebrate cooperation and demonstrate international solidarity for cooperative development in the Nile Basin.

17. Support for the Nile Basin Initiative has been characterized by partnership since it began. The initial “cooperating partners” (CIDA, UNDP and World Bank) played the role of concerned facilitators, assisting the process of dialogue. As the NBI moved into the preparation of the Strategic Action Program, the partnership has expanded to include the governments of Denmark, Finland, Germany, Italy, the Netherlands, Norway, Sweden, the United Kingdom, and the United States, together with the United Nations Food and Agriculture Organization (FAO) and the Global Environment Facility (GEF). With the first ICCON, the circle of partners will widen as the international development community commits further support to Shared Vision projects and to the preparation of SAP projects.

## **PROJECT CONTEXT**

18. The Nile countries recognize that future development of the Basin must be environmentally sustainable. Identifying the environment and development synergies, and thus the sustainable development opportunities in the Basin, is now a major priority. Focusing on transboundary issues provides the riparian countries with a major opportunity to make significant progress towards their economic and environmental goals in ways that have proved difficult to achieve independently. Consensus has emerged in support of a set of activities in the riparian countries to (a) provide a strategic framework for the environmentally sustainable development of the Nile River Basin as part of the Shared Vision Program, (b) improve the understanding of the relationship of water resources development and the environment throughout the Basin, and (c) provide a forum to discuss development paths for the Nile Basin with a wide range of stakeholders.

## ***TRANSBOUNDARY ENVIRONMENTAL ANALYSIS***

19. To take this process forward, a Transboundary Environmental Analysis (TEA)<sup>7</sup> was initiated by the Nile riparian countries in December 1999 under the NBI’s Shared Vision Program, with funding from GEF PDF resources and support from UNDP and the World Bank. The main objective was to help translate existing national environmental commitments and interest into regional and basin-wide analytical frameworks, and eventually basin-wide actions. The TEA<sup>8</sup> was prepared through a highly participatory and transparent process to ensure maximum consultation and involvement, which in turn would translate into maximum relevance, ownership and commitment. The TEA report constitutes a collective synthesis of basin-wide

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7 In the Nile Basin context, the Transboundary Environmental Analysis is equivalent to the Strategic Action Program preparation process used elsewhere by the GEF. SAP has a different meaning in the Nile Basin context.

8 Obtainable from Inger Andersen: <[landersen1@worldbank.org](mailto:landersen1@worldbank.org)> or <[inger.andersen@undp.org](mailto:inger.andersen@undp.org)>

environmental trends, threats and priorities, and a product in terms of a set of national and international actions to be carried out under basin-wide cooperation. The Transboundary Environmental Analysis was approved by the Nile Council of Ministers meeting held in Khartoum in March 2001. The present Project Brief is based on the findings of the TEA (see also Annexes I and J and the Maps at the end of this document).

20. The TEA emerged from two related sets of activities. The first consisted of broad and participatory national consultations led by a National Expert in each of the nine participating Nile countries, with findings and recommendations documented in National Reports then synthesized by an international consultant. The national consultations were carried out in parallel to assessments of priority needs in the other sectors included in the Shared Vision Program: power trade; efficient use of water for agriculture; water resources planning and management; confidence building and stakeholder involvement; applied training; and benefit sharing and integration. All of the national consultations and assessments were guided by Nile-TAC representatives, with basin-wide coordination by an international lead consultant in each sector. The National Experts consulted with key stakeholders in national and local government agencies, NGOs and research organizations, as well as people working on related projects and programs. At least one workshop was held in each country to which a variety of stakeholders were invited. These consultations built on existing national environmental planning processes within the countries as well as sectoral master plans, many of which were themselves based on broad consultative processes. The second activity, which was supported by the United States Agency for International Development (USAID), involved a scoping study leading to preparation of a multi-country technical background paper based on readily accessible and public domain information and on findings from selected country visits.

#### ***AGENDA FOR ENVIRONMENTAL ACTION IN THE NILE BASIN***

21. The TEA provided the basis for identifying the elements of an Agenda for Environmental Action in the Nile Basin, to be implemented over the next decade or more under the NBI's Strategic Action Program in coordination with other development activities. The Agenda recognizes the critical need for high-level commitment and improved public awareness for successful long-term management and conservation of the Basin's natural resources and ecosystems. It emphasizes the integration of environmental concerns into the development process through capacity building, and more effective environmental monitoring, assessment and planning with enhanced local participation, through demonstration projects involving the full range of key stakeholders, and through policy reforms. The Agenda for Environmental Action includes a broad range of actions that will need to be carefully coordinated with the other elements of the NBI's Shared Vision Program and the SAPs, as well as the complementary initiatives of other local, national and international partners. The emphasis throughout is on stakeholder awareness and involvement, water and environmental management, training and education, capacity building, information sharing and institutional development.

22. The GEF eligible priority transboundary activities to be addressed in the initial phase of the Agenda for Environmental Action are the subject of this proposal. Additional activities can begin as success is achieved in this first phase, as transboundary collaboration and cooperation matures, as national capacities increase and as more funding becomes available. Successful implementation of the Agenda for Environmental Action will require mobilization of a range of human and financial resources to support priority activities. A balance between preventive and curative measures must be part of long-term development strategies. Domestic funding, at the

national and local level, should be anticipated in most nations to be the primary source for investment activities. These funds can be supplemented by loans and grants from international financial institutions and bilateral donors to support the implementation of priority investments.

## **BASELINE COURSE OF ACTION**

### ***ENVIRONMENTAL THREATS***

23. The varied and valuable environmental resources of the Nile Basin are subject to a series of threats with significant consequences for future development of the Basin. The proximate or immediate causes of these threats have been studied extensively and are reasonably well understood, even though reliable data are scarce and some of the transboundary linkages require further elaboration. Agricultural and grazing lands are being degraded, water quality is declining, wetlands and forests are being lost, the overexploitation of natural resource is continuing, pollution from urban, industrial and agricultural sources is increasing, waterborne diseases are proliferating, and the harmful impacts of floods and droughts are intensifying. Many of these threats have a direct impact on human health and welfare, while others undermine people's ability to secure their livelihoods, with poorer people most affected by the deteriorating environmental conditions. Collectively, these threats represent a substantial barrier to the long-term achievement of sustainable development in the Nile Basin countries. A summary of the major direct threats to the environment of the Nile Basin is provided in Table 3 and Annexes I and J, with respective maps attached at the end of this document.

24. The underlying or driving forces behind the threats to the Nile Basin's environmental resources are complex and difficult to make generalizations about with any degree of certainty. Environmental threats have often been attributed to rapid human population growth and persistent poverty, although the linkages between poverty and the environment are complex and vary considerably from place to place. Looking beyond population and poverty, there is now increasing acceptance that the underlying causes of environmental threats are often related to institutional, governance, awareness and information issues as well as sectoral and macroeconomic policies. Gaining a better understanding of the complex interactions between these factors and the Nile Basin's environmental resources is critical to the design of effective remedial actions. Efforts that focus on the technical aspects of natural resource management and conservation can then be complemented by parallel efforts targeting the policy issues and institutional structures that play a key role in managing those resources in a more sustainable and equitable manner.

**Table 3. Summary of Basin-wide Common Causes and Priority Environmental Threats Reported for Basin Countries**

<i>Common Causes for Environmental Threats</i>	
Basin-wide causes	Policy, governance, institutional and capacity constraints, insufficient environmental education and awareness, limited access to environmental knowledge and information (including relevant scientific data), unclear tenure and inadequate access to resources for local stakeholders, inadequate management of protected areas and other environmental hot spots
<i>Priority Environmental Threats by Country</i>	
Burundi	Deforestation, soil erosion, degradation of river banks and lakeshores, mining, wildlife hunting
DR Congo	River and lake pollution, deforestation, soil erosion, wildlife hunting
Egypt	Water and air pollution, filling of wetlands, desertification, waterlogging and soil salinity, sanitation, river bank degradation
Ethiopia	Deforestation, overgrazing, soil erosion, desertification, sanitation, loss of biodiversity (including agrobiodiversity), floods, droughts
Kenya	River and lake pollution (point and non-point source), deforestation, desertification, soil erosion, sedimentation, loss of wetlands, eutrophication and water weeds
Rwanda	Deforestation, soil erosion, degradation of river banks and lake shores, desertification, wildlife hunting, overgrazing
Sudan	Soil erosion, desertification, pollution of water supplies, wildlife hunting, floods, droughts, sanitation, deforestation,
Tanzania	Deforestation, soil degradation, desertification, river and lake pollution, poaching and shortage of potable water
Uganda	Draining of wetlands, deforestation, soil erosion, encroachment into marginal lakeshore and riverine ecosystems, point- and non point-source pollution

### ***TRANSBOUNDARY ENVIRONMENTAL ISSUES***

25. Several key transboundary environmental issues have been identified in the Nile Basin:

- (a) **Exchange of information and knowledge sharing** among and between key resource users, research institutions and other stakeholders throughout the Basin regarding best practices and lessons from experiences is very limited. Relatively few local stakeholders have access to adequate means of communications.
- (b) **Point and non-point source pollution** can cross national boundaries and affect downstream riparians. Soil erosion and non-point source pollution are serious problems in many areas in the Basin. Deforestation and soil erosion can lead to increased sedimentation and greater flood risks downstream, while sediments also accumulate in wetlands and reservoirs. Urbanization and industrialization often lead to greater pollution of the Nile River and its tributaries as pollution prevention and treatment measures generally do not keep pace with this development. Increased use and improper application of pesticides and fertilizers, especially in the large irrigation schemes in the northern reaches of the Basin, lead to increased runoff and pollution of drainage canals. All of these impacts have the potential to reach and harm downstream water users. Data and information related to the transboundary aspects of these issues are scarce and awareness of downstream impacts generally lacking. Only limited work has been done to identify environmental hot spots or to carry out systematic water quality monitoring at environmentally-sensitive sites of transboundary and regional significance. Moreover, there is insufficient understanding of the river basin dynamics to assess the downstream environmental impacts of future river system interventions or changes in watershed management regimes.



- (c) **Lack of capacity to perform adequate environmental impact assessments** for planned investments and installations, although variable between the countries, is generally widespread throughout the Basin. This is either due to missing or outdated regulations or to insufficient enforcement of existing ones. While some countries have adopted environmental impact assessment guidelines relatively recently, the institutional capacity to enforce and monitor the process has been identified as generally poor. As a result, the capacity to assess the transboundary environmental impacts of planned basin-wide investment programs is currently insufficient to support a transition toward sustainable development.
- (d) **Water hyacinth and other invasive aquatic weeds** have spread throughout many parts of the Nile Basin, impairing the functions of natural ecosystems, threatening fisheries and interfering with transportation. Programs are underway in the Basin to combat these invasive species and considerable progress has been made in the Lake Victoria region, largely supported by activities funded by the Lake Victoria Environmental Management Project.
- (e) **Water-dependent ecosystems** throughout the Nile Basin contribute to the stability, resistance and resilience of both natural and human systems to stress and sudden changes. In particular, significant transboundary benefits derive from the Basin's wetlands' roles in maintaining water quality, trapping sediment, retaining nutrients, buffering floods, stabilizing micro-climates and providing storm protection. The ecological and economic role of wetlands in supporting sustainable development in the Basin is not well understood or widely appreciated.
- (f) **Key plant and animal species** often have habitats in adjoining countries, requiring cross-border protected areas and other conservation measures for effective management. For example, the Nile is a principal flyway for birds migrating between central Africa and Mediterranean Europe, and Nile wetlands in a variety of countries provide indispensable habitats for these birds.
- (g) **Water-borne diseases** such as malaria, diarrhea and bilharzia (schistosomiasis) are prevalent throughout the Basin and thus of major concern the Nile countries. Actions to curb these remain a priority in most of the Nile countries.
- (h) **Lack of awareness and understanding** of the transboundary environmental consequences of the decisions being taken over land and water resource management in all of the riparian countries is a major barrier to strengthening environmental management.
- (i) **Environmental impacts of macro and sectoral policies** on the Nile Basin's land and water resources—including transboundary impacts linked to trade, transport and migration—are poorly understood.

### ***BASELINE ACTIVITIES***

26. All of the riparian countries have carried out various national environmental planning processes aimed at diagnosing and prioritizing environmental problems. These include national

environmental action plans, national conservation strategies, national biodiversity strategies and action plans, tropical forestry action plans, and so on. Many of these processes have been based on broad national consultations. The main environmental threats in each country are therefore reasonably well known, even though reliable data is often lacking and some of the underlying causes of the threats are less well understood.

27. A wide variety of projects and programs have attempted and are attempting to address various environmental threats in the Nile riparian countries, many with support from bilateral or multilateral development agencies. The overwhelming majority of these initiatives have been implemented at a national rather than transboundary level. These baseline activities are listed in Annex A. The achievements, lessons and experiences of these activities have been carefully considered in the design of the project. Achieving the project's objectives in the absence of these initiatives would have entailed far higher costs.

28. A set of very sizable and important baseline activities for this project is the NBI's SAP investment projects (described above), still under development. These are expected to include substantial investments over several decades. The proposed SAP includes projects on efficient water use in agriculture, wetlands conservation, water hyacinth control, watershed management, hydropower development and river simulation projects. The present GEF project will provide a basin-wide framework for these follow-on investment activities (see Table 2 for further details). Two other particularly notable initiatives have been launched in the Lake Victoria region of the Nile Basin. These are discussed below

29. The objectives of the recently established East African Community (EAC) are to develop policies and programs aimed at widening and deepening co-operation among partner states (Kenya, Tanzania and Uganda) in the political, economical, social and cultural fields; research and technology; defense, security and legal and judicial affairs for their mutual benefit. As such many cooperative actions are already implemented such as moves towards free movement of goods and labor, a passport union and other similar integrating actions. The Lake Victoria Development Program (LVDP) has been established by the partner states to create a body for cooperation in the joint and efficient management and sustainable utilisation of natural resources for the coordinated management of the Lake Victoria Basin. This regional initiative is supported by several donors and the management of catchments that straddle international borders such as the Mara Basin could be placed under the overall institutional framework of the EAC.

30. A Partnership Agreement between the EAC and its Development Partners was signed at an EAC Heads of State Summit held in Arusha in April 2001. The Development Partners who have signed the agreement include the World Bank, Sweden, Norway, France and the East African Development Bank.

31. The Partnership Agreement between the EAC and the Development Partners is a long term initiative for the three EAC States to act as a single block to address issues of common interest of the member countries with some support from the Development Partners. In this endeavor, the Lake Victoria Basin has been targeted as a Growth Zone common for the three EAC countries. In the Agreement, the Development Partners have undertaken to do the following:

- Assist the EAC in the formulation of policies to guide activities relevant to sustainable development of the Lake Victoria Basin;

- Assist in the mobilization of resources for the implementation of identified programs;
- Assist the efforts of the EAC in exploiting the opportunities for development in the Lake Zone;
- Assist the EAC in building capacity through the development and strengthening of local institutions and organizations concerned with the sustainable development of Lake Victoria Basin; and
- Promote coordination of the development efforts undertaken by the established actors/institutions within the Partner States or with an interest in supporting the development of the Lake Victoria Basin.

32. The Lake Victoria Environmental Management Project (LVEMP) is a large comprehensive project that covers Lake Victoria and its catchment in Kenya, Tanzania and Uganda. Its main objective is the rehabilitation of the ecosystem for the benefit of the inhabitants and national economies. It commenced in 1994 with a Tripartite Agreement and is funded by GEF and IDA in addition to national contributions. Many of the achievements of the LVEMP and the experience gained in these fields should provide important lessons for the present project. The present project will not undertake any activities in Kenya, Tanzania and Uganda that are already being funded by the LVEMP. However, many of the LVEMP activities are highly relevant to the rest of the Basin, and many of the activities in the present project will include Kenyan, Tanzanian and Ugandan participation to ensure transfer of lessons and experiences.

33. Further information on the baseline projects can be found in Annex A.

#### **PROJECT OBJECTIVE AND RATIONALE**

34. The objective of the project is to provide a strategic environmental framework for the management of the transboundary waters and environment challenges in the Nile River Basin. The project will improve the understanding of the relationship of water resources development and the environment in the Basin, and provide a forum to discuss development paths for the Nile with a wide range of stakeholders. The environmental framework established by the project will also promote: (a) enhanced basin-wide cooperation and environmental awareness essential to the successful implementation of the Agenda for Environmental Action in the Nile Basin through the NBI's SVP, SAPs and other programs, and (b) a basin-wide institution, the NBI, with substantially enhanced environmental management capacities.

35. More effective cooperation and coordination between the riparian countries is badly needed if the Nile Basin's environment is to be conserved in ways that help improve the quality of life of the inhabitants. This project will strengthen riparian cooperation and coordination by supporting a series of measures focusing on various aspects of transboundary environmental management. Project activities will include capacity building, training, education and awareness raising, knowledge and information sharing, communications, environmental monitoring and activities at selected pilot sites. All project components will require site selection and stakeholder participation from at least two riparian countries; while many will involve all of the countries. Consistent emphasis will be given to encouraging diverse stakeholder groups to work together, both within their own countries and with counterparts in other riparian countries, as an essential contribution to building the mutual understanding, relationships and trust that are essential to collaborative problem-solving in the future.

36. The project (phases 1 and 2) will encourage more effective basin-wide stakeholder cooperation on transboundary environmental issues by supporting the implementation of the actions prioritized by the TEA, in the following areas:

1. Institutional Strengthening to Facilitate Regional Cooperation.
2. Community-level Land, Forest and Water Conservation.
3. Environmental Education and Awareness.
4. Wetlands and Biodiversity Conservation.
5. Water Quality Monitoring Basin-wide.

37. The present GEF project will be implemented through a programmatic and phased approach, to allow early progress and successes to be consolidated prior to further expansion. The first phase of the GEF program (to be supported under the present Project Brief) will consist of full implementation of two components – institutional strengthening (component 1) and water quality monitoring (component 5), together with partial implementation of two components – land, forests and water conservation (component 2) and environmental education and awareness (component 3). At the end of the third project year, an assessment of the achievements of the present GEF project, as well as in the larger Nile Basin Initiative, will be made against a number of agreed benchmarks. Contingent upon satisfactory performance of the program, a second submission for the second phase as well as for some of the suitable SAP projects will be made to the GEF. This second phase will launch and complete an additional component – wetlands and biodiversity conservation (component 4) – and will complete components 2 and 3. The second phase submission to the GEF may also include some of the suitable SAP projects. Preliminary performance indicators for Phase 1 completion are provided in Annex B (Logical Framework Analysis); these will be further refined during project appraisal and formulation.

38. It is recognized that the NBI is a long-term undertaking and that progress toward the set goals will take decades. Detailed performance benchmarks will be defined during the project design and will relate to the GEF project components. (For further discussion of the performance benchmarks, please see section on Monitoring, Evaluation and Dissemination in paras. 69 – 73 of the present Project Brief.)

#### ***RATIONALE FOR GEF SUPPORT***

39. GEF participation will broaden the range of partners supporting the NBI, facilitate an increased emphasis on analysis and management of transboundary environmental issues throughout the Basin and assist in the full integration of environmental concerns into design and implementation of the large-scale program of investments to be planned in the immediate future.

40. The Project fully supports the objectives of GEF Operational Program Number 9, the “Integrated Land and Water Multiple Focal Area Operational Program.” Consistent with the priorities of Operational Program 9, GEF can “be a catalyst for action to bring about the successful integration of improved land and water resource management practices on an area-wide basis.” It specifically addresses the goal of the Operational Program to assist a “group of countries to utilize the full range of technical, economic, financial, regulatory, and institutional

measures needed to operationalize sustainable development strategies for international waters and their drainage basins.” Special attention is given to “integrated land and water resources management” and the special protection of sensitive areas as “land degradation resulting in damage to the water resources” is often a transboundary problem that requires “political commitments on the part of neighboring countries to work together, establish factual priorities, and decide on joint commitments for action.”

41. The NBI, consistent with GEF guidelines, will “achieve changes in sectoral policies and activities as well as in leveraging donor and regular Implementing Agency participation” and its “projects focus on integrated approaches for the use of better land and water resources management practices on an area-wide basis.” “Community involvement and stakeholder participation” are especially important and the GEF basin-wide project is aiming to “derive lessons learned in testing workable mechanisms to improve community, NGO, stakeholder [including the private sector, and] inter-ministerial participation in planning, implementing and evaluating projects.” As an outcome of the basin-wide project and in line with Operational Program Number 9 “political commitments on the part of neighboring countries to work together, establish factual priorities, and decide on joint commitments for actions” will be supported. A “strengthened multi-country institutional arrangement is ... appropriate measure for support.” The program has been designed to “test various interventions and learn from implementation.” It will also provide critical support for activities in two GEF priority development regions—Sub-Saharan Africa and the Middle East and North Africa.

42. Both the proposed project and the NBI itself are highly relevant to and consistent with the goals of the recently-established Integrated Land and Water Management (ILWM) Program for Africa. Concerned by the tremendous pressure exerted on Africa’s natural resources base and the concomitant ethical, political, economic, security and global environmental implications, a March 1999 meeting of the GEF CEO and the Heads of Agencies of UNDP, UNEP, and the World Bank agreed to prioritize development of a coordinated “Action Program” to promote and support holistic and integrated approaches to reversing land and water degradation in Africa in close collaboration with other key partners. The resulting ILWM Program is expected to aid African countries to accelerate efforts to reverse land and water degradation, with tangible results on the ground taking a programmatic approach. The ILWM Program concept uses a two-phase approach: (a) a demonstration phase with expedited program development and implementation process, and (b) a program expansion phase emphasizing development and implementation of scaled-up activities. The proposed Nile Transboundary Environmental Action Project is consistent with the ILWM in its approach, aiming to strengthen the regional environmental framework as a basis for more effective, larger-scale investment projects involving two or more countries.

#### **COMPONENTS, OUTPUTS AND ACTIVITIES**

43. As described above, the full basin-wide GEF program (phases 1 and 2) consists of a total of 5 components as follows.

1. Institutional Strengthening to Facilitate Regional Cooperation.
2. Community-level Land, Forest and Water Conservation.
3. Environmental Education and Awareness.

4. Wetlands and Biodiversity Conservation.
5. Basin-wide Water Quality Monitoring.

44. To build capacities incrementally while providing an opportunity to build on early progress, the present proposal for Phase 1 of the project includes full implementation of components 1 and 5 as well as partial implementation of components 2 and 3 (as described in para 37). The remaining components will be included in Phase 2, subject to satisfactory project performance and achievement of benchmarks in Phase 1.

## **1: Institutional Strengthening to Facilitate Regional Cooperation (Phase 1)**

### ***1.1 Regional Capacity Building for Transboundary Environmental Management***

45. This component will help develop deeper and more effective cooperation on transboundary environmental management among and between the Nile riparian countries, including governments, NGOs, researchers and other stakeholders. Specifically, the component will (a) strengthen the capacity of the NBI to coordinate and implement the national components of the project, and (b) ensure effective cooperation with the other elements of the NBI Shared Vision Program, the NBI SAPs, and the other active environment and development programs in the Basin. Project activities will establish and support the activities of:

- (a) A Project Coordination Committee (PCC), composed, among others, of national focal points, scientific experts, donors, etc., with a rotating chair.
- (b) A small Project Coordination Unit (PCU) consisting of a Regional Project Coordinator, a Chief Technical Advisor, three Thematic Lead Specialists (corresponding to the three project components in Phase 1 of the project), and support staff for procurement, finance and administration.
- (c) *Ad hoc* basin-wide Thematic Working Groups (possibly one for each of the project components), to provide expertise on the implementation of project components, to highlight country-specific needs and to jointly plan activities, evaluate progress and exchange lessons learned from national experiences.
- (d) One National Project Coordinator for each country, to interact between the PCU, the Thematic Working Groups and the respective national organizations implementing the project components.

46. The national focal point ministry for the project will host the office of the National Project Coordinator. These focal point ministries are as follows:

- (a) Burundi: l'INECN, Ministry of Environment.
- (b) Congo: Ministère des Affaires Foncières, Environnement, Conservation de la Nature, Pêche et Forêts.
- (c) Egypt: Egyptian Environmental Affairs Agency.
- (d) Eritrea: Eritrea Agency for the Environment.

- (e) Ethiopia: Environment Protection Authority.
- (f) Kenya: Ministry of Environment & Natural Resources.
- (g) Rwanda: Ministry of Energy, Water and Natural Resources.
- (h) Sudan: Higher Council of Environment and Natural Resources.
- (i) Tanzania: National Environment Management Council.
- (j) Uganda: Ministry of Water, Lands and Environment.

47. These national institutions have taken an active role in preparing the present project and will play a key coordinating role in its implementation. Civil society organizations will play an active role in the implementation of component 2, while NGOs and youth groups, schools and universities, in addition to the ministries of education, will play a role in implementation of component 3. The decision support system and knowledge management activities (parts of component 1) will be managed by the respective ministries of water affairs in cooperation with the ministries of environment and agriculture, as envisaged under the Water Resources Planning and Management project of the SVP (see also Table 1).

48. In most of the Nile countries, a national Nile Committee has been established, consisting of all the relevant ministries and civil society organizations, including the ministries dealing with finance, planning, agriculture, environment and of course, water resources. These Committees have discussed and prepared the national positions on overall policy with respect to the emerging Nile cooperation, including the Cooperative Framework, the NBI, the SVP projects and the SAPs. Most countries plan that these Committees will continue to play a coordinating role for the NBI. In most of the countries, the ministry of water affairs acts as convener and secretary for the national Nile Committees.

### ***1.2 Knowledge Management***

49. This component will provide key project participants and other stakeholders with improved access to relevant environmental and resource management information as well as enhanced abilities to communicate with one another. Project activities will:

- (a) Facilitate the establishment of basin-wide environmental communication email/internet services (in collaboration with the Water Resources Planning and Management Project, which will establish the structure and technical standards for the SVP communications network and information management system, see also 2.1 below).
- (b) Establish and maintain an electronic environmental knowledge base and repository for resources and documents.
- (c) Publish an environmental SVP electronic newsletter and establish a website.

### ***1.3 Decision Support System and River Basin Modeling<sup>9</sup>***

50. This component will afford a substantial learning process and support improved decision making by developing a basin-wide decision support system (DSS), including a River Basin Model. This first participatory, basin-wide development effort of the River Basin Model aims at a simplified representation of the Basin's hydrology and river system behavior based on available data. The model will allow assessments of potential future impacts of collaborative projects that may have transboundary implications, and will provide quantitative river flow information to support more detailed environmental assessments. A broad acceptance and use of the River Basin Model will depend on demonstration of its usefulness and successful application at regional, sub-regional and national levels. Relevant applications, including its use in SAP projects or the evaluation of development and management options, will provide an important testing and validation basis. Broader, multi-sectoral databases and finer scale models may be developed in subsequent projects to address site-specific issues. Sub-component activities will include the following:

#### *1.3.1 Development of the River Basin Model component of the Nile Basin DSS and staff training*

- (a) Assess the modeling needs and system requirements through a consultative process with the riparian states, review existing models, and prepare design specifications and a development plan for the River Basin Model.
- (b) Develop the River Basin Model with full participation from a core team of national lead specialists.
- (c) Train core staff from the region to be able to understand, use, maintain and assist in further model development.

#### *1.3.2 Linkage of the Regional DSS Unit with national networks*

- (a) Develop the National Expertise and capacity to use and maintain the Model through national training sessions and workshops in each country.

#### *1.3.3 River Basin Model applied and result recognized as useful by decision makers*

- (a) Identify relevant projects/programs for model application, use the River Basin Model and present the results to decision makers.

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<sup>9</sup> Key components of the DSS development process include: (a) strengthening of the institutional framework and human capacity for DSS development and application, including the establishment of a Regional DSS Unit, National Focal Point Institutions and a network of users; (b) development and application of a comprehensive information management system (IMS), including communication networks, data and knowledge bases, geographical information systems, and user interfaces; (c) development and application of a regional Nile River Basin planning model; and (d) establishment of guidelines for the collection, processing, analysis and exchange of relevant data and information. The total costs of the DSS development are estimated to be US\$21 million US (out of the total costs of the Water Resources Planning and Management project of US\$28 million). This GEF project will support the River Basin Model component of the DSS (US\$3.6 million) as outlined below and provide the environmental content for the IMS as discussed above in Output 1.2 (Knowledge Management). The remaining components of the DSS will be funded from different sources.



### *1.3.4 Regional and national level training and consolidated DSS use*

- (a) Fill critical data gaps, within budgetary constraints, and identify the means to ensure that gap filling and additional data collection is done on a continuous basis to ensure long-term sustainability of the River Basin Model.
- (b) Monitor, evaluate, and identify future needs. Recommend further model and capacity development needed to support detailed environmental, ecological and socio-economic assessments.

### ***1.4 Macro and Sectoral Policies and the Environment***

51. This component will encourage strengthening of national policies that affect environmental conservation, as a component of sustainable economic development and as a key step towards a more informed environmental policy debate. Project activities will support a regional/transboundary study of the national and international policies determining the patterns of economic development and environmental change in at least three of the riparian states (*in coordination with the SVP Benefit-sharing/Integration project*).

### **2: Community-level Land, Forest and Water Conservation (Phase 1 and 2)**

52. Pilot activities at selected transboundary sites will demonstrate the feasibility of local-level approaches to land and water conservation, including mitigation actions for soil erosion, non-point source pollution and invasive water weeds. National NGO networks will be strengthened and NGO-government collaboration improved. This component includes regional institutional strengthening (2.1) and one set of problem identification and site selection activities (2.2) that build on the basin-wide transboundary environmental analysis. These sets of activities will provide the basis for planning and implementing community-level actions to be financed by a micro-grant fund (2.3). Special effort will be made to ensure that NGOs and grassroots organizations supported through this program include women's groups and organizations operating in the region.

53. In view of the interlinked nature of component 2 with the activities planned under the Shared Vision Program project on "Efficient Water Use for Agricultural Production" (see also Table 1, project 3), a cost-sharing arrangement has been established between these two projects for the management of this component. Moreover, activities under the two projects will be designed with complementarity, in order to mutually reinforce one another.

54. Sub-component activities will include:

#### ***2.1 Enhanced Basin-wide Capabilities and Cooperation***

- (a) Conduct regional workshops for government and NGO personnel for training and information sharing on lessons learned in land and water conservation and issues of eutrophication and water weeds, including identification and mitigation of root causes, participatory planning and implementation of projects, as well as identification of areas most at risk and cost-effective site-specific mitigation measures. Special attention will be made to ensure that women's groups and NGOs are reached through the workshops and training.

- (b) Strengthen or, where necessary, help to establish national networks of NGOs involved in land and water conservation, including access to email/internet. Provide equipment, technology and information technology training.
- (c) Promote exchanges of knowledge and lessons learned among and between the national NGO networks, including organization and management, funding options and sources, access to cost-effective technical solutions, best practice on community-level land, forest and water conservation, etc.

## ***2.2 Priority Actions for Addressing Transboundary Soil Erosion***

- (a) Carry out rapid assessments and mapping of critical erosion and deposition sites, with analysis of site-specific root causes (*mapping in coordination with the SVP Water Resources Project and using existing GIS facilities*).
- (b) Select pilot sites to focus activities addressing specific erosion problems.

## ***2.3 Micro-Grant Fund to Support Local Land and Water Conservation Measures at Priority Transboundary Sites (based on the criteria and priorities emerging from 2.1 and 2.2)***

- (a) Develop terms of reference and management arrangements for a Nile Basin Micro-grant Fund for enhanced local land and water conservation measures in a transboundary context. Overall program to be managed by a representative board made up of Basin and agency representation, with national fund management and grant disbursement arrangements. Collaboration with the GEF Small Grants Program and other micro-grants programs will be established to draw on experiences and best practice.
- (b) Select grant applications that prioritize projects that (i) focus on transboundary problems and sites, including those identified under Component 2.2, (ii) provide for community participation in their design, implementation and evaluation, (iii) pay attention to the needs of women and/or indigenous peoples and practices, (iv) draw on local or Nile Basin scientific and technical resources, and (v) include provision for capacity development. In view of the important role which women play in household management, firewood and water management, agriculture and vegetable gardening, special effort will be made to ensure that women beneficiaries are reached through the micro-grant funding.
- (c) Emphasize piloting, best practice and exchanges of lessons learned. Successful or promising initiatives can be scaled up as a part of the NBI SAP.
- (d) The types of activities to be supported will include:
  - (i) Water weeds: (1) support for local community and private sector initiative for water weed control (focusing on infestations in Burundi, D.R. Congo, Rwanda and Sudan), through biological, mechanical or other forms of removal; (2) support for exchange with other regions, projects and countries, where successful water weed removal efforts have been undertaken.

- (ii) Land management, soil conservation, reforestation/afforestation and land degradation control: (1) physical and biological soil conservation measures; (2) support to production/procurement of multi-purpose tree seedlings; (3) flood check dams and water harvesting to decrease soil erosion; (4) prevention of non-point source pollution from agriculture; (5) organic farming demonstration sites (inter-cropping etc.); (6) agroforestry demonstration plots; (7) extension services to promote agricultural practices leading to less soil loss, better nutrient retention, and less fertilizer and pesticide use; (8) Integrated Pest Management (IPM) demonstration sites.
- (iii) Development and use of alternative energy and construction materials.
- (iv) Support for local environmental planning and awareness.
- (v) Exchange of lessons learned and field visits to demonstration sites.

### **3: Environmental Education and Awareness (Phase 1 and 2)**

55. This component will make an important contribution to deepening public awareness and understanding of the community of interest and the ecospace which the Nile creates. It will help inform a generation that has broader Nile-related transboundary environmental understanding and create a constituency in support of environmental conservation. Component activities will be coordinated with the NBI Shared Vision Program's Stakeholder Awareness and Communications Project. Activities will:

#### ***3.1 Deepen Public Awareness and Understanding of Transboundary Environmental Issues***

- (a) Establish national Working Groups representing likely users/implementers of environmental education and awareness programs, including relevant government departments, educators and NGOs, to explore and agree on the development and dissemination of programs.
- (b) Form basin-wide teams to design and develop common environmental education and awareness programs and materials aimed at public and school audiences, emphasizing transboundary links and connections which the Nile naturally forms, using TV, radio and web pages in addition to traditional media, to complement existing initiatives.
- (c) Train team participants in development and implementation of environmental education and awareness programs.
- (d) Through a variety of delivery mechanisms, (nature clubs, schools, the scout movement, youth movement, university modules, etc) launch environmental education and awareness programs in participating countries. In view of the fact that schools are often not co-educational in the Nile countries, attention will be paid to ensure that boys and girls are equally reached through the education and awareness programs.

### ***3.2 Enhanced Networking among Universities and Other Educational and Research Institutions***

- (a) Establish a basin-wide working group with representatives from principal universities and research institutions to coordinate university programs in environmental science, engineering, and policy studies.
- (b) Develop programs that encourage the exchange of students in environmentally related disciplines among the principal universities of the riparian nations (*to be coordinated with the NBI SVP Communications and Applied Training project, possibly with some resources from 2.3*). Attention will be paid to ensure gender balance among the exchange students selected.
- (c) Facilitate basin-wide and sub-basin teams of university-based educators and researchers working on issues related to environmental monitoring, geographic information analysis, and knowledge dissemination, and form connections between these teams and international sources of remote sensing information (*to be coordinated with the NBI SVP Decision Support System and Applied Training activities*).

Funding for components 4 and 5 below does not form part of the current project proposal (Phase 1), but forms part of the overall GEF program for the Nile Basin. Based on performance in Phase 1 of the project, a subsequent proposal for Phase 2 will be submitted to the GEF after year 3 in the present project.

### **4: Wetlands and Biodiversity Conservation (Phase 2)**

56. This component will improve the understanding and awareness of the role of wetlands in supporting sustainable development and improve management at selected transboundary wetland sites, cross-border protected areas and key migratory bird sites. The emphasis of the entire pilot program is on the management of significant transboundary ecosystems that straddle borders and on important wetlands in the river system. Activities will include:

#### ***4.1 Enhanced Regional Cooperation and Capabilities***

- (a) Based on the analysis contained in the TEA, select three key conservation areas to be targeted by the project.
- (b) Establish a basin-wide network of stakeholder representatives/experts in biodiversity conservation, wetland management, sustainable use of natural resources and sustainable livelihood initiatives involving local communities (to include government officials, protected area managers, NGOs, researchers, etc).
- (c) Develop education, training and awareness programs emphasizing the transboundary aspects of Nile Basin conservation, including habitat and species management, conservation and multiple use management of wetlands, and integration of protected area management with local social and economic development as well as sound wetland conservation and management.

#### ***4.2 Better Understanding and Broader Awareness of the Role of Wetlands in Supporting Sustainable Development***

- (a) Carry out in-depth ecological and economic studies of one or two of the most important Nile wetlands, to explore (i) ecological processes, including wetlands' role in flood control and waste treatment (including the impact of wetland modification and loss on these roles), (ii) the economic value of wetlands, and (iii) major threats to wetlands and their underlying social and economic causes.

#### ***4.3 More Effective Management of Wetlands and Transboundary Protected Areas***

- (a) Prepare site-specific participatory management plans for selected pilot sites, emphasizing multiple-use objectives where applicable, using a process that facilitates dialogue among key stakeholders to build consensus on the problems and opportunities of community participation and action in and around the selected sites.
- (b) Undertake baseline assessments on the status and trends of biodiversity and the related social, economic and institutional issues at each selected site.
- (c) Support actions at selected sites, including: (i) baseline assessments, including flora and fauna rapid assessments, (ii) provision for key stakeholders to participate in planning and implementation of management activities, (iii) training for wetland and other protected area management staff, (iv) environmental education and public awareness programs, including schools programs, flora and fauna field guides, etc., (v) activities by local communities and sustainable livelihood projects aimed at generating local benefits from conservation and mitigating wetland and other protected area threats, (vi) support for boundary setting and demarcation, basic facilities, equipment and on-the-job training for protected area staff, (vii) sensitization of guards and other staff to local social and economic issues.

### **5: Water Quality Monitoring Basin-wide (Phase 1)**

57. This component will make an important contribution to improving water quality monitoring across the Nile Basin. Capacities for water quality vary widely in the Basin and this component will help upgrade the skills and capacities of key stakeholders. One essential outcome will be the establishment of standard analytical methods and improved capacities to monitor a limited number of key water quality parameters using uniform analytical methods across the Basin. Additionally, cost recovery options for water quality monitoring and possibilities of creating incentives for pollution prevention will be better understood. Improved water quality information will enable better decision making by governments and other resource users, particularly with respect to transboundary environmental management. A limited basin-wide water quality monitoring program at selected environmental hotspots of transboundary significance will be initiated. Project activities include:

### ***5.1 Enhanced National Capacities for Water Quality Monitoring***

- (a) Review current national efforts and capacities for monitoring source and non-point source pollution, summarize and map regular sampling points in the Basin, and construct preliminary map of known water quality along the Nile River.
- (b) Develop common analytical methods for water quality monitoring measurements and quality assurance (*to be coordinated with NBI SVP Water Resources Project, LVEMP, and other current national and regional activities*).
- (c) Identify list of relevant and realistic key surface water quality parameters to be monitored by common methods in the Basin; develop catalogue of recommended common analytical methods for water quality monitoring, a quality assurance program, and training materials (including sampling methods, data recording and electronic storage); and review and pilot test methods in one national laboratory in each country.
- (d) Develop common formats for a water quality database in each country for storage and processing of water quality parameters (*using the capacities and infrastructure provided through LVEMP, FAO, and the SVP Water Resources Project to ensure regional integration*).
- (e) Provide technical support to national environmental agencies designing water quality monitoring programs for point and non-point source pollution for various water uses and industrial sectors, including identification of strategic sampling points (*aided by DSS – including models developed under the SVP Water Resources Project, Pillar E*).
- (f) Conduct regional training workshops on water quality monitoring and application of common analytical methods developed for staff from environmental organizations, academic institutions and targeted industries.
- (g) Increase understanding of possible cost recovery mechanisms for water quality monitoring and for the creation of incentives for pollution prevention: Prepare best practice resource materials and examples of respective environmental legislation, rules, and regulations; compile list of sector specific pollutants and range of existing standards for discharge monitoring and permitting from regional and international experiences; present options to create incentives for pollution prevention and cost recovery mechanisms for water quality monitoring.
- (h) Review lessons learned and conduct study tour related to water quality accidents/recoveries and to well-run monitoring facilities.

### ***5.2 Water Quality Monitoring Program at Environmental Hotspots of Transboundary Significance Initiated***

- (a) Review existing water quality monitoring stations and systems in the Nile Basin and evaluate and recommend additional resources.

- (b) Initiate a Nile River water quality monitoring program at a selected number of environmental hotspots of transboundary significance. Strategic sampling points may focus on (i) the outlet/inflow of major Nile Basin lakes, marshes and other features (*to be coordinated with LVEMP*), (ii) selected biodiversity hot spots, e.g., significant wetlands, migratory birds' route and cross-border protected areas (*to be coordinated with components 2 and 4*), and (iii) points known to experience major change in quality or quantity (using existing data/information facilities listed in component 1). It is expected that the SAPs will design follow-on investment programs addressing specific water quality interventions in the future.

## RISKS AND SUSTAINABILITY

### *RISKS*

58. There are some important risks that may result in the project not meeting its desired outputs:

- (a) **Commitment of the Nile-Basin countries.** Project success will be critically dependent on the countries' continued commitment to the collaboration with other Nile Basin member countries, and to achieving the objectives of the SVP, as laid down by the Nile-COM and the Nile-TAC. This is intimately related to political stability. Many countries in the region are facing insecurity and contention, political uncertainty, extreme poverty, diseases, etc. All these conditions are not conducive to a long-term project aimed at improving an enabling environment on a regional basis. On the other hand, this and other NBI projects seek to contribute towards building trust among the Nile Basin countries. It is therefore of crucial importance that this process have tangible benefits. The emphasis on regional cooperation, the collaborative efforts that have been made to design the project and the regional ownership that is the result thereof are powerful instruments for not only achieving the project's objectives, but also for accomplishing the longer term trust and understanding.
- (b) **Institutional leadership.** The project depends on the capability of government institutions and staff to provide visionary leadership. This may not be forthcoming in a setting where there is general lack of incentives for staff, research and innovation and supporting infrastructure. Through regional learning from study tours, exchange visits and consultations, the project endeavors to create institutional capacity and leadership that will form the basis for implementation of project activities. It should be pointed out that the project intends to seek visionary leadership within, and not outside the boundaries of the Nile Basin.
- (c) **Regional coordination capacity.** The institutions of the NBI supported by the Nile-SEC have effectively managed a complex, multi-country sectoral process to prepare the seven projects of the Shared Vision Program. This demonstrates capacity for basin-wide coordination. Effective implementation of the SVP projects, however, will be a challenge. The creation of a strong Project Coordination Unit has been incorporated into the project design while continued strengthening of the regional capabilities of the NBI institutions will be addressed at the SVP level.

- (d) **National institutional capacity.** Recognizing that some countries in the Basin face institutional capacity constraints, the project has been designed to strengthen institutional and human resources capacity in the recipient countries. Component 1.1 of the present project, “Regional Capacity Building for Transboundary Environmental Management” is specifically designed to develop a culture of good practice within national environmental management institutions.
- (e) **Insecurity and conflict.** Seven of the ten countries in the Nile region are at present, or have recently been, involved in internal or external conflict. This brings both operational and political risks to a process and a project of this size. However, there is an awareness at the highest political levels of the Nile countries of the possibilities of a “cooperation and peace dividend” which the broader NBI can leverage, and thus there is a high-level commitment to maintaining the momentum of the process, in spite of the political landscape and reality of the moment. Leaders in the Nile Basin countries have made it clear that they see the NBI as a tremendous opportunity to bring further cooperation, economic exchange and eventually greater integration and interdependence, which can yield high returns in terms of growth, food security, sustainable development and peace. Both of the Implementing Agencies are well represented in the countries concerned and manage large programs delivering development and humanitarian assistance. Moreover, as far as the regional Nile process is concerned, UNDP and the Bank have been involved since 1995 and 1997 respectively, and are confident of the agencies’ ability to deliver this GEF project, as well as the larger NBI, in an efficient and effective manner.

## *SUSTAINABILITY*

59. Sustainability issues include the following:

- (a) **High level government commitment.** The most important aspect underpinning the sustainability of the present project is that it is set within a much larger initiative, to which the governments of the Nile countries have committed themselves at the highest level. The governments see the NBI as offering the possibility of moving beyond isolated planning and unilateral actions in a non-cooperative and possibly conflictual setting, towards cooperative development planning in the utilization of this transboundary resource, seeking win-win opportunities in the spirit of benefit sharing. The GEF project must therefore be seen as a component within a much larger initiative, which has been underway since 1995, with the initial endorsement of the Cooperative Framework project. The governments of the region have taken extremely bold steps, seeking to move beyond the acrimony of the past towards cooperation. In making their commitments to the NBI, including the present project, the riparian countries have committed themselves to discovery of cooperative solutions, sustainable governance of a shared resource, and work towards further integration. While intangible and unquantifiable, these commitments are the most important elements within the present project to buttress the long-term sustainability of the intervention.



- (b) **Funding of regional institution.** The Nile riparian countries have made a conscious decision to self-finance the recurrent running costs of the regional Secretariat. The riparian governments are contributing an annual amount to the operations and the budget of the Secretariat. This decision has been taken to assure true ownership and control of the process. Additional cost recovery mechanisms are currently being explored.
- (c) **Project ownership.** Sustainability of project initiatives will greatly depend on the approach adopted during project design and implementation. First and foremost is the question of project ownership. Through a resolutely participatory process of project design, every effort has been made to ensure that riparian country stakeholders genuinely “own” the project. Local communities, NGOs and the private sector have been engaged in the national and local consultations underlying the TEA. These and other key stakeholders will need to be genuinely engaged in project implementation and encouraged to take on ownership. Project ownership will also be demonstrated through continued national commitment to the Nile Basin institutional set-up.
- (d) **Tangible benefits.** Another important concern is whether the project outcomes will indeed result in tangible benefits for local communities. It is recognized that the initial beneficiaries of the project will be selected government agencies and ministries, private sector and local communities. For long-term sustainability, project benefits must reach local farmers and private sector. Incorporating regional experiences at the national level will need to form an important element of this strategy.
- (e) **Recurring costs.** Some project components will entail recurring costs past the life-span of the project. Where this is the case, mechanisms for long-term cost recovery will be explored and piloted during the duration of the project. It is expected that, where the project has led to tangible benefits on the ground, recurring costs are likely to be covered by the beneficiaries of the project.
- (f) **Regional cooperation.** Project sustainability will depend on maintaining and strengthening the growing cooperation among the Nile-Basin countries. There is a strong commitment and a clear notion of “crossing the Rubicon” among the riparians—a sense that so much has been invested already that the NBI, including the present project, must succeed for the process to move forward. Regional commitment to the process is high, with the specifics of cooperation anchored in the Policy Guidelines endorsed by the Nile Council of Ministers (see Annex E). The core institutions governing the overall Nile Basin Initiative (Nile-COM, Nile-TAC and Nile-SEC) as well as the Policy Guidelines have emphasized the importance of transparent operational procedures, open communication networks and information sharing as key principles to guide long-term regional cooperation.

## STAKEHOLDER PARTICIPATION AND IMPLEMENTATION ARRANGEMENTS

### *STAKEHOLDER PARTICIPATION*

60. Extensive participation by a wide range of stakeholders is an explicit emphasis of the entire project. Stakeholders have already participated in the national consultation processes linked to the TEA, and the implementation of the project will build on these contacts and relationships (See Annex F for list of stakeholders consulted in the preparation of the TEA and the present project).

61. Significant project components aim to broaden and deepen stakeholder involvement in environmental management. The basin-wide Working Groups that will coordinate each of the project components (see below) will all include a range of stakeholder representatives. Local stakeholders, especially communities and smaller NGOs, are explicitly targeted beneficiaries for the Micro-grant Fund. A wide range of stakeholders is also expected to be involved in and benefit from the information and knowledge management component as well as the environmental education and awareness program. Representatives of all major stakeholder groups will also have opportunities to participate in monitoring and evaluating the project.

### *IMPLEMENTATION ARRANGEMENTS*

62. **GEF Implementing Agency responsibilities.** Building on the successful implementation of the PDF phase of the project, the full GEF project will continue to be jointly implemented by the two GEF implementing agencies, UNDP and the World Bank, each with its specialized expertise and comparative advantage in the thematic areas of intervention. The PCU will provide technical and managerial support to the Nile-Sec in overseeing the implementation of the project. The PCU will be responsible for contracting, fund management, procurement, disbursement, program administration and project level monitoring.

63. As this is a joint UNDP-World Bank supported project, the relative strengths of each agency have been drawn upon for the design of the present project. The backstopping, management and support to the project will draw on the comparative advantages of each agency, including such matters as in-house technical expertise, technical experience in relevant project components, on the ground presence, ability to handle small contracts expeditiously, etc. The Washington-based UNDP-World Bank Nile Team will backstop both the components for which the UNDP and the Bank act as GEF Implementing Agencies. The two partner agencies will support project implementation as follows:

#### **1. Institutional Strengthening to Facilitate Regional Cooperation (Phase 1)**

- |   |              |
|---|--------------|
| 1.1 Regional capacity building for transboundary environmental management | (UNDP)       |
| 1.2 Knowledge management  | (World Bank) |
| 1.3 Decision Support System - River Basin Model                           | (World Bank) |
| 1.4 Macro/sectoral policies and the environment                           | (World Bank) |

#### **2. Land, Forest and Water Conservation (Phases 1 and 2) (UNDP)**

**3. Environmental Education and Awareness (Phase 1 and 2) (UNDP)**

**4. Wetlands and Biodiversity Conservation (Phase 2) (UNDP)**

**5. Water Quality Monitoring Basin-wide (Phase 1) (World Bank)**

64. **Implementation at regional level.** A project organizational chart is shown in Annex G. It should be noted that the final arrangement will be coordinated with other SVP projects under the direction of Nile-TAC. The NBI transitional institutional structure, comprised of the Nile-COM and Nile-TAC and supported by the Nile-Sec, will provide overall policy guidance to the project.

65. **Project management** arrangements have been designed to (a) provide basin-wide guidance and leadership, (b) facilitate decentralized project implementation within the riparian countries participating in each component, and (c) coordinate effectively with the activities of the NBI SAPs as well as other elements of the NBI Shared Vision Program. To achieve these aims, the following management structure is envisioned:

- (a) The transitional NBI institutional structure—comprising the Nile-COM and the Nile-TAC, supported by the Nile-Sec—will provide overall policy guidance to the project and ensure regional as well as inter-sectoral integration of the entire Shared Vision Program.
- (b) The PCC will oversee the Project with a membership composed of national focal points, scientific experts and donors.
- (c) A number of *ad hoc* basin-wide Thematic Working Groups (possibly one corresponding to each of project components 2 to 5) will be established with representatives from each participating country, to plan and facilitate joint activities, review and evaluate progress, and exchange lessons from national experience. These Working Groups will play a key leadership role in the implementation of the project components.
- (d) A small PCU will implement the project in liaison with the Nile-Sec. The PCU will consist of a Regional Project Coordinator (reporting to the PCC), a Chief Technical Advisor, three Thematic Lead Specialists (corresponding to the three project components in Phase 1 of the project) and support staff. The PCU will begin by developing a detailed project work plan, including a detailed monitoring plan.
- (e) One National Project Coordinator in each country will provide a critical link between the Thematic Lead Specialists based in the PCU, the basin-wide Thematic Working Groups, and the national organizations and individuals involved in implementing the various project components within the respective countries. Project implementation will ensure participation of all government and private sector stakeholders, including ministries of water, agriculture, and forestry, local communities, and NGOs.

## NATIONAL INSTITUTIONS

66. A large number of national government and NGO institutions will participate in the different components of the project. Annex H provides an overview of some of the agencies and institutions that the project would aim to involve in the implementation phase.

### INCREMENTAL COSTS AND PROJECT FINANCING

*(The following data are provisional pending the inclusion of cost estimates for the planned EN-SAP projects in the baseline)*

67. The total baseline of the project is estimated at US\$403.0 million and the alternative scenario is estimated at US\$513.7 million. The incremental cost is estimated at US\$110.7 million. In addition to the US\$350,000 grant from the PDF Block B, already disbursed, GEF is requested to finance a total of US\$26.6 million, which is divided into two distinct project phases. The total for Phase 1 is US\$19.3 million while the total for Phase 2 is US\$7.4 million. Total co-financing is US\$84.1 million (of which US\$71.4 million will support other SVP/NBI projects, while an additional US\$12.7 million will be raised at ICCON as a non-GEF funded increment to the present GEF project). The costs of monitoring and evaluation, supervision and quality control, contingencies as well as execution costs are included in these amounts.

**Table 4 Incremental Costs and Project Financing (US\$ millions)**

Component	Base Line <sup>10</sup>	Alternative Scenario <sup>11</sup>	Incremental Cost <sup>12</sup>	Co-financing	NBI SVP Co-financing	GEF
1	93.0	116.6	23.6	0.0	15.0	8.6
1a (DSS)	0.0	28.0	28.0	0.0	24.4	3.6
2	205.9	222.0	16.1	7.4	5.0	3.7
3	0.9	31.3	30.4	0.0	27.0	3.4
4	74.2	81.3	7.1	2.7	0.0	4.4
5	29.0	34.5	5.5	2.6	0.0	2.9
<b>TOTAL</b>	<b>403.0</b>	<b>513.7</b>	<b>110.7</b>	<b>12.7</b>	<b>71.4</b>	<b>26.6</b>

10 For this analysis, the “Business-as-Usual” scenario has been used as Baseline.

11 The Alternative Scenario is equal to the Baseline plus the Incremental Cost.

12 The total Incremental Cost includes the costs to the GEF and Co-financing.

**Table 5. Summary Budget (in US\$)**

<b>Components</b>	<b>TOTAL</b>	<b>GEF</b>	<b>Non-GEF</b>
<b><u>1. Institutional Strengthening (Phase 1)</u></b>			
1.1 Regional capacity building for transboundary env. management	6,936,149	6,936,149	0
1.2 Knowledge management	1,154,139	1,154,139	0
1.3 Decision Support System - River Basin Model	3,646,986	3,646,986	0
1.4 Macro/sectoral policies and the environment	436,686	436,686	0
	<b>12,173,959</b>	<b>12,173,959</b>	<b>0</b>
<b><u>2. Land, Forests and Water Conservation (Phase 1)</u></b>			
2.1 Basin-wide cooperation and NGO networks	3,656,370	1,194,997	2,461,373
2.2 Transboundary soil erosion	305,210	305,210	0
2.3 Micro-grant fund for local conservation initiatives	5,137,982	215,236	4,922,746
	<b>9,099,561</b>	<b>1,715,442</b>	<b>7,384,119</b>
<b><u>3. Environmental Education and Awareness (Phase 1)</u></b>			
3.1 Public awareness and understanding	3,062,563	3,062,563	0
3.2 Networking universities and other research institutions	402,742	402,742	0
	<b>3,465,305</b>	<b>3,465,305</b>	<b>0</b>
<b><u>4. Wetlands and Biodiversity Conservation (Phase 1)</u></b>			
4.1 Regional cooperation and capabilities	0	0	0
4.2 Wetlands in sustainable development	0	0	0
4.3 Management of wetlands & cross-border PAs	0	0	0
	<b>0</b>	<b>0</b>	<b>0</b>
<b><u>5. Water Quality Monitoring Basin-wide (Phase 1)</u></b>			
5.1 Capacity building for water quality monitoring	1,506,249	1,506,249	0
5.2 Transboundary water quality monitoring initiated	4,007,266	1,418,221	2,589,045
	<b>5,513,514</b>	<b>2,924,470</b>	<b>2,589,045</b>
<b>PHASE 1 TOTAL</b>	<b>29,252,340</b>	<b>19,279,176</b>	<b>9,973,163</b>
<b><u>2. Land, Forests and Water Conservation (Phase 2)</u></b>			
2.3 Micro-grant fund for local conservation initiatives	2,000,000	2,000,000	0
	<b>2,000,000</b>	<b>2,000,000</b>	<b>0</b>
<b><u>3. Environmental Education and Awareness (Phase 2)</u></b>			
3.1 Public awareness and understanding	1,000,000	1,000,000	0
	<b>1,000,000</b>	<b>1,000,000</b>	<b>0</b>
<b><u>4. Wetlands and Biodiversity Conservation (Phase 2)</u></b>			
4.1 Regional cooperation and capabilities	1,185,766	1,185,766	0
4.2 Wetlands in sustainable development	2,735,816	0	2,735,816
4.3 Management of wetlands & cross-border PAs	3,183,786	3,183,786	0
	<b>7,105,368</b>	<b>4,369,552</b>	<b>2,735,816</b>
<b>PHASE 2 TOTAL</b>	<b>10,105,368</b>	<b>7,369,552</b>	<b>2,735,816</b>
<b>OVERALL PROJECT TOTAL</b>	<b>39,357,708</b>	<b>26,648,729</b>	<b>12,708,979</b>

**Table 6. Summary Budget by Implementing Agency**

COMPONENT	GEF Implemen- ting Agency	GEF Financing		UNDP	World Bank
		Phases			
		Phase 1	Phase 2		
<b><u>1. Institutional Strengthening</u></b>					
1.1 Regional capacity building	UNDP	6.94		6.94	
1.2 Knowledge management	WB	1.15			1.15
1.3 Decision Support System - River Basin Model	WB	3.65			3.65
1.4 Macro/sectoral policies and the environment	WB	0.44			0.44
<b><i>Component Sub-total</i></b>		<b>12.17</b>		<b>6.94</b>	<b>5.24</b>
<b><u>2. Land, Forests and Water Conservation</u></b>					
2.1 Basin-wide cooperation and NGO networks	UNDP	1.19		1.19	
2.2 Transboundary soil erosion	UNDP	0.30		0.30	
2.3 Micro-grant fund for local conservation initiatives	UNDP	0.22	2.00	2.22	
<b><i>Component Sub-total</i></b>		<b>1.72</b>	<b>2.00</b>	<b>3.72</b>	
<b><u>3. Environmental Education and Awareness</u></b>					
3.1 Public awareness and understanding	UNDP	2.06	1.00	3.06	
3.2 Networking universities and other research institutions	UNDP	0.40		0.40	
<b><i>Component Sub-total</i></b>		<b>2.46</b>	<b>1.00</b>	<b>3.46</b>	
<b><u>4. Wetlands and Biodiversity Conservation</u></b>					
4.1 Regional cooperation and capabilities	UNDP		1.19	1.19	
4.2 Wetlands in sustainable development	UNDP				
4.3 Management of wetlands & cross-border PAs	UNDP		3.18	3.18	
<b><i>Component Sub-total</i></b>			<b>4.37</b>	<b>4.37</b>	
<b><u>5. Water Quality Monitoring Basin-wide</u></b>					
5.1 Capacity building for water quality monitoring	WB	1.51			1.51
5.2 Transboundary water quality monitoring initiated	WB	1.42			1.42
<b><i>Component Sub-total</i></b>		<b>2.92</b>			<b>2.92</b>
<i>Phase 1 – total</i>		<b>19.28</b>		<b>11.12</b>	<b>8.16</b>
<i>Phase 2 - total</i>		<b>7.37</b>		<b>7.37</b>	
<b>TOTAL</b>		<b>26.65</b>		<b>18.49</b>	<b>8.16</b>

## MONITORING, EVALUATION AND DISSEMINATION

68. A basin-wide monitoring and evaluation program will be developed and implemented. Activities will include developing a structured work plan and reporting formats, defining performance indicators, adopting a standard methodology for data collection and analysis, and supporting capacity building in monitoring and evaluation. An independent mid-term and final evaluation will be conducted, with broad dissemination of findings and lessons learned.

69. Key to the mid-term evaluation will be an assessment of performance against agreed benchmarks. The mid-term evaluation will be undertaken in the third project year to provide an assessment of achievements made through the funding of the present GEF project, as well as in the larger Nile Basin Initiative. Based on program performance, a second submission for the two remaining components as well as for some suitable SAP projects may be made to the GEF.

70. It is recognized that the NBI is a long-term undertaking and that progress toward the set goals will take decades. Detailed performance benchmarks will be defined during project design and will relate to the GEF project components. The following parameters will shape the definition of the performance benchmarks:

- (a) Broader appreciation of transboundary impacts of water management actions.
- (b) Increased regional cooperation in environmental and water management fields.
- (c) Increased basin-wide community action and cooperation in land and water management.
- (d) Greater basin-wide professional networks of environmental and water professionals.
- (e) Exchanges on common environment and water issues among Basin university and school networks—south-south and north-south.
- (f) Greater appreciation of river hydrology and more informed discussion of development paths.
- (g) Expanded information and knowledge base on land and water resources available to professionals and NGOs.

71. Monitoring against the broader goals set out in the Shared Vision Program will be undertaken in the Socio-Economic Development and Benefit Sharing Project of the SVP, funded outside the scope of the present GEF project. In that broader monitoring exercise, the following parameters will help assess how the countries have progressed toward the long-term goals of the SVP.

- (a) Increased and active discourse on economic development scenarios, win-win investments and trade-offs coupled with increased capacity in water policy formulation.
- (b) Increased riparian cooperation through on the ground preparation of projects and programs for joint physical, social and economic infrastructure.
- (c) Increased private sector investment in co-riparian states.
- (d) Development of common platform of understanding of Nile riparian issues in the Basin.
- (e) Strengthened and competitive economies.
- (f) Reduced regional conflict and tension.
- (g) An agreed long-term legal and institutional set-up for Nile Basin cooperation.

## **LESSONS LEARNED**

72. Lessons learned from the NBI to date, from the region and from the broader GEF international waters project portfolio were reflected in project design. The lessons that are of the greatest relevance to the project include:

- (a) *Development of a shared vision.* This important step allows development and expression of a common overarching goal for cooperation and a common view of the objectives of riparian involvement in a transboundary dialogue and/or institution. Goals need to take full account of historical, environmental, and socio-economic development constraints and opportunities.
- (b) *Moving from challenges and constraints to opportunities.* Long-term conflict over scarce resources creates challenges, but also provides opportunity for cooperation, thereby unlocking a huge development potential. In spite of a history of conflicting water demands and difficulties, the Nile riparian countries have come together to forge a new environment of cooperation seeking win-win benefits. The Nile countries have committed themselves to identifying and pursuing cooperative investment opportunities. However, embedded in this is the realization that much work is required to transform the situation of the past into a new culture of cooperation. The Shared Vision Program was designed to provide the “software” and the enabling environment that will foster sound transboundary cooperation and development among the Nile riparian states. A first step in a cooperative dialogue may be to facilitate a move from a primarily country focus toward wider needs and interests based upon which opportunities for collaboration can be better identified.
- (c) *Sharing benefits not sharing water.* A dialogue that moves away from a stalemate in sharing a limited resource to sharing its benefits—especially in situations where water quantity is at stake—can provide a much more constructive base for continued cooperation and open an avenue for regional integrated planning. This also implies the need for “widening the circle” from water departments alone to broader sectoral involvement, such as agriculture, environment, planning, energy, infrastructure, and education.
- (d) *Institutional and legal framework.* The dialogue and commitment to agree on a basic legal and institutional framework should be supported and where necessary capacity should be built to assist in this process. Partnership and trust among countries requires a “leveling of the playing field” in terms of information and skills among riparian partners. Entering into dialogue and eventually agreeing on a framework for cooperation demonstrate national and regional political commitment and facilitate the initiation of more concrete investment discussions.
- (e) *Investment and appropriate frameworks—an iterative and mutually supportive process* A legal and institutional framework needs investment and investment needs a legal and institutional framework. The parallel processes of dialoguing on a cooperative framework while also building a vision and incentive for agreement in form of a cooperative strategic action and investment program can be mutually supporting. In the Nile context, work was begun in 1996 on a legal and institutional framework. As this evolved, a parallel track addressing investment issues was begun in 1997. The two tracks, while closely linked, reinforced one another.



- (f) *Acceptance of principle of subsidiarity and agreed policy guidelines.* The acceptance of the commonly known European principle of subsidiarity has proven immensely useful in the Nile context. Once political agreement was found and a common set of Policy Guidelines agreed, within which all agreed to operate, this provided the opportunity to explore subsidiary actions, which would involve those countries affected by and involved in the proposed activities.
- (g) *Trust.* Developing trust and personal relations among riparian delegations from countries that have often been in conflict for decades or more is a key ingredient to moving the process further. Trust and confidence among and between riparian parties and between riparians and donor partners need to be built and long-term involvement of specific individuals can be very important.
- (h) *Long-term commitment to process and product.* Involvement in regional processes requires a substantial commitment in terms of time, and long-term provision of financial and human resources. The dialogue process and support for development of trust underpin an enabling environment for cooperation, and a sense of ownership and commitment by all parties to a process that may require years to bear fruit. Sustained riparian commitment expressed on a political level (i.e. beyond the technical ministries) allows for growing confidence in the process and facilitates a broader level of support from national and donor partners. For donor agencies, a key requirement is that they be able to stay with the process. Long-term support that will not be subject to political and institutional changes must be a mainstay of any donor involvement. As much of this work is based on relationships and trust built up over years with key riparian players, the donor institution must be able to keep key staff involved for required periods of time if the support is to yield maximum benefits.
- (i) *Partnerships.* Building broad partnerships among and within the riparian countries and with key international agencies and donors is essential for a coordinated process and implementation of programs and for utilizing the comparative advantage of donor institutions. Public support and broad ownership in the countries should be encouraged and built early in the process.
- (j) *Management structures and implementation arrangements.* Financial sustainability, careful attention to institutional set-ups and selection of staff, and consideration of efficient, transparent and accountable management structures are all essential. Regional projects often have high overhead costs given the inherent complexity of their tasks. Moreover, there is often a push to place a project activity in each participating country. The present project has been designed with minimum organizational structures, and will instead draw on consultancy expertise (preferably regional consultants) when required. Location of in-country project activities will be based on careful planning efforts, with a view to balancing optimum results with the broadest possible geographical coverage.

## *LIST OF ANNEXES AND ATTACHMENTS*

### **REQUIRED ANNEXES**

- A. INCREMENTAL COST ANALYSIS
- B. LOGICAL FRAMEWORK MATRIX
- B1. PHASED FUNDING OVERVIEW
- C. STAP REVIEW (To be added after COM endorsement)
- C1. RESPONSE TO STAP REVIEW (To be added after COM endorsement)
- D. GOVERNMENT REQUESTS (To be added after COM endorsement)

### **OPTIONAL ANNEXES**

- E. POLICY GUIDELINES FOR THE NILE RIVER BASIN STRATEGIC ACTION PROGRAM  
The Policy Guidelines, endorsed by the Council of Ministers of Water Affairs in February 1999, provide a basin-wide framework for moving forward with cooperative action and set forth the primary objectives of the Nile Basin Initiative.
- F. STAKEHOLDER INVOLVEMENT IN PROJECT FORMULATION  
This annex describes the process of preparing the entire Shared Vision Program portfolio and the GEF project in particular. A list of all stakeholders consulted during the transboundary environmental analysis is attached.
- G. ORGANIZATIONAL CHART – TRANSBOUNDARY ENVIRONMENTAL ACTION PROJECT  
The organizational structure for the proposed Transboundary Environmental Action Project is depicted in chart form.
- H. ORGANIZATIONAL CHART – SHARED VISION PROGRAM  
The organizational structure for the entire Shared Vision Program is depicted in chart form.
- I. TRANSBOUNDARY ANALYSIS – NILE BASIN ENVIRONMENTAL THREATS  
This annex contains an overview table describing the basin-wide environmental threats identified by the National Experts during the transboundary analysis. The locations given correspond to the attached maps.
- J. TRANSBOUNDARY ANALYSIS – COMMON CONCERNS BY SUB-REGION  
This is a table summarizing prevalent environmental threats on a sub-regional scale.

### **MAPS**

The environmental threats identified in the transboundary analysis are depicted on the basin-wide map. Individual maps are attached for each Basin country highlighting environmental issues of transboundary significance.

STRATEGIC ACTION PROGRAM FOR THE NILE RIVER BASIN (IBRD 30967)  
BURUNDI (IBRD 30966)  
CONGO, D.R. (IBRD 30961)  
EGYPT, A.R. OF (IBRD 30957)  
ETHIOPIA (IBRD 30960)  
KENYA (IBRD 30963)  
RWANDA (IBRD 30965)  
SUDAN (IBRD 30958)  
TANZANIA (IBRD 30964)  
UGANDA (IBRD 30962)

**AVAILABLE UPON REQUEST<sup>13</sup>**

NILE BASIN SHARED VISION PROGRAM

TRANSBOUNDARY ENVIRONMENTAL ANALYSIS (*REPORT*)

A Transboundary Environmental Analysis (TEA) has been carried out by the Nile riparians. The Transboundary Environmental Analysis report constitutes a collective synthesis of basin-wide environmental trends, threats and priorities. The TEA also identifies the elements of an Agenda for Environmental Action in the Nile Basin, to be implemented over the next decade or more under the NBI's Strategic Action Program in coordination with other development activities.

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13 The Transboundary Environmental Analysis report can be obtained from Inger Andersen, Partnership Coordinator, UNDP-World Bank International Waters Partnership: [iandersen1@worldbank.org](mailto:iandersen1@worldbank.org) or [inger.andersen@undp.org](mailto:inger.andersen@undp.org)



## ANNEX A INCREMENTAL COST ANALYSIS

### ***BROAD DEVELOPMENT GOALS***

The Nile River Basin is home to about 160 million people in Burundi, D.R. Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda, with six of these countries among the world's poorest. The Basin contains an extraordinarily rich and varied range of ecosystems, with mountains, tropical forests, woodlands, savannas, high and low altitude wetlands, arid lands and deserts, culminating in a delta partially below sea level. Extreme poverty, combined with rapid population growth, war, civil strife, drought and famine, has put enormous pressure on these environmental resources, which in turn represent the only source of livelihood for many millions of Africa's most impoverished people. As a result, there is an urgent need to integrate environmental concerns into poverty alleviation and sustainable economic development strategies, specifically through improved land and water resource management practices.

Recognizing their common concerns and interests, the Nile riparian countries have recently taken a historic step towards cooperation with the establishment in 1999 of the Nile Basin Initiative (NBI), which provides an agreed framework to fight poverty and promote economic development. The NBI provides a transitional institutional mechanism, an agreed vision and basin-wide framework, and a process to facilitate substantial investment in the Nile Basin to realize regional socio-economic development. The establishment of the NBI begins the complex, challenging and long-term process of building confidence and realizing mutual benefits through shared projects. To translate its shared vision into action, the NBI has launched a Strategic Action Program, which includes two complementary components: (1) a basin-wide Shared Vision Program (SVP), and (2) Subsidiary Action Programs (SAPs).

The SVP includes a series of technical assistance and capacity building projects to be implemented basin-wide to help establish a foundation for transboundary regional cooperation and provide a common vision to ensure long-term sustainability; they incorporate common analytical frameworks, practical tools and demonstrations, and institutional and human capacity building. The SVP project portfolio will include seven projects. Four of these projects are thematic in nature, addressing issues related to transboundary water and environmental management (the subject of this proposal), power trade, efficient use of water for agriculture, and water resources planning and management; the remaining three are facilitative, supporting efforts to strengthen confidence building and stakeholder involvement, applied training, and benefit sharing and integration.

The SAPs will be initiated in parallel to the SVP, implementing investment projects that confer mutual benefits at the sub-basin level while following the guidance of the overall NBI Policy Guidelines endorsed by the Nile-COM (see Annex F). The Nile riparians have formed two SAPs. The Eastern Nile (EN-SAP) includes Egypt, Sudan and Ethiopia; while the Nile Equatorial Lakes Region (NEL-SAP) includes the six countries in the southern portion of the Basin—Burundi, D.R. Congo, Kenya, Rwanda, Tanzania and Uganda—in cooperation with the downstream riparians, Sudan and Egypt.

The identification of environment and development synergies and sustainable development opportunities has emerged as a major NBI priority. Although political, economic and social differences persist between them, the Nile riparian countries share several critical environmental problems and threats that reinforce the need for regional collaborative efforts. The riparians have recognized that focusing on issues of common concern provides them with a major opportunity to make significant progress towards their economic and environmental goals in ways that have proved difficult to achieve independently.

A Transboundary Environmental Analysis (TEA) has been carried out by the Nile riparians as part of the SVP, with support from UNDP, World Bank and other international partners, and with funding provided by the Global Environment Facility. This process identified the elements of an Agenda for Environmental Action in the Nile Basin, based on a collective synthesis of environmental trends, threats and priorities. This Agenda includes a recommended program of complementary preventive and curative actions to address current and emerging environmental issues. It delineates key measures for institutional strengthening, human resource development and expansion of public awareness at regional, national and local levels. The Agenda is to be implemented over the next decade or more under the NBI's Strategic Action Program in coordination with other development activities.

The project will support the priority transboundary activities to be addressed in the initial implementation phase of the Agenda for Environmental Action. The objectives are to provide a strategic environmental framework for environmentally sustainable development of the Nile River Basin, improve understanding of the relationship of water resources development and environment in the Basin, and provide a forum to discuss development paths for the Nile with a wide range of stakeholders. The project seeks to conserve the Basin's unique but critically threatened environmental assets while helping to ensure that its natural resources are used in an optimal and sustainable way to foster economic development and mitigate the appalling levels of poverty that pervade the region.

### ***BASELINE SITUATION***

The baseline situation consists of existing projects and programs for the riparian countries included in country-level plans and strategies for economic development, environmental conservation and natural resource management, supplemented by other activities being planned or conducted by individual governmental agencies at national and local levels as well as private enterprises and NGOs. The total baseline is estimated at US\$403 million as detailed in Table 1, Project Baseline Summary at the end of this Annex. This amount includes US\$77 million for the estimated costs of defined NBI NEL-SAP projects currently under preparation. The total estimated costs of the NBI EN-SAP projects also form part of the baseline, however, finalized cost estimates are still not available.

Perpetuation of the baseline would limit the NBI's ability to encourage more effective integrated land and water management within overall economic development strategies on a basin-wide scale. The majority of support for natural resource management and environmental conservation would continue to focus on independent national-level activities. Some sub-regional activities will be implemented through the NEL-SAP and the EN-SAP projects in addition to important existing East African activities involving Kenya, Tanzania and Uganda (such as the GEF-funded

Lake Victoria Environmental Management Project and the Sida-funded Lake Victoria Initiative). However, none of these activities will be implemented on a *basin-wide* scale, which is the key to success of the entire NBI. The ability of the Nile riparians to effectively address transboundary environmental issues requiring coordination at the basin-wide level would remain limited, especially for those environmental issues related to future investments in land and water management. Key cross-border environmental issues such as environmental information sharing, community-level land and water management (including the spread of aquatic weeds), environmental education and awareness, transboundary benefits from wetland conservation (including threats to migratory species) and water quality monitoring would not therefore be addressed adequately or at the appropriate scale.

### **1. Institutional Strengthening to Facilitate Regional Cooperation**

The baseline for this component amounts to US\$93 million, with two main types of project intervention: first, capacity building and institutional support to the water resources and environment sectors; second, water resources assessments combined with planning, modeling, forecasting and simulation, including environmental planning and monitoring. This baseline of action is, significantly, largely national in character and is unevenly distributed within the Basin. Apart from Bank and FAO-funded regional projects that were specifically designed in the context of the wider Nile program, there are no other projects in the institutional strengthening category which specifically target the coordination of transboundary elements required for cooperative management of shared water resources.

### **2. Community-level Land, Forest and Water Conservation**

The baseline is very large under this rather broad category, as would be expected, consisting of projects totaling US\$206 million, including three sub-regional NEL-SAP projects with estimated costs of US\$61 million. Many of these projects target agricultural productivity or expansion through irrigation or other intensification as the basis for food security and poverty alleviation. Other projects in this category attempt integrated land and water management with an emphasis on soil conservation, as well as land rehabilitation and community-based efforts in afforestation, reforestation and forest management. While it is recognized as cross-cutting, multi-sectoral and interdisciplinary, the IDA portion of the Lake Victoria Environmental Management Project is categorized as baseline under this component.

### **3. Environmental Education and Awareness**

The TEA identified less than US\$1 million in current, externally-funded baseline activities for this category. This is mainly because most environmental education and awareness activities are being undertaken on a relatively small scale by large numbers of NGOs and community organizations and are widely dispersed within the Basin. There is no central project database documenting these activities. While existing and emerging environmental NGOs are undoubtedly very active in environmental education and awareness in a number of the Nile Basin countries, their activities seem almost exclusively to be limited to local and national levels. There is no program beginning to build awareness of interdependence and opportunities for cooperation across national boundaries. The proposed NBI project on Communication and Stakeholder

Involvement will be the first of its kind, attempting to develop common messages and common dialogues among the people of the Nile Basin.

#### **4. Wetlands and Biodiversity Conservation**

Non-GEF-funded baseline actions under this component are comparatively large at US\$74 million, including a US\$16 million NEL-SAP fisheries project for Lake Albert. This is an impressive total for a region as pervaded by poverty and food security concerns as the Nile Basin. The focus of these projects is mainly environmental management and planning, targeting wetlands and other protected areas, with an emphasis on both conservation and sustainable uses. The projects are distributed very unevenly within the Basin, however. Apart from the Lake Albert initiative, the only project with a transboundary focus is a GEF project addressing East African cross-boundary protected areas (since this is GEF-funded, however, it does not form part of the baseline). The critical linkages between transboundary water resource management and the Basin's acutely threatened and dwindling natural ecosystems is of such importance that the significance of the transboundary wetland conservation (including biodiversity) issues can scarcely be overestimated.

#### **5. Water Quality Monitoring Basin-wide**

The baseline of action for this component amounts to US\$29 million, almost entirely in Egypt, indicating the low priority given to the transboundary aspects of water quality in the wider Nile Basin. At a sub-basin level, the GEF and IDA-funded Lake Victoria Environmental Management Project addresses water quality issues in the Lake Victoria basin (again, the GEF portion does not form part of the baseline). Relatively little attention has been given to this issue in the wider Nile Basin, however, even though it is of growing concern, particularly in the Basin's more heavily populated and farmed areas. Pollution and water quality issues are becoming especially critical at and around large-scale irrigation schemes with intensive use and storage of agrochemicals (e.g., in Egypt and Sudan), as well as larger urban and industrial settings throughout the Basin. Only in Egypt is a large water quality monitoring program in place. Although the adverse impacts are often fairly local and not basin-wide phenomena, water quality issues are major human health and environmental concerns at these sites.

#### ***ALTERNATIVE SCENARIO***

##### **Non GEF-Funded Alternative**

##### ***Nile Basin Initiative's Strategic Action Program and Cooperative Framework***

The project alternative is augmented by a significant part of the project portfolio of the NBI's Shared Vision Program (SVP) and the Cooperative Framework project (Phases I and II). Together, these consist of seven technical assistance and capacity building projects aiming to create a basin-wide enabling environment for cooperative development.



*Non-GEF-funded portion of the Alternative (Co-financing, in US\$m)*

<b>PROJECT</b>	<b>AMOUNT</b>	<b>CORRESPONDING PROJECT</b>	
	<b>(\$US m)</b>	<b>COMPONENT</b>	
NBI/SVP Socio-Economic Development - Macroeconomic Integration	11.0	Institutional Strengthening	1
Water Resources Planning and Management	24.4	Institutional Strengthening	1
Nile River Basin Cooperative Framework, Phase I	3.5	Institutional Strengthening	1
Nile River Basin Cooperative Framework, Phase II	0.5	Institutional Strengthening	1
NBI/SVP Efficient Water Use for Agriculture	5.0	Land Management	2
NBI/SVP Confidence Building & Stakeholder Involvement	7.0	Awareness	3
NBI/SVP Applied Training	20.0	Awareness	3
NBI/SVP Transboundary Environmental Action	12.7	Water Quality; Land&Forest; Biodiversity	2, 4 & 5
<b>Total</b>	<b>84.1</b>		

As described in the body of this Project Brief, the NBI's Strategic Action Program includes Subsidiary Action Programs in addition to the SVP. The EN-SAP and NEL-SAP are identifying sub-basin projects planned for submission for funding to the International Consortium for Cooperation on the Nile (ICCON) in 2001. Details of the SAP projects had not become available at the time of drafting this Project Brief. However, it is already evident that the SAP projects in water resources management, agriculture, communications, macro-economic planning and other economic development sectors will add significantly to the alternative as well as to the baseline, depending on project type.

### **GEF-Funded Alternative**

The alternative consists of the steps needed to establish a sound basin-wide environmental framework consistent with current and projected patterns of economic development. This would be accomplished through GEF support to facilitate the priority transboundary actions outlined in the Agenda for Environmental Action in the Nile Basin, combined with additional resources from the projects outlined above, which are funded through the ICCON mechanism by other international as well as domestic sources. These steps would generate sustainable global benefits embodied in mitigation of the environmental problems identified in the TEA. GEF participation would finance the incremental costs needed to remove barriers to regional environmental conservation and sound natural resource use, including transaction costs for joint planning activities, development of common approaches to sectoral policies, further cross-border data collection and analysis, knowledge management and information sharing at a regional level, and coordination of efforts among the participating countries.

The GEF alternative would support a regionally led initiative to promote more effective management and conservation of the natural resources and environmental assets of the Nile Basin. This would greatly facilitate the ability of the NBI and the cooperating countries to address transboundary environmental issues and common natural resource management concerns at a basin-wide level. The GEF alternative would allow the Agenda for Environmental Action in the Nile Basin to be initiated and undertaken with support from a variety of sources. GEF support would also increase the visibility of and demonstrate the opportunities for more effective transboundary environmental management in the Basin. In this way the project would complement the innovative and far-reaching regional NBI investment programs currently being prepared and about to be undertaken on a significant scale in a variety of economic development sectors, including water, agriculture and hydropower. The alternative would also test and demonstrate a variety of approaches to Nile transboundary environmental management issues, of which the most successful and promising could be scaled up or replicated in subsequent NBI Strategic Action Program investments.

The project will encourage more effective basin-wide stakeholder cooperation on transboundary environmental issues by supporting implementation of actions prioritized by the TEA in the following areas:

### ***1. Institutional strengthening to facilitate regional cooperation***

**Transboundary threats to be addressed.** Overall basin-wide capacities for environmental management are quite limited and there have been relatively few efforts to exchange environmental information and experiences among and between key resource users, research institutions and other stakeholders throughout the Basin. Understanding of the dynamics of the river system is insufficient to assess the downstream environmental impacts of future river system interventions or changes in watershed management regimes. The environmental impacts of macro and sectoral policies on the Nile Basin's land and water resources are poorly understood.

**Objective and global benefits.** This project component will strengthen NBI's capacity in basin-wide program management, regional coordination, knowledge management, understanding of the Nile Basin system and policy analysis. The largest sub-component will link with the non-GEF-funded SVP Water Resources Management Project to develop a basin-wide Decision Support System, with GEF resources used to support the development and application of a River Basin Model including the training of management teams from the riparian countries. This will help provide a regional perspective on water resources management as well as the assessment of transboundary environmental impacts of investment projects, and will support the exploration of alternative development strategies. A Nile Basin environmental knowledge base accessible to all key stakeholders will be developed. Transboundary impacts of national economic and sectoral policies linked to trade, transport and migration will be further analyzed and regional dialogues initiated with policymakers and other donor organizations. The component will also facilitate effective implementation and coordination of all project activities at a national level. The active participation of basin-wide Thematic Working Groups will further enhance regional cooperation and technical transfer among the countries involved with respect to each of the other five project components. Baseline costs of this component are US\$93 million and incremental costs are

US\$52 million (including US\$28 million for the Decision Support System) of which US\$12.2 million are requested from the GEF for Phase 1 funding.

## ***2. Community-level land, forest and water conservation***

**Transboundary threats to be addressed.** Relatively few local stakeholders have access to adequate means of communication. For local stakeholders, tenure is often unclear and access to resources inadequate. Soil erosion is a chronic problem throughout the Basin. Deforestation and soil erosion can lead to increased sedimentation and greater flood risks downstream, while sediments also accumulate in wetlands and reservoirs. Water hyacinth and other invasive aquatic weeds have spread throughout many parts of the Nile Basin.

**Objective and global benefits.** This component will help to strengthen national and international NGO networks within the Basin, including access to internet/email (with information technology equipment funded from non-GEF sources). Regional land and water conservation training workshops will emphasize transboundary cooperation as well as government-NGO partnerships. The component will also support in-depth examination of transboundary soil erosion and sediment transport. Major sources and root causes will be further analyzed by teams from the participating countries, and priority sites will be identified for pilot activities. A Micro-grant Fund will be established with GEF and Canadian (to be confirmed) support to finance pilot initiatives in the priority land and water conservation areas identified by the TEA, including aquatic weed infestations. Key grant selection criteria will include participation of local communities, targeting of issues with direct cross-border impacts, identification of lessons and best practices, and the potential for promising initiatives to be scaled up or replicated within the NBI SAP. Baseline costs of this component are US\$206 million and incremental costs are US\$16 million of which US\$1.7 million is requested from the GEF for Phase 1 funding, while an additional US\$2 million will be requested from the GEF for Phase 2 funding.

## ***3. Environmental education and awareness***

**Transboundary threats to be addressed.** In all the riparian countries, lack of awareness and understanding of the transboundary environmental consequences of decisions concerning land and water resource management is a major barrier to strengthening environmental management.

**Objective and global benefits.** This component will develop and deliver education and awareness programs that emphasize the way in which environmental issues are shared by the Nile riparian countries. Economic and ecological linkages with neighboring countries upstream and downstream will be emphasized, as well as the riparians' mutual dependence on the natural resources and environmental assets of the entire Basin. A variety of media will be used in programs developed by basin-wide teams of educators for delivery throughout the Basin (translated to appropriate languages). This component aims not only to highlight the importance of sustainable environmental management, and the role of every individual and community in trying to achieve this, but also contribute to breaking down the mistrust between countries that has long proved a constraint to more effective basin-wide collaboration. The component will also support basin-wide networking among universities and other research institutions, with exchanges of information, teachers and students. Baseline costs of this component are US\$1

million and incremental costs are US\$30 million of which US\$2.5 million are requested from the GEF for Phase 1 funding, while an additional US\$1 million will be requested from the GEF for Phase 2 funding.

#### ***4. Wetlands and biodiversity conservation***

**Transboundary threats to be addressed.** Water-dependent ecosystems throughout the Nile Basin contribute to the stability, resistance and resilience of both natural and human systems to stress and sudden changes. In particular, significant transboundary benefits derive from the Basin wetlands' role in maintaining water quality, trapping sediment, retaining nutrients, buffering floods, stabilizing micro-climates and providing storm protection. The ecological and economic role of wetlands in supporting sustainable development in the Basin is not well understood or widely appreciated. Key plant and animal species with habitats in adjoining countries often require cross-border protected areas and other conservation measures for effective management. Adequate management of protected areas and other environmental hot spots is generally lacking.

**Objective and global benefits.** This component will support further analysis of the key economic and ecological role of wetlands in the transboundary Basin system and promote awareness of the need to conserve and manage these natural resources, building on the promising national wetland programs that have already been established in a few of the riparian countries. The regional capacity for monitoring and managing wetland resources will be strengthened through technical assistance and training. Programs emphasizing the multiple-use management of internationally significant wetlands will be developed and presented through basin-wide workshops attended by wetland managers and other key stakeholders. Pilot activities will be undertaken to demonstrate best practice management of a small number of sites with a strong emphasis on local stakeholder involvement. Baseline costs of this component are US\$74 million and incremental costs are US\$7 million, of which US\$4.4 million will be requested from the GEF for Phase 2 funding.

#### ***5. Water quality monitoring basin-wide***

**Transboundary threats to be addressed.** Physical impacts from land and water management as well as aquatic pollutants can cross national boundaries downstream. Urbanization, industrialization and increased use of agricultural chemicals all lead to increased runoff and pollution that harm downstream water users. In addition, waterborne diseases are prevalent throughout the Basin. Data and understanding related to the transboundary aspects of these issues is lacking. Only limited work has been done to identify environmental hot spots or to carry out systematic water quality monitoring at environmentally sensitive transboundary sites.

**Objective and global benefits.** This component will augment the collective capacity of the riparian countries to monitor a limited set of agreed key water quality parameters on a basin-wide scale. Teams from the participating countries will work together on developing common analytical methods, identifying parameters to be measured, and preparing and delivering training programs for key national stakeholders through regional workshops. GEF resources will also be used to provide a systematic overview of existing monitoring stations in the Basin, to identify gaps and to strengthen monitoring at transboundary "hot spot" sites. The result of this component will be to substantially upgrade basin-wide capacity to make high quality and consistent water

quality information available to inform decision making and thereby target future investments more effectively. Baseline costs of this component are US\$29 million and incremental costs are US\$6 million, of which US\$2.9 million are requested from the GEF for Phase 1 funding.

### ***Domestic benefits***

Domestic benefits arising from the project are expected to be largely incidental. The project sub-components that are expected to generate measurable domestic benefits will be financed from non-GEF sources. These are:

- (a) Information technology equipment provided to NGOs under component 2.
- (b) Approximately 50-80 percent of the micro-grant activities under component 2.
- (c) Water quality monitoring equipment purchased under component 5.

### ***SCOPE OF ANALYSIS***

The scope of analysis includes the geographic, institutional, market, policy and legislative issues having a transboundary impact on the Nile Basin's environmental resources. This includes actions at the national and regional levels, as well as actions undertaken on the ground as part of the national development and/or conservation efforts within the parts of the countries that fall within the Nile Basin itself. The defined baseline includes non-GEF projects outside the NBI that were still active in 1999. Reference to the NBI's investment program, the SAP, has been made in the text where figures exist, such as for the NEL-SAP. The size of the investment program is expected to total several billion US dollars over the coming decades, but it is only in the definition stage, and actual figures have therefore not been fully reflected in the incremental cost analysis. Some of the projects in the investment program will form the baseline while others will be part of the alternative.

Relevant actors/elements in the program include (a) national governments; (b) local governments for sub-national jurisdictions within the Basin; (c) local (and community-based), national and international NGOs active in the Basin; (d) the private sector; (e) universities and other research institutions; (f) government policies, laws, regulations and development plans; (g) other donors active in the Basin and (h) relevant international conventions and agreements entered into by the Nile countries related to land and water management.

### ***COSTS***

The costs of the action are over and above those incurred by the countries to implement their national environmental policies and environmental action plans and to comply with existing environmental laws and regulations. The incremental cost, by which the alternative scenario exceeds the costs of the baseline situation, is estimated at US\$110.7 million. In addition to the US\$350,000 grant from the PDF Block B, already disbursed, GEF is requested to finance US\$26.6 million. Project co-financing is expected to amount to US\$84.1 million (of which US\$71.4 million will support other SVP/NBI projects, while an additional US\$12.7 million will be raised for the project through the ICCON process to complement the GEF increment (Discussions with Canada are underway in this regard.). The costs of monitoring and evaluation,

supervision and quality control, contingencies and execution are included in these amounts. The project builds on a substantial baseline and is complemented by significant associated financing. The nine participating Nile Basin country governments are fully committed to the project and to the sustainability of activities undertaken beyond the life of the project.

In line with the above, therefore, the GEF project total for Phase 1, which is requested in the present project proposal, amounts to a total of US\$19.3 million, while the GEF resources which will be requested for Phase 2 amounts to a total of US\$7.4 million.

### Incremental Cost Matrix (US\$million)

Component/ Other Costs	Category	Amount	Domestic Benefits	Global Benefits
1. Institutional Strengthening to Facilitate Regional Cooperation	Baseline	93.0	The institutional framework in most riparian countries includes national legislation, environmental plans and strategies, and projects for natural resource management and environmental conservation.	
	Alternative	116.60	Some gains in institutional and human capacity through training and involvement of National Experts in the project.	Establishment of an environmental framework that will promote: (a) enhanced basin-wide cooperation essential to successful implementation of the Agenda for Environmental Action in the Nile Basin through the SVP, SAPs and other programs, and (2) a basin-wide institution (NBI) with substantially enhanced environmental management capacities.
	<b>Increment</b>	<b>23.60</b>		
1a. Decision Support System (DSS)	Baseline	0.00	Currently insufficient understanding of river basin dynamics to assess the downstream environmental impacts of future river system interventions or changes in watershed management regimes. Existing efforts are fragmented and have not included all riparians.	
	Alternative	28.00	Some incidental domestic benefits.	Improved technical foundation for transboundary water resources planning and management, including environmental assessments. Improved access to information within and between the riparian countries, improved knowledge of shared biological resources, enhanced understanding of river basin dynamics, especially transboundary effects. Also regional, integrated planning and management of water resources.
	<b>Increment</b>	<b>28.00</b>		
2. Community-level Land, Forest and Water Conservation	Baseline	205.9	Local-level capacities and access to resources and information throughout the Basin are mostly inadequate.	
	Alternative	222.0	Emphasis will be on transboundary soil erosion hot spot sites and areas with biodiversity of global significance. There will be some incidental domestic benefits. Equipment provided to NGO networks will be funded from non-GEF sources and 50-80% of micro grants will be funded from non-GEF sources.	Improved understanding of transboundary soil erosion processes and land and water conservation. Increased knowledge from exchanges of lessons and experiences among and between national NGO networks. Improved environmental management involving activities designed and implemented by local stakeholders plus enhanced government-NGO collaboration.

<b>Component/ Other Costs</b>	<b>Category</b>	<b>Amount</b>	<b>Domestic Benefits</b>	<b>Global Benefits</b>
	<b>Increment</b>	<b>16.10</b>		
3. Environmental Education and Awareness	Baseline	0.90	Low level of environmental awareness and education on issue of shared water resources among the public, students, officials and professionals.	
	Alternative	31.30	Some incidental domestic benefits.	Deepened public awareness and understanding of riparian countries' co-dependence on sound environmental management. Strengthened transboundary education and research initiatives.
	<b>Increment</b>	<b>30.40</b>		
4. Wetlands and Biodiversity Conservation	Baseline	74.20	There is generally inadequate information, awareness and management of wetlands and protected areas.	
	Alternative	81.30	There will be some incidental domestic benefits.	Enhanced information and knowledge of economic and ecological contribution of wetlands to conservation and development. Increased basin-wide appreciation of wetland functions. Improved protection of key transboundary conservation areas and key sites for migratory species.
	<b>Increment</b>	<b>7.10</b>		
5. Basin-wide Water Quality Monitoring	Baseline	29.00	Existing water quality monitoring efforts are inconsistent, uncoordinated and mainly do not include the sharing of transboundary information.	
	Alternative	34.50	Monitoring at selected sites will provide some incidental domestic and capacity building benefits, net of domestic contributions. Non-GEF funding will be sought for investments in monitoring equipment that generate domestic benefits.	Improved water quality information for basin-wide natural resource and environmental management, especially at transboundary and globally-significant hot spot sites.
	<b>Increment</b>	<b>5.50</b>		
<b>TOTALS</b>	<b>Baseline</b>	<b>403.00</b>		
	<b>Alternative</b>	<b>513.70</b>		
	<b>Increment</b>	<b>110.70</b>		
	<i>GEF</i>	<i>26.60</i>		
	<i>Non-GEF</i>	<i>84.10</i>		



## Project Baseline Summary

### Baseline (\$US millions)

<u>Component</u>		Total Baseline
Institutional Strengthening to Facilitate Regional Cooperation	1	93.0
Land, Forest, and Water Conservation	2	205.9
Environmental Education & Awareness	3	0.9
Wetlands and Biodiversity Conservation	4	74.2
Water Quality Monitoring Basin-wide	5	29.0
<b>TOTAL</b>		<b>403.0</b>

### Other Baseline Projects

Country	Project	Year	Budget <sup>14</sup> (US\$M)	Implementing Agency	Donor Agency	Location & Issues Addressed	Relevant Proj. Comp.
BURUNDI	Integrated Development - Bututsi (1)	2000-2002	5.6	-		Agriculture, Land mgt	2
	Support to the Mgt and Rehab of Env. (wetlands component)	Ongoing	3.0	General Directorate for Land and Environment Mgt. (DGATE)	UNDP	Biodiv./Nature Conservation	4
	Rural Development Program (wetlands component)	Ongoing	5.0	Provincial Directorate for Agriculture and Livestock (DPAE)	FIDA-OPP	Wetlands	4
	Agricultural Development - Muyinga (1)	2000-2002	0.1	-		Agriculture, Land mgt	2
	Soil Erosion Program (2)	2000-2002	0.1	General Directorate for Land and Env. Mgt.		Soil erosion	2
	Forestry - World Bank (2)	2000-2001	0.1	Forestry Department	IDA	Forest mgt	2
	National Biodiversity Strategy & Action Plan	1996-2000	0.22 (GEF)	National Institute for Env. and Nature Conservation	GEF	Biodiv./Nature Conservation	4
<b>Sub-total of known non-GEF projects</b>			<b>13.9</b>				
CONGO	National Biodiversity Strategy & Action Plan		0.25(GEF)	Ministry of Tourism and Environment	GEF	Biodiv./Nature Conservation	4
	Range Management and Pasture Improvement	5 years	2.5	Ministry of Agriculture		Land and Water Conservation	2
<b>Sub-total of known non-GEF projects</b>			<b>2.5</b>				
EGYPT	Capacity building/Env Sector/Upgrade NEAP	1998-2000	1.1	Min. of State for Environmental Affairs, Egyptian Environmental Affairs Agency		Instit. Strengthening	1
	Lake Manzala Engineered Wetland	1997-2002	4.5 (GEF)	Min. of State for Environmental Affairs, Egyptian Environmental Affairs Agency	GEF	Pollution	5
	National Oil Spill, River Nile & Lake Nasser Used Oil & Domestic Waste/Along Nile	2000-2002	0.9	Egyptian Environmental Affairs Agency		Disaster mgt	5
	National Environmental Disaster Plan	1999-2002	4.4	Egyptian Environmental Affairs Agency		Disaster mgt	5
	Organic Agriculture	Ongoing	0.5	Min. of Agriculture		Land and Water Conservation	2
	National water Quality and Availability Management (NAWQAM) Project	1997-2004	21.3	National Water Resources Centre (NWRC)	Canada/Egypt	WQ Monitoring, Water resources Management	5
	National Water Resources Plan for Egypt	1998-2002	3.9	Ministry of Water resources and Irrigation (MWRI)	Netherlands/ Egypt	Water Resources Planning	1
	DSS for Water Resources Planning based on Environmental Balance	1998-2001	1.5	National Water Resources Centre (NWRC)	Italy/Egypt	DSS development	1
	Monitoring, Forecasting and Simulation of the Nile River	Ongoing	15.0	FAO/ Ministry of Water resources and Irrigation (MWRI)	USAID	Water resources management	1
	Updating Meteorological Network	Ongoing	1.4	Government of Egypt	Egypt	Hydrological network	1
	METAP III	1996-2001	4.2	Egyptian Environmental Affairs Agency	UNDP/WB	Instit. Strengthening	1
	Wetlands & Coastal/Mediterranean Region	1997-2002	2.8 (GEF)	Egyptian Environmental Affairs Agency	GEF	Instit. Strengthening	4
	National Biodiversity Strategy & Action Plan	1995-1997	3.5 (GEF)	Egyptian Environmental Affairs Agency	GEF	Biodiv./Nature Conservation	4
	Local Initiative Facility to Urban Environment	1993-1998	0.9	NGOs	UNDP	Env. Education/Awareness	3
	Italian Cooperation Project	1998-2002	2.0	EEAA, Min. Water Res. & Irrigation, Min. of Culture	Italy		1
<b>Sub-total of known non-GEF projects</b>			<b>57.7</b>				

14 Project budgets indicated as GEF funded are **not** added in the baseline.

Country	Project	Year	Budget <sup>14</sup> (US\$M)	Implementing Agency	Donor Agency	Location & Issues Addressed	Relevant Proj. Comp.
ETHIOPIA	Conservation Strategy for Ethiopia (CSE) project	1989-to date	0.5	IUCN and Environmental Protection Authority (EPA)	NORAD	Biodiv./Nature Conservation	4
	Regional Conservation Strategy Projects	1994-1999	1.5	IUCN and National Regional Governments with the Technical Support from EPA	NORAD	Biodiv./Nature Conservation	4
	National Action Program to Combat Desertification	1997-1999	0.3	EPA	UNDP/UNSO	Biodiv./Nature Conservation	4
	Environmental Support Project	1999-2003	12.3	Ministry of Water Resources (MOWR)	The Netherlands/Ethiopia	Water supply & sanitation master plan; water res. & env. meta database	1
	Flow Forecasting	2000-2001	0.2	Ministry of Water Resources (MOWR)	UNDP	Flow forecasting	1
	Capacity Building of The Hydrology Department	1998-2001	0.7	Ministry of Water Resources (MOWR)	NORAD/Ethiopia	Data Collection	1
	Soil Conservation for Hydrology	Ongoing	1.4	Ministry of Water Resources (MOWR)	EU/Ethiopia	Sediment transport in rivers	2
	Ecological Sustainable Industrial Development	2000-2002	1.5	EPA	Netherlands/UNIDO	Instit. Strengthening	1
	National Biodiversity Strategy & Action Plan	2000-2002	0.33(GEF)	Institute for Bio-diversity Conservation and Research (IBCR)	GEF	Biodiv./Nature Conservation	4
	Bird Life Project	2000-2002	0.2 (GEF)	Ethiopian Wildlife and Natural History NGO (EVLNHS)	GEF	Biodiv./Nature Conservation	4
	Conservation of Plant Genetic Resources	1994-1999	2.45 (GEF)	National governmental departments	GEF	Biodiv./Nature Conservation	4
Conservation of Plant Genetic Resources	1994-1999	3.9	National governmental departments	UNDP/GOV	Biodiv./Nature Conservation	4	
<b>Sub-total of known non-GEF projects</b>			<b>22.3</b>				
KENYA	National Biodiversity Strategy & Action Plan	Recently concluded		Min. of Env. and Natural Resources (National Environment Secretariat)	GEF	Biodiv./Nature Conservation	4
	Integrated Water Resource Management	2000-2003	0.6	Ministry of Environment and Natural Resources (MENR)	Sida/Kenya	Watershed management	2
	Water Resources Assessment Project (WRAP 5)	1996-2000	0.3	Ministry of Environment and Natural Resources (MENR)	The Netherlands/Kenya	Water Resources database & water res. assessment	1
	National Action Program to Combat Desertification	Five Years	8.3	Min. of Env. And Natural Resources	UNDP/UNSO	Land and Water Conservation	2
<b>Sub-total of known non-GEF projects</b>			<b>9.2</b>				

Country	Project	Year	Budget <sup>14</sup> (US\$M)	Implementing Agency	Donor Agency	Location & Issues Addressed	Relevant Proj. Comp.
RWANDA	National Biodiversity Strategy & Action Plan	Ongoing	0.17 (GEF)	Ministry of Lands and Environmental Protection	GEF	Biodiv./Nature Conservation	4
	Environmental Law Formulation	2000-2001	0.1	Ministry of Lands and Environmental Protection	UNDP	Biodiv./Nature Conservation	4
	Implementation of National Environmental Action Plan	1996-2001	0.8	Ministry of Lands and Environmental Protection	UNDP	Biodiv./Nature Conservation	4
	Potable Water Supply (A.E.P.)	1999-2001	0.1	Ministry of Water, Energy and Natural Resources	Rwanda	Land and Water Conservation	2
	Capacity Building for the National Meteorological Service	Ongoing	0.3	Ministry of Public Works, Transport and Communications (MINTRACO)	UNDP	Capacity building	1
	Database for Geology and Mining	Ongoing	0.3	Ministry of Public Works, Transport and Communications (MINTRACO)	IDA	Information systems	1
	Rehab & Reforestation	Ongoing	0.4	Ministry of Geology and Mining, Energy, Water and Natural Resources (MINERENA)	EU	Environmental conservation.	2
	A.E.P. Umutara	1999-2001	1.2	Ministry of Water, Energy and Natural Resources	Denmark	Land and Water Conservation	2
	A.E.P à partir du lac Mugesera (Karengwe-Kigali)	1998-2000	2.0	Ministry of Water, Energy and Natural Resources	RFA	Land and Water Conservation	2
	A.E.P. Umutara-Kibungu-Kigali rural	1998-2000	3.0	Ministry of Water, Energy and Natural Resources	IDA	Land and Water Conservation	2
	National Program for Soil and Water Conservation	1999-2001	4.3	Ministry of Agriculture	Rwanda	Land and Water Conservation	2
	Management of natural Forests in Nyungwe (cross-border w. natural forest of Kibira in Burundi)	2000-2001	1.2	Ministry of Agriculture	EU	Land and Water Conservation	4
	Agro-forestry in the Oriental High Plateau	1997-2001	1.0	Ministry of Agriculture	EU	Land and Water Conservation	2
<b>Sub-total of known non-GEF projects</b>			<b>14.7</b>				
SUDAN	Biodiversity Mgt - Dinder National Park	1999-2002	0.8 (GEF)	Higher Council for Environment & Natural Resources	GEF	Biodiv./Nature Conservation	4
	Biodiversity Mgt - Dinder National Park	1999-2002	0.5	Higher Council for Environment & Natural Resources	UNDP	Biodiv./Nature Conservation	4
	Lower Atbara Area Development Scheme	1995-2003	4.5	Ministry of International Cooperation and federal states	UNDP	Land and Water Conservation	2
	Area Rehabilitation Scheme – Juba	1998-2001	1.5	Ministry of International Cooperation and federal states	UNDP	Land and Water Conservation	2
	Area Rehabilitation Scheme - Wau	1998-2001	1.5	Ministry of International Cooperation and federal states	UNDP	Land and Water Conservation	2
	National Action Plan to Combat Desertification	1997-1999	0.3	National Desertification Unit	UNDP	Land and Water Conservation	2
	National Biodiversity Strategy and Action Plan	1999 - 2000	0.3 (GEF)	Higher Council for Environment & Natural Resources	GEF	Biodiv./Nature Conservation	4
<b>Sub-total of known non-GEF projects</b>			<b>8.3</b>				

Country	Project	Year	Budget <sup>4</sup> (US\$M)	Implementing Agency	Donor Agency	Location & Issues Addressed	Relevant Proj. Comp.
TANZANIA	Participatory Environmental Resource Management Project	1997-1999	10.0	Min. of Natural Resources & Tourism	USAID	Biodiv./Nature Conservation	4
	National Action Plan to Combat Desertification	1997-1999	0.4	Division of Environment under Vice President's office	UNDP/UNSO	Land mgt	2
	River Basin Management and smallholder Irrigation Improvement Project.	1997-2003	10.6	Ministry of Water	World Bank	Water resources mgmt. & irrigation	2
	Capacity Building for Environmental Management and Pollution Abatement in Mwanza Region	1998-2003	1.8	Prime Minister's office; Mwanza municipality	DANIDA	Instit. Strengthening, pollution	5
	National Biodiversity Strategy and Action Plan	1995-1996	0.3 (GEF)	Division of Environment under Vice President's office	GEF	Biodiv./Nature Conservation	4
<b>Sub-total of known non-GEF projects</b>			<b>22.8</b>				
UGANDA	National Wetlands Conservation and Management Project	July 1996-2001	2.2	Min. of Water Lands and Environment	Netherlands Govt.	Biodiv./Nature Conservation	4
	Tree Seed Project	Oct 1998-2003	2.1	Forestry Dept, Min. of Water, Lands and Env.	NORAD/G of Uganda	Forest mgt	2
	South East and South West Integrated Watershed Management Project.	July 99 - 2004	3.7	Forestry Dept, Ministry of Water, Lands and Environment	ADB	Land mgt.	2
	Environment Management Capacity Building Project	1996-2000	8.4	Nat. Environment Management Authority	World Bank	Instit. Strengthening	1
	Integrated Water Resources Management of Lakes George & Edward Basin	1999-2004	9.4	Ministry of Local Govt.	DFID	Integrated basin management	2
	Strengthening Water Resources Monitoring and Assessment Services (WRAP)	1996-2003	12.0	Directorate of Water Development (DWD)	Danida	Water resources information	1
	National Environment Monitoring Agency	1998-2002	1.5	National Environmental Management Authority (NEMA)	Uganda	Monitoring	1
	National Parks and Wildlife Management.	1995-1999	5.0	Uganda Wildlife Authority	USAID	Instit Strengthening	1
	Environment Laws and Institutions Project	1996-1999	0.4	Ministry of Water Lands and Environment	UNEP	Instit. Strengthening	1
	Kibali Wild Coffee	1999	0.8	Uganda Coffee Trade Federation	IBRD/GEF	Biodiv./Nature Conservation	4
	Peri-urban Plantations Project	1996-2000	1.8	Forestry Dept, Ministry of Water Lands and Environment (MWLE).	NORAD/G of Uganda	Forest mgt	2
	Mt. Elgon Conservation and Development	1996-2000	1.4	Ministry of Water Lands and Environment	IUCN	Biodiv./Nature Conservation	4
	Biomass Study Phase III	1996-2000	0.7	Forestry Dept, Ministry of Water Lands and Environment (MWLE).	EU	Forest mgt/Energy	2
	Development Through Conservation Project	1989-2002	2.8	Ministry of Tourism, Wildlife and Industry		Biodiv./Nature Conservation	4
	Water Resources Assessment Project	1996-2000	7.0	Directorate of Water Development	Danida	Water resources	1
	Environment Management	1996-2001	11.8	Ministry of Natural Resources	IDA	Biodiv./Nature Conservation	4
	Bwindi Forest and Mgahinga Gorilla	1995-1999	4.0 (GEF)	Government of Uganda	GEF	Biodiv./Nature Conservation	4
	National Biodiversity Strategy and Action Plan		0.25 (GEF)	Ministry of Water Lands and Environment (MWLE).	GEF	Biodiv./Nature Conservation	4
	Cross-border Biodiv. Project (Sango Bay)	1998-2002	1.77 (GEF)	Ministry of Water Lands and Environment	GEF	Biodiv./Nature Conservation	4
	Protected Areas Management & Sustainable Use	1999-2002	12.4	Ministry of Tourism, Wildlife and Antiquities	IDA	Biodiv./Nature Conservation	4
Protected Areas Management & Sustainable Use	1999-2002	2.0 (GEF)	Ministry of Tourism, Wildlife and Antiquities	GEF	Biodiv./Nature Conservation	4	

Country	Project	Year	Budget <sup>14</sup> (US\$M)	Implementing Agency	Donor Agency	Location & Issues Addressed	Relevant Proj. Comp.
	Small - Towns Water Supply	1995-2001	42.3	Ministry of Water Lands and Environment	IDA	Water resources	2
<b>Sub-total of known non-GEF projects</b>			<b>125.7</b>				
<b>Regional</b>	Strengthening of National Capacities in Nile Basin	2000-2002	5.3	Nile-Council of Ministers through Nile-SEC	FAO	Instit. Strengthening	1
	Operational Water Resources Management and Information Systems in the Nile Basin Countries Project (basin-wide)	1996-1999	3.6	Ministers of Water Affairs - Nile Countries	FAO/Italy	Instit. Strengthening	1
<b>Sub-basin</b>	NBI Eastern Nile Subsidiary Action Program (Egy, Eth, Sud)	Design phase	tbd	Relevant sector ministries under coordination by Ministers of Water Affairs	tbd	Water Resources; Early warning Systems and Modeling; Agriculture; Land & Water Conservation; Power	
	NBI Equatorial Lakes Subsidiary Action Program (Bur, DRC, Ken, Rwa, Tan, Ug) :			<i>(relevant NEL-SAP projects under design listed below:)</i>			
	1. Water Use in Agriculture	Design phase	46.2	Relevant sector ministries under coordination by Ministers of Water Affairs	tbd	Soil & Water Conservation	2
	2. Sustainable management and Conservation of Lakes and Linked Wetlands	Design phase	16.0	Relevant sector ministries under coordination by Ministers of Water Affairs	tbd	Wetlands and Biodiversity	4
	3. Watershed Management (three sub-projects)	Design phase	10.0	Relevant sector ministries under coordination by Ministers of Water Affairs	tbd	Soil & Water Conservation	2
	4. Water Hyacinth and Water Weed Control	Design phase	4.7	Relevant sector ministries under coordination by Ministers of Water Affairs	tbd	Water Resources; Soil & Water Conservation	2
	Lake Victoria Environment Management Project (LVEMP)	1996-2001	35.0	Ministries of environment affairs Ken, Tan, Uga + many local partners	IDA	Water Res.; Soil & water conservation	2
	Lake Victoria Environment Management Project (LVEMP)	1996-2001	35 (GEF)	Ministries of environment affairs Ken, Tan, Uga + many local partners	GEF	Water Res.; Soil & water conservation	2
	Lake Victoria Water Resources Project (Ken, Tan, Uga)	1996-1999	4.9	Ministries of Water Affairs - Ken, Tan, Uga	FAO/ Japan	Instit. Strengthening	1
	Lake Victoria Development Initiative	Planned	-	EAC- Secretariat and member states	Sida	Instit. Strengthening	1
	Reducing Biodiv Loss - Cross Border Sites - East Africa	1998-2002	12.6(GEF)	Gov't Tan, Gov't Ken, Gov't Uga	GEF	Biodiv./Nature Conservation	4
	East African Sub-Regional Project on Environmental Law	1997-1999	0.2	Division of Environment under Vice President's office	Denmark/ UNEP/ UNDP	Instit. Strengthening	1
	Institutional Support for the Protec. E. Africa Biodiversity		10 (GEF)	Gov't Tan, Gov't Ken, Gov't Uga	GEF	Biodiv./Nature Conservation	4
	Afr NGO-Govt Partnerships Biodiv.Action/Birdlife (BkF, Cam, Eth, Gha, Ken, Mad, SiL, SA, Uga)	1994 - 1999	4.3 (GEF)	Natl. NGOs, Govt. & intl. NGOs	GEF	Biodiv./Nature Conservation	4
	East African Communities' Organization for Management of Lake Victoria Resources (ECOVIC)	Planned	-	NGOs and CBOs with environment mandate within the Lake Basin		Instit. Strengthening	1
<b>Sub-total of known non-GEF projects</b>			<b>125.9</b>				
<b>Grand Total</b>			<b>403.0</b>				

**ANNEX B**  
**LOGICAL FRAMEWORK FOR THE NILE BASIN INITIATIVE TRANSBOUNDARY ENVIRONMENTAL MANAGEMENT PROJECT**  
**(SHARED VISION PROGRAM)**

<b>Intervention</b>	<b>Indicators of Performance</b>	<b>Means of Verification</b>	<b>Risks and Assumptions</b>
<p><b>Overall Goal</b>            The vision of the Nile Basin Initiative (NBI) is to achieve sustainable socio-economic development through equitable utilization of, and benefit from, the common Nile Basin water resources.            The NBI's Strategic Action Program aims to support establishment of an enabling environment for cooperative development.            The project aims to develop a framework for basin-wide environmental action linked to transboundary issues within the context of the Nile Basin Initiative's (NBI's) Strategic Action Program.</p>			
<p><b>Project Objective</b>            The project aims to create more effective basin-wide stakeholder cooperation on transboundary environmental issues by supporting the implementation of a subset of the actions prioritized by the TEA.</p>	<ul style="list-style-type: none"> <li>• Examples of effective basin-wide stakeholder cooperation on key environmental issues identified by the TEA include:</li> <li>• Exchanges of information and knowledge, including the establishment of networks</li> <li>• Capacity building and training</li> <li>• Improved environmental monitoring and enhanced applied research capabilities</li> <li>• Pilot project interventions</li> <li>• Environmental issues given greater weight in economic development policies and projects</li> </ul>	<ul style="list-style-type: none"> <li>• NBI Environment Project documents that show that basin-wide cooperation on environmental action is taking place.</li> <li>• Project monitoring and evaluation reports.</li> <li>• Reports of other local, national, and international investigations</li> </ul>	

<b>Intervention</b>	<b>Indicators of Performance</b>	<b>Means of Verification</b>	<b>Risks and Assumptions</b>
<p><b>Result/ Component 1:</b> Institutional Strengthening to Facilitate Regional Cooperation</p> <ol style="list-style-type: none"> <li>1. Regional Capacity Building for Transboundary Environmental Management</li> <li>2. Decision Support System (DSS)</li> <li>3. Communications and Knowledge Management</li> <li>4. Macro and sectoral policies and the environment</li> </ol>	<ul style="list-style-type: none"> <li>• DSS river basin planning model developed</li> <li>• DSS Information Management System with environmental content developed.</li> <li>• Participatory development of River Basin Model completed.</li> <li>• Five training workshops conducted for core staff to use and maintain River Basin Model.</li> <li>• Basin-wide environmental web site and electronic communication network functioning.</li> <li>• Newsletter published regularly (in 3 languages) with best practices, lessons, workshops and additional resource material of interest for all project areas.</li> <li>• Basin-wide Thematic Working Groups established and functioning effectively for each of project components 2 to 5.</li> <li>• Transboundary studies of macro and sector policies and environment (including root causes) completed in 4 countries, including at least one southern and one northern Nile country.</li> </ul>	<ul style="list-style-type: none"> <li>• Project and DSS progress and performance reports (incl. needs assessment report, user manuals, QA reports, and training program assessment)</li> <li>• Project monitoring and evaluation reports</li> <li>• Workshop reports (with gender specific data)</li> <li>• Project Newsletter</li> <li>• Evaluation of River Basin Model performance and utility</li> <li>• Reports of studies on relationships between macro and sector policies and environment, including root causes.</li> </ul>	<ul style="list-style-type: none"> <li>• The non-GEF-funded portion of the Water Resources Planning and Management Project will support other DSS components, including developing the Information Management System and strengthening the institutional frameworks and human capacity for DSS development and application.</li> <li>• The DSS component of the Water Resources Planning and Management Project will establish the structure and technical standards for the communications network and Information Management System to be used by the project.</li> <li>• The Newsletter will use information and publishing facilities supported by CIDA (through a parallel Communications Project) in collaboration with the DSS.</li> <li>• Stakeholders are willing to share information and will collaborate in the design and maintenance of the DSS.</li> <li>• Qualified and motivated staff and other resources available.</li> <li>• Additional financial resources can be mobilized to cover the hardware costs associated with the establishment of NGO networks.</li> <li>• Key issues and constraints related to the use of new technology can be overcome.</li> </ul>



Intervention	Indicators of Performance	Means of Verification	Risks and Assumptions
	<p><b>Indicators for Phase 1 Completion</b></p> <ul style="list-style-type: none"> <li>• Basin-wide Thematic Working Groups established and functioning effectively for each of project components 2 to 5.</li> <li>• Newsletter published regularly (in 3 languages) with best practices, lessons, workshops and additional resource material of interest for all project areas.</li> </ul>	<p><b>Verification of Phase 1 Completion</b></p> <ul style="list-style-type: none"> <li>• Project and DSS progress and performance reports (incl. needs assessment report, user manuals, QA reports, and training program assessment)</li> <li>• Project monitoring and evaluation reports</li> <li>• Workshop reports (with gender specific data)</li> <li>• Project Newsletter</li> </ul>	
<p><b>Result/ Component 2:</b> Community-level Land, Forest and Water Conservation</p> <ol style="list-style-type: none"> <li>1. Enhanced basin-wide capabilities and cooperation</li> <li>2. Improved understanding of transboundary soil erosion</li> <li>3. Micro-grant Fund to support local-level land, forest and water conservation initiatives at transboundary sites</li> </ol>	<ul style="list-style-type: none"> <li>• National and international environmental NGO networks established or strengthened in 5 countries</li> <li>• Four regional training workshops (with gender balance) conducted on NGO-government collaboration with basin-wide participation</li> <li>• Transboundary assessments and studies of soil erosion completed, involving at least 5 countries, including at least one southern and one northern Nile country, and participation of a full range of stakeholders.</li> <li>• Priority transboundary sites and areas identified for pilot activities in 5 countries.</li> <li>• Micro-grant Fund established and functioning effectively reaching NGOs and grassroots groups across gender lines. Micro-grants made to support local-level pilot initiatives, adoption of best practices and exchanges of lessons learned. Specific verifiable indicators developed for the Micro-grant Fund. Indicators to include gender targets for micro-grant beneficiaries.</li> <li>• Promising or successful pilots identified for scaling up or replication through the NBI's SAP.</li> </ul>	<ul style="list-style-type: none"> <li>• Project progress reports.</li> <li>• Survey of users of NGO networks.</li> <li>• Workshop reports.</li> <li>• Reports on assessments and studies of transboundary soil erosion.</li> <li>• Micro-grant Fund reports on institutional arrangements, organization and management, grant selection criteria and grant making.</li> <li>• Monitoring and evaluation reports for Micro-grant Fund, including monitoring and evaluation for individual grants.</li> <li>• Satisfactory gender ratios reached in grant-making.</li> </ul>	<ul style="list-style-type: none"> <li>• National and international NGOs are willing to share information and collaborate with the project.</li> <li>• Studies provide usable insights on transboundary soil erosion to guide grant-making emphasis of Micro-grant Fund.</li> <li>• Adequate institutional arrangements can be made in each country to house, manage, safeguard and administer the Micro-grant Fund.</li> <li>• Community-level stakeholders are ready to submit proposals to and engage in joint activities with the Micro-grant Fund.</li> </ul>

Intervention	Indicators of Performance	Means of Verification	Risks and Assumptions
	<p><b>Indicators for Phase 1 Completion</b></p> <ul style="list-style-type: none"> <li>National and international environmental NGO networks established or strengthened in 3 Nile countries. Micro-grant Fund established and functioning effectively.</li> <li>First round of grant making satisfactorily completed.</li> <li>Two regional training workshops conducted on NGO-government collaboration with basin-wide participation.</li> <li>Transboundary assessments and studies of soil erosion completed, involving at least 2 countries, including participation of a full range of stakeholders.</li> </ul>	<p><b>Verification of Phase 1 Completion</b></p> <ul style="list-style-type: none"> <li>Project progress reports.</li> <li>Workshop reports.</li> <li>Reports on assessments and studies of transboundary soil erosion.</li> <li>Micro-grant Fund reports on institutional arrangements, organization and management, grant selection criteria and grant making.</li> <li>Monitoring and evaluation reports for Micro-grant Fund.</li> </ul>	
<p><b>Result/ Component 3:</b> Environmental Education and Awareness</p> <ol style="list-style-type: none"> <li>Public awareness and understanding of Nile transboundary environmental issues</li> <li>Enhanced networking among universities and other research institutions</li> </ol>	<ul style="list-style-type: none"> <li>National Working Groups established and functioning effectively.</li> <li>Regional training provided to 50 stakeholders in environmental education and awareness program development.</li> <li>Gender sensitive environmental education and awareness programs for public and schools developed and delivered, using both innovative and traditional media. Specific verifiable indicators will be developed in consultation with national education authorities.</li> <li>University and research institutions brought into a network to coordinate programs in environmental science, engineering and policy studies. One coordinating institution selected per country. Specific verifiable indicators developed in consultation with regional Working Group.</li> </ul>	<ul style="list-style-type: none"> <li>Project progress reports.</li> <li>Gender sensitive environmental education and awareness program materials.</li> <li>Survey of environmental education and awareness program users to evaluate impact of activities.</li> <li>Survey of users of university and research institution network to evaluate impact of activities.</li> </ul>	<ul style="list-style-type: none"> <li>National Working Groups are willing to participate, work jointly and share information with counterparts from other riparian countries.</li> <li>Adequate institutional arrangements for development and delivery of environmental education programs can be made within each country, e.g., with the Ministries of Education.</li> </ul>
	<p><b>Indicators for Phase 1 Completion</b></p> <ul style="list-style-type: none"> <li>National Working Groups established and functioning effectively.</li> <li>Regional training provided to 20 stakeholders in environmental education and awareness program development.</li> <li>Environmental education and awareness programs for public and schools developed and delivery plan at an advanced or final stage.</li> </ul>	<p><b>Verification of Phase 1 Completion</b></p> <ul style="list-style-type: none"> <li>Project progress reports.</li> <li>Environmental education and awareness program materials.</li> </ul>	

<b>Intervention</b>	<b>Indicators of Performance</b>	<b>Means of Verification</b>	<b>Risks and Assumptions</b>
<p><b>Result/ Component 4:</b> Wetlands and Biodiversity Conservation</p> <ol style="list-style-type: none"> <li>1. Enhanced regional cooperation and capabilities</li> <li>2. Better understanding and broader awareness of the role of wetlands</li> <li>3. More effective management of wetlands</li> </ol>	<ul style="list-style-type: none"> <li>• Basin-wide wetland management network of stakeholders and experts established and functioning effectively.</li> <li>• Wetland education, training and awareness programs developed in 3 languages and delivered in 5 countries.</li> <li>• Two ecological and economic studies of the role of wetlands in sustainable development completed in one southern and one northern Nile country.</li> <li>• Pilot initiatives completed in support of capacity building and management at 3 key transboundary sites, involving at least one southern and one northern Nile country. Specific verifiable indicators will be developed for the site interventions.</li> </ul>	<ul style="list-style-type: none"> <li>• Project progress reports.</li> <li>• Survey of users of wetland management network to evaluate impact of activities.</li> <li>• Wetland education, training and awareness program materials.</li> <li>• Reports on studies on the role of wetlands in sustainable development.</li> <li>• Progress reports on pilot initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>• Wetland management stakeholders and experts are willing to participate in and share information through a network facilitated by the project.</li> <li>• Wetlands and other priority transboundary sites selected for studies and for pilot initiatives are accessible.</li> </ul>
	<p><b>Indicators for Phase 1 Completion</b></p> <ul style="list-style-type: none"> <li>• Component to begin in Phase 2</li> <li>• Phasing indicators as for Component 1.</li> </ul>		
<p><b>Result/ Component 5:</b></p> <ol style="list-style-type: none"> <li>1. Water Quality Monitoring Basin-wide Enhanced national capacities for water quality monitoring</li> <li>2. Transboundary water quality monitoring established</li> </ol>	<ul style="list-style-type: none"> <li>• Existing national capacities assessed, including documentation of sampling points in each country.</li> <li>• Common analytical methods selected for basin-wide use.</li> <li>• Methods pilot tested in one national laboratory in each country then revised based on experience and adopted basin-wide.</li> <li>• Four regional training workshops on water quality monitoring conducted in each country</li> <li>• National water quality database developed in each country.</li> <li>• Water quality monitoring program sampling points established at 3-5 environmental hotspots of transboundary relevance per country.</li> <li>• Study tours conducted with basin-wide participation to examine water quality incidents and corrective measures.</li> <li>• Best practice materials on pollution prevention and control prepared at a regional level in three languages and disseminated in each country.</li> <li>• Four regional training workshops conducted on pollution prevention and monitoring needs, and cost recovery mechanisms for water quality monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>• Project progress reports and maps.</li> <li>• Reports on national water quality monitoring capacities.</li> <li>• Manual of common Nile Basin water quality analytical methods.</li> <li>• Progress reports on basin-wide water quality monitoring program.</li> <li>• Best practice materials and workshop reports.</li> </ul>	<ul style="list-style-type: none"> <li>• Technical institutions and their staff of sufficient capacity and ready to engage in developing monitoring programs with national and international exchanges of information.</li> <li>• Additional financial resources are available for laboratory resources, sampling instruments and other hardware needed for water quality monitoring.</li> <li>• Adequate institutional arrangements, including computer systems are made to house and maintain national water quality databases.</li> <li>• Adequate financial resources are mobilized to cover the recurring costs of monitoring systems.</li> <li>• Political commitment exists to share information and to establish common monitoring approaches.</li> </ul>
	<p><b>Indicators for Phase 1 Completion</b></p> <ul style="list-style-type: none"> <li>• Component to be completed in Phase 1.</li> </ul>		



**ANNEX B1**  
**PHASED FUNDING OVERVIEW**

COMPONENT	OUTPUT PERFORMANCE INDICATORS FOR SECOND PHASE OF GEF FUNDING	GEF Implementing Agency	GEF Financing Phases Implementing Agency and Funding Distribution		GEF Sub-totals and TOTALS	Non-GEF Funding
			Phase 1	Phase 2		
<b><u>1. Institutional Strengthening</u></b>						
1.1 Regional capacity building	All GEF funding in Phase 1.	UNDP	6,936,149	0	6,936,149	0
1.2 Knowledge management	All GEF funding in Phase 1.	World Bank	1,154,139	0	1,154,139	0
1.3 Decision Support System - River Basin Model	All GEF funding in Phase 1.	World Bank	3,646,986	0	3,646,986	0
1.4 Macro/sectoral policies and the environment	All GEF funding in Phase 1.	World Bank	436,686	0	436,686	0
			<b>12,173,959</b>	<b>0</b>	<b>12,173,959</b>	<b>0</b>
<b><u>2. Land, Forests and Water Conservation</u></b>						
2.1 Basin-wide cooperation and NGO networks	All GEF funding in Phase 1.	UNDP	1,194,997	0	1,194,997	2,461,373
2.2 Transboundary soil erosion	All GEF funding in Phase 1.	UNDP	305,210	0	305,210	0
2.3 Micro-grant fund for local conservation initiatives	Institutional arrangements in place. First round of grant making satisfactorily completed.	UNDP	215,236	2,000,000	215,236	4,922,746
			<b>1,715,442</b>	<b>2,000,000</b>	<b>3,715,422</b>	<b>7,384,119</b>
<b><u>3. Environmental Education and Awareness</u></b>						
3.1 Public awareness and understanding	Organizational arrangements, detailed work plans and early pilots completed.	UNDP	2,062,563	1,000,000	3,062,563	0
3.2 Networking universities and other research institutions	All GEF funding in Phase 1.	UNDP	402,742	0	402,742	0
			<b>2,465,305</b>	<b>1,000,000</b>	<b>3,465,305</b>	<b>0</b>
<b><u>4. Wetlands and Biodiversity Conservation</u></b>						
4.1 Regional cooperation and capabilities	Institutional framework established (Component 1).	UNDP	0	1,185,766	1,185,766	0
4.2 Wetlands in sustainable development	No GEF funding.	UNDP	0	0	0	2,735,816
4.3 Management of wetlands & cross-border Pas	Institutional framework established (Component 1).	UNDP	0	3,183,786	3,183,786	0
			<b>0</b>	<b>4,369,552</b>	<b>4,369,552</b>	<b>2,735,816</b>
<b><u>5. Water Quality Monitoring Basin-wide</u></b>						
5.1 Capacity building for water quality monitoring	All GEF funding in Phase 1.	World Bank	1,506,249	0	1,506,249	0
5.2 Transboundary water quality monitoring initiated	All GEF funding in Phase 1.	World Bank	1,418,221	0	1,418,221	2,589,045
			2,924,470	0	2,924,470	2,589,045
<b>TOTAL</b>			<b>19,279,176</b>	<b>7,369,552</b>	<b>26,648,729</b>	<b>12,708,979</b>



**ANNEX C**  
**STAP REVIEW**

*To be completed upon completion of present Project Brief*

*following Nile-TAC and Nile-COM endorsement*





**ANNEX C1**  
**RESPONSE TO STAP REVIEW**

*To be completed upon completion of present Project Brief*  
*following Nile-TAC and Nile-COM endorsement*



**ANNEX D**  
**GOVERNMENT REQUESTS**

*To be received from all Nile countries no later than 30 June 2001.*



**ANNEX E**  
**COUNCIL OF MINISTERS OF WATER AFFAIRS OF THE NILE BASIN STATES**  
**POLICY GUIDELINES FOR THE NILE RIVER BASIN STRATEGIC ACTION PROGRAM<sup>1</sup>**

## **1. INTRODUCTION**

The Nile is one of the world's greatest riches and is of inestimable value for its peoples—a resource which needs to be held in trust for future generations. Sustainable development and management of the Nile Basin presents a great challenge and there remain many opportunities for growth and development for the future, bringing the promise of regional harmony and economic development. At the heart of this challenge is the imperative to eradicate poverty. Without action today, the riparian countries will face many problems including famine, extreme poverty, environmental degradation and rapid population growth. This is a clear challenge for the peoples of the Basin and calls for vision and leadership.

The purpose of this brief document is to set out policy guidelines for taking the strategic action which is necessary to realize the potential of the Nile for the good of all. The time has come to move from planning to action.

## **2. OBJECTIVES**

The objectives 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.

- To ensure that the program results in a move from planning to action.

## **3. THE SHARED VISION**

*To achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources.*

### **Cooperative action:**

An important approach to cooperative action within a basin-wide framework is the principle of subsidiarity: to take decisions at the lowest appropriate level, to facilitate the development of real action on the ground.

## **4. THE STRATEGIC ACTION PROGRAM**

The strategic action program comprises two complementary sub-programs. These promote the Shared Vision and realize the vision through action on the ground – see Figure 1.

While the Shared Vision is being developed and promoted at the basin-wide level, building commitment and clear goals, it needs to filter down to the country and local level. However, the Shared Vision cannot stand alone; it has to be nourished and fed by actions on the ground—actions which meet the needs of the people and build trust and confidence amongst the riparian countries. Action on the ground will take place at local, national and sub-basin levels, and will integrate upwards within a basin-wide framework.

## **5. SHARED VISION PROGRAM**

The main task of the Shared Vision Program will be the creation of an enabling environment for investments and action on the ground, within a basin-wide framework. This Program will promote the Shared Vision through a limited, but effective, set of basin-wide activities and projects.

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<sup>1</sup> *Policy Guidelines for the Nile River Basin Strategic Action Program*, Council of Ministers of Water Affairs of the Nile Basin states, February 1999

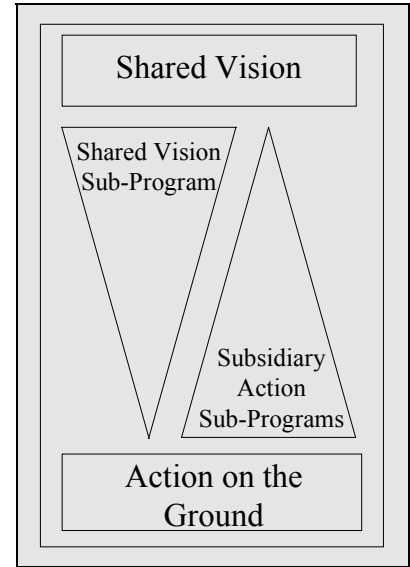
The Shared Vision Program illustrated in Figure 2 (and further explained in Annex 1), comprises 5 broad themes, as follows:

- Cooperative Framework (Project D3, ongoing) [B].
- Confidence building and stakeholder involvement [C].
- Socio-economic, environmental and sectoral analyses [D].
- Development and investment planning [E].
- Applied training [F].

The Shared Vision (A) will be underpinned by a cooperative framework (B). The ongoing Cooperative Framework Project D3, supported by UNDP, is building such a regional framework. Supporting this “roof,” are four major basin-wide tasks (C-F) which are the “pillars” of a basin-wide Shared Vision Program. Other activities will be added as they are needed and agreed upon. All activities within these tasks have a major capacity building component and contribute to human resources development within the Basin—this provides the “foundation” of the proposed program (G).

**Figure 1: Strategic Action Program for the Nile**

1. *The “Shared Vision Program”* comprises a limited range of essential but effective activities to create a coordination mechanism and an “enabling environment” for the implementation of the Shared Vision through action on the ground.
2. *“Subsidiary Action Programs”* plan and implement action on the ground at the lowest appropriate level, taking into account benefits and effects of planned activities on other countries.



**Figure 2: A Basin-wide Shared Vision Program**

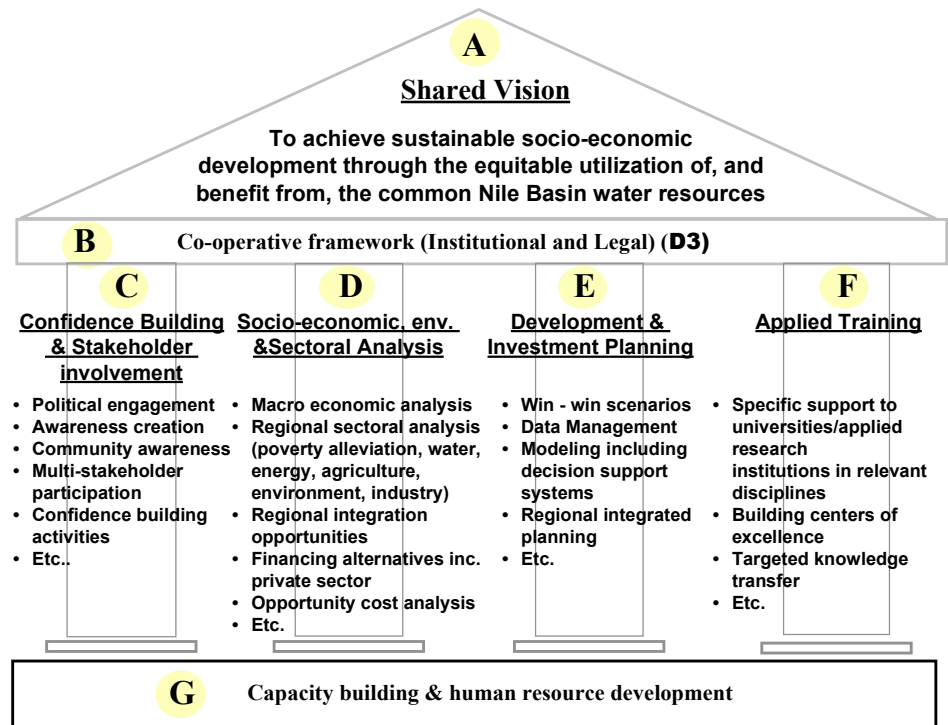
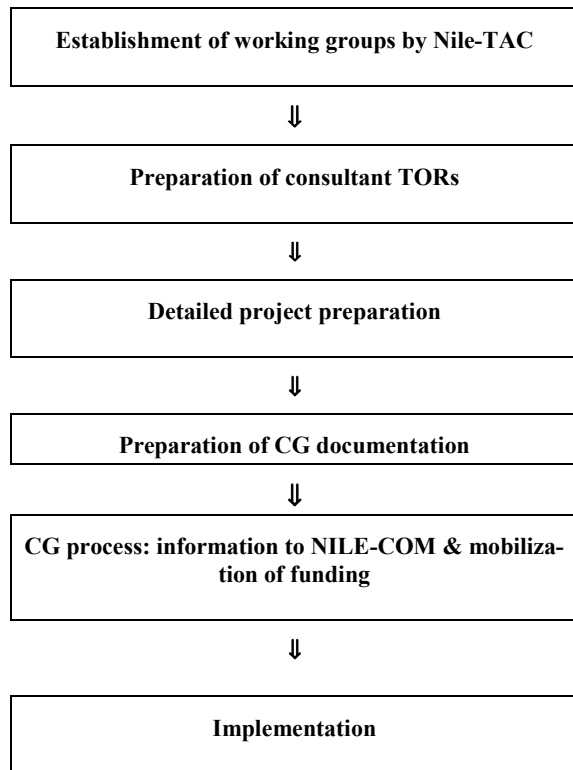


Figure 3 outlines the project cycle for the Shared Vision Program.

**Figure 3: Shared Vision Program Project Cycle**



## 6. SUBSIDIARY ACTION PROGRAMS

Within the basin-wide framework, Subsidiary Action Programs will comprise actual development projects at sub-basin level, involving two or more countries. This will allow the move from planning to action. While local and national governments will address what needs to be done at the local and national levels, the challenge of regional cooperation is to address development opportunities with transboundary implications.

### Guidelines for subsidiary action programs

Common understanding has been reached on the following guidelines for the implementation of Subsidiary Action Programs, pending the establishment of the Cooperative Framework.

1. Action on the ground needs to be planned at the lowest appropriate level (the principle of

subsidiarity). Given the hydrological conditions of the Nile Basin, action on the ground will mainly be planned and implemented at a sub-basin level.

2. The appropriate planning level needs to involve all those who will be affected. Countries involved will be a function of the location, type, and scale of activity, as well as potential upstream and downstream impacts.
3. The role of the overall (basin-wide) framework is to ensure appropriate consultation and involvement of those affected on the one hand, and subsidiarity on the other.
4. Subsidiary Action Programs will build on principles of equitable utilization, no significant harm and cooperation.
5. The range of development project options (see below) will vary depending on the nature of the needs and opportunities in the different geographical areas.
6. Investigations will seek solutions both that have benefits for all involved and distribute benefits, costs, and risks equitably as well as use resources efficiently and protect the environment.
7. Bundling several projects into a program provides the opportunity to counterbalance the positive and negative impacts of different projects, such that the cumulative sum of impacts within the program optimizes benefits for all parties involved.

Some of the types of projects which could be bundled into Subsidiary Action Programs are as follows:

**I. Generic Water Resources Management Project Possibilities**

- Water Supply & Sanitation
- Irrigation & Drainage Development
- Fisheries Development
- Hydropower Development & Pooling
- Watershed Management
- Sustainable Management of Wetlands & Biodiversity Conservation
- Sustainable Management of Lakes & linked Wetland Systems
- River Regulation
- Flood Management
- Desertification Control
- Water Hyacinth & Weeds Control
- Pollution Control & Water Quality Management
- Water Use Efficiency Improvements

**II. Other Related Joint Development Project Possibilities**

*Infrastructure:*

- Regional energy networks, including power inter-connection and gas pipelines
- Telecommunication development
- Regional transport, including: railway and road networks; river and marine navigation; aviation

*Trade and Industry:*

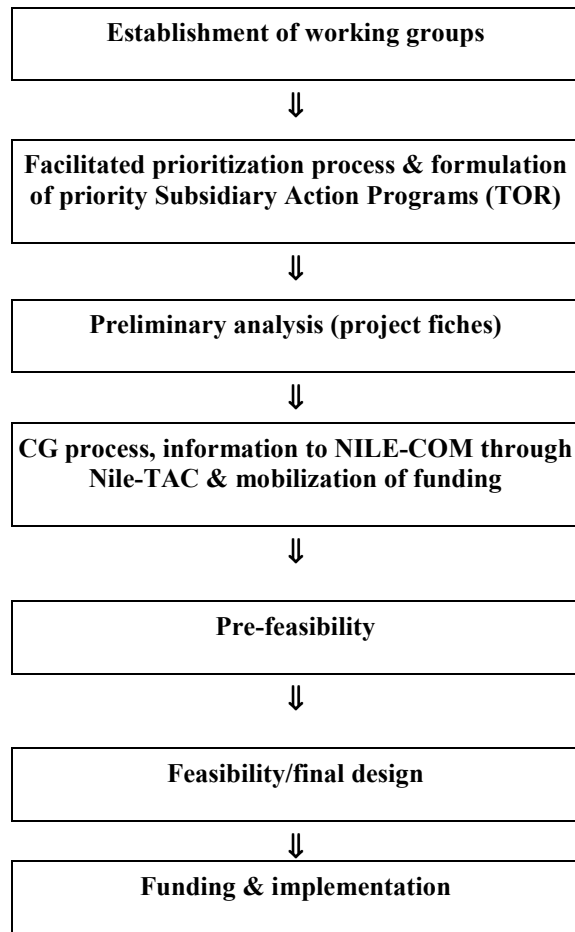
- Promotion of trade (including border trade)
- Industrial development
- Regional tourism development
- Promotion of private investment and joint ventures
- Marketing and storage of agricultural products
- Forest crop harvesting

*Health, environment, other:*

- Malaria and other endemic diseases control
- Protection of wildlife
- Environmental management
- Disaster forecasting and management

The program cycle for Subsidiary Action Program development is outlined in Figure 4.

**Figure 4: Subsidiary Action Program Cycle**



**7. RIPARIAN CONSULTATION PROCESS**

**Maintaining riparian dialogue**

The Council of Ministers of Water Affairs of the Nile Basin (NILE-COM) is the main policy and guidance forum for Nile Basin cooperation. The NILE-COM has established a Technical Advisory Committee (Nile-TAC) as an inclusive, transitional institutional mechanism to coordinate joint activities, pending the successful completion of the Cooperative Framework Project D3. The Nile-TAC will establish working groups to undertake specific tasks (see below). High priority will continue to be placed on strengthening the process of consultation in order to build trust and confidence. Other fora, such as the Nile 2002 series of conferences (supported by CIDA) will continue to be valuable mechanisms for the exchange of views.



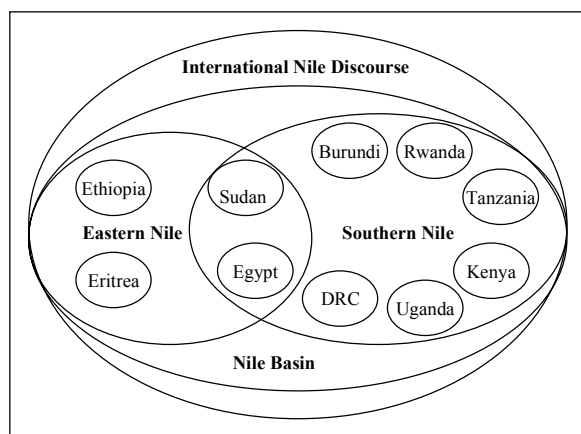
## Shared Vision Program preparation

The Nile-TAC will be responsible to the NILE-COM for the preparation of the Shared Vision Program, which will be coordinated and implemented at the basin-wide level.

## Subsidiary Action Program identification

To help with identifying subsidiary action programs, Nile-TAC will promote the establishment of working groups of concerned countries. The Subsidiary Action Programs that will evolve will be within the Shared Vision and its framework developed at the basin-wide level. The sole responsibility for these programs will then rest with the involved riparians—with all affected countries being able to participate. Figure 5 illustrates how country activities will take place within possible sub-basin frameworks (with many smaller sub-basins within the two larger sub-basins illustrated), which themselves will be within a basin-wide framework. This basin-wide framework will itself be within an “international discourse” to promote international support for sustainable Nile water development and management.

**Figure 5: An Illustration of Possible Levels of Nile Cooperation**



## 8. CONSULTATIVE GROUP (CG)

The NILE-COM has requested the World Bank and its partners to organize and host a consultative group - the International Consortium for Cooperation on the Nile (ICCON). The objective of the ICCON is to seek coordinated and transparent

support for cooperative water resources development and management and other related projects in the Nile Basin. Within this forum, Nile riparian countries will seek funding pledges for projects from bilateral, multilateral and possibly private funding agencies.

## 9. CONCLUSIONS

On the basis of the Shared Vision for the Nile Basin and the arrangements outlined in this document, the Council of Ministers is committed to foster cooperation and *sustainable development of the River Nile for the benefit of all*.



## ANNEX F STAKEHOLDER INVOLVEMENT IN PROJECT FORMULATION

The preparation of this project, as well as the other projects within the Shared Vision Program project portfolio, was directed by the institutions of the NBI and involved the active participation of technical experts from across the Basin. This complex, multi-country, multi-sectoral process, which is described below, demonstrates riparian ownership and commitment to successful project implementation.

### **Evolution of the Shared Vision Program: A coordinated basin-wide program**

The Shared Vision Program evolved from four thematic areas, or pillars, as described in the NBI policy guidelines for a coordinated program of seven basin-wide projects, between February 1999 and December 2000. The process, as summarized in Table 2, was executed and coordinated by the Nile-Sec, involved active participation of and guidance from the Nile-TAC, and received formal endorsement by the Nile-COM at critical milestones.

The final portfolio of Shared Vision Program projects includes:

- (a) Environmental analysis and management (this proposal).
- (b) Promoting power trade in the Nile Basin.
- (c) Efficient use of water for agriculture.
- (d) Water resources planning and management.
- (e) Confidence building and stakeholder involvement.
- (f) Applied training.
- (g) Socio-economic development and benefit-sharing.

Four of these are sectoral projects—focusing on environment, power, agriculture, and water resources management—and three are cross-cutting projects related to confidence building and stakeholder involvement, training, and macro-economics. The projects build on each other, and together will serve to provide an enabling environment for cooperative development.

**Table 1. Preparation of the Shared Vision Program**

Date	Meeting		Key Outcomes
	Type	Location	
July 1998	Nile-TAC	Dar es Salaam, Tanzania	Drafting of Policy Guidelines that define the SVP and 4 major thematic areas of the program.
Feb 1999	Nile-COM and Nile-TAC	Dar es Salaam, Tanzania	Adoption of the NBI Policy Guidelines, and instruction by Nile-COM to prepare a portfolio of priority SVP projects for ICCON.
May 1999	SVP Planning Meeting	Sodere, Ethiopia	Preliminary list of priority projects, including project goals & objectives, based on consultation and brainstorming by Nile-TAC members and 2 additional sectoral experts from each country.
May 1999	Nile-COM and Nile-TAC	Addis Ababa, Ethiopia	Approval of list of priority projects and project preparation process. Nile-COM endorses GEF PDF-B project for submission to GEF Secretariat.
Sept 1999	Nile-TAC	Entebbe, Uganda	Based on output from Sodere Planning Meeting, development of Project Concept Notes for 7 priority projects and approval of a detailed project preparation process and schedule for each project.
Nov, 1999	PDF B Review meeting	Washington DC	GEF SEC approved PDF B funding.
Dec 1999	Project Preparation 1	Entebbe, Uganda	Review and further development of Draft Project Concept Notes/Documents by Working Groups (WG). For each project, the WGs included a Nile-TAC member and National Expert(s) from each country. A total of 8 National Experts were involved from each country. Each project was assisted by a Lead Consultant.
Dec 1999 - Nov 2000	National Analysis & Consultations	(basin-wide) Nile Basin countries	Lead Consultants together with National Experts prepare Draft Project Documents. Depending on the project and country, National Experts provided inputs through preparation of National Reports, country consultations and/or country visits by Lead Consultants.
Jan 2000	Nile-TAC	Entebbe, Uganda	Review of progress in project preparation and further refinement of Project Concepts, as warranted.
Jan – Apr 2000	National consultations	In all Basin countries	GEF PDF-B funds facilitated the holding of national consultation workshops in each of the Nile riparian countries. This allowed for further stakeholder involvement and consultation.
Mar 2000	Environment Experts	Entebbe, Uganda	Review of draft National Reports. Agreements of common transboundary priorities.
Mar 2000	Nile-TAC	Delft, the Netherlands	Review of progress in project preparation and further refinement of project concepts/design, as warranted.
July 2000	Project Preparation 2	Addis Ababa, Ethiopia	Review and further development of detailed Draft Project Documents by WGs.
Aug 2000	Nile-COM and Nile-TAC	Khartoum, Sudan	Approval of SVP Project Portfolio and updated Project Summaries.
Oct 2000	Nile-TAC	Via electronic mail	Review of Final Project Documents.
Feb 2001	Nile-COM and Nile-TAC	Khartoum, Sudan	Final approval of SVP Project Portfolio and Project Documents.

## The Transboundary Environmental Analysis

**Highly participatory.** The Transboundary Environmental Analysis (TEA) was prepared through a highly participatory and transparent process to ensure maximum consultation and involvement, which in turn can translate into maximum relevance, ownership and commitment.

**Political commitment.** The decision to carry out a process of environmental analysis was taken by the Nile Basin Initiative’s Council of Ministers for Water Affairs, based on the recommendations by the Nile-TAC at meetings held in Addis Ababa in May 1999, which prepared the strategic guidance for the overall Shared Vision Program.

**National Experts.** During October – November 1999, the national Ministries of Water Affairs consulted with their national environment authorities for the nomination of a National Environment Expert from each of the nine countries who would serve as National Expert and Drafting Group member.

**Initiation of Transboundary Analysis.** The Transboundary Environmental Analysis process was formally launched with a one-week workshop in December 1999 at the Nile Basin Secretariat in Entebbe, Uganda. During this workshop, participants from each of the Nile countries studied GEF guidelines and operations, and started initial identification of common Nile-related transboundary environmental priorities. The National Experts participated in this workshop, together with UNDP and World Bank staff. Members of the TAC participated in several of the workshop sessions. One of the key workshop outputs was a preliminary characterization of the major basin-wide environmental threats by the National Experts. The workshop participants also agreed on a basic approach and methodology for the process ahead; decided to hold broad national consultations in each of the nine countries to ensure that the report would emerge reflecting national concerns and priorities, and agreed on the format for the National Report which each National Expert would produce; and, finally, committed to a challenging work plan for the following six months. For the riparian countries, this workshop began the critical process of working together on shared environmental concerns at an operational level, complementing the commitment to political cooperation that had already been established through the Nile Basin Initiative.

**National consultations.** The national consultation process varied between countries, reflecting national traditions and preferences as well as the nature of individual Nile Basin issues within each country. In each case the National Experts started by identifying the major stakeholder groups. The national ministries or departments responsible for water resources and for environment were usually facilitators of the consultation as well as being important stakeholders themselves. Other key stakeholders included national government agencies responsible for natural resources and for planning, local government agencies, national and local NGOs, universities and other research institutions, participants in related projects and programs, and selected individual experts (see table below for a list of stakeholders involved in the national consultations).

**Broad participation.** At least one stakeholder workshop was held in each riparian country. All of the workshops were led by the national Nile-TAC representative and many had ministerial-level participation. The workshops served the dual purpose of explaining the relatively complex context for and background to the consultations, including making sure that the Nile Basin Initiative itself was well understood, as well as soliciting inputs and suggestions on environmental priorities. In some cases workshop participants were able to respond to early drafts of the National Reports. In all cases the workshop participants were encouraged to contact the National Experts directly to request information about progress or to provide further inputs. In countries where the national capital is outside the Nile Basin, the National Experts traveled to the Nile Basin region of their countries for consultations. In some cases additional workshops or briefings were conducted for NGO groups.

**Coordination with environmental planning initiatives.** All of the riparian countries had previously undertaken comparable national environmental planning processes aimed at diagnosing and prioritizing environmental problems. These include national environmental action plans, national conservation strategies, national desertification action plans, national biodiversity strategies and action plans, tropical forestry action plans, etc. Many of these processes had themselves been based on broad consultations. The findings from these planning frameworks were reflected in the National Reports.

**National Reports.** The National Experts prepared their National Reports to reflect the results of the consultations as well as prior analytical work done in their respective countries. These reports in draft form were made available to and reviewed by the stakeholders who had participated in the consultations. By March 2000, the National Reports were received from each of the nine countries and a second workshop for the National Experts was therefore held in Entebbe. The purpose of this workshop was to review the environmental analysis in each of the reports and begin to identify common themes and priorities, around which joint and common environmental management action could be taken.

**Consolidation of findings.** Following the March 2000 workshop, a draft Consolidated Report was produced and shared with the Nile-TAC members and the National Experts. This was followed by a final workshop held in Addis Ababa in July 2000 during which the Consolidated Report and the project action components were carefully reviewed and revised to fully reflect the national and basin-wide priorities.

Throughout the process, policy guidance was provided by the National Nile-TAC members and close interaction took place between the Nile-TAC members and the National Experts. Moreover, the Nile-Sec provided administrative and logistical support and facilitated links to related NBI activities while UNDP and World Bank staff provided technical guidance. Coordination between the countries was provided by an international Lead Consultant who also prepared the Consolidated Report based on the national findings and recommendations. The core funding for these activities was provided by the Global Environment Facility. Additional funding was provided by UNDP and the World Bank.

A parallel set of activities supported by USAID involved a scoping study preparing a multi-country technical background paper based on readily accessible and public domain information. This activity was carried out by a US-based consulting team that consulted with stakeholders in Burundi, D.R. Congo, Egypt, Ethiopia, Kenya, Rwanda, Tanzania and Uganda. The National Experts worked closely with the consulting teams during their country visits. The National Experts reflected some of the results of this scoping study in the consolidated Transboundary Environmental Analysis report.

The impressive collaboration between the riparian countries' Experts laid a promising foundation for the detailed design and implementation of the transboundary project activities proposed as a result of the Transboundary Environmental Analysis.

**Table 2. Stakeholders consulted during Transboundary Analysis and Project Formulation Process**

COUNTRY	STAKEHOLDER
<b>BURUNDI</b>	Agri-Consult Département de l'Environnement Deuxième Vice-Présidence de la République Food & Agriculture Organisation (FAO) Générale de l'Aménagement du Territoire et de l'Aménagement - Génie Rural (Gestion des Marais) Institut Géographique du Burundi (IGEBU) – Cartographie Institut Géographique du Burundi (IGEBU) – Climatologie Institut Géographique du Burundi (IGEBU) Institut National Pour l'Environnement et la Conservation de la Nature (INECN) - Département Technique Institut National Pour l'Environnement et la Conservation de la Nature (INECN) Ministère de Développement Rural et de l'Artisanat Ministère de l'Agriculture et de l'Elevage Ministère de l'Agriculture et de l'Elevage - Département des Pêches et Pisciculture Ministère de l'Aménagement du Territoire et de l'Environnement Ministère de l'Energie et des Mines - Géologie et Mines Ministère de la Santé Publique - Propreté Environnement Santé (PES) Programme des Nations unies pour le Développement (PNUD) Université du Burundi
<b>D.R. CONGO</b>	Agence Nationale de Météorologie et de Télédétection par Satellite (METTELSAT) Bureau d'Etudes de l'Association pour le Développement de Beni et Lubero (ADEBEL) Bureau Dendrologie Cellule Juridique au Secrétariat Général de l'Environnement – Conservation de la Nature, Pêche et Forêts (SG – ECPNF) Centre National d'Information Environnementale (CNIE) Comité Interministériel de Coordination en matière d'environnement Comité National d'Action de l'Eau et de l'Assainissement (CNAEA)

**COUNTRY    STAKEHOLDER**

Comité National MAB (Man and Biosphere)  
Direction d'Etudes et Planification  
Direction de Pêche et Ressources en Eau (DPRE)  
Direction des Etablissements Humains et Protection Environnementale  
Institut Géographique de Congo  
Institut Supérieur des Techniques Appliqués (ISTA)  
Ministère de l'Agriculture, Elevage et Développement Rural  
Ministère de l'Intérieur et des Affaires Coutumières  
Ministère du Plan et Consultant national chargé du volet utilisation efficace de l'eau pour l'agriculture  
National du Projet – FAO  
Notabilité de la Province du Nord – Kivu  
Organisations autogérées et Organisations non-gouvernementales (ONGS)  
Point Focal – Lutte contre la Désertification  
Programme Hydrologique International (PHI)  
Régie de Distribution d'eau (REGIDESO)  
Régie des Voies Fluviales (RVF)  
Services Généraux  
Service National pour la Promotion et le Développement de la Pêche (SENADEP)  
Société Nationale d'Electricité (SNEL)  
Système d'information Géographique (SIG)

**EGYPT**

Ain Shams University - Engineering Department  
Ain Shams University – Environmental Institute  
Arabian Youth and Environment Office  
Cairo University – Engineering Department  
Climate Change and Environmental Research Institute  
Drainage Research Institute  
Egypt Youth for Development and Environment  
Egyptian Environment Federation  
Egyptian Environmental Affairs Agency - Central Department for Information and Environmental Awareness  
Egyptian Environmental Affairs Agency - Environment Quality Department  
Egyptian Environmental Affairs Agency - Natural Protectorate Department  
Groundwater Research Institute  
Ministry of Agriculture  
Ministry of State for Environmental Affairs  
Ministry of Water Resources and Irrigation  
Ministry of Water Resources and Irrigation - National Water Quality and Availability Project  
National Water Research Center  
Water Resources Master Plan Project

**ETHIOPIA**

Agri-Service Ethiopia (ASE)  
Bureau of Agriculture  
Bureau of Economic Development and Planning  
Bureau of Water Resources and Energy  
CARE – Ethiopia  
Christian Relief and Development Agency (CRDA)  
CISP  
Conservation Strategy for Ethiopia  
Ethiopia Environmental NGO (EENGO)  
Environmental Protection Authority  
Ethiopian Aid  
Ethiopian Aid  
Ethiopian Wildlife and Natural History Society (EWNHS)  
Ethiopian Wildlife Conservation Organization  
HNDEE (Oromo Grass-roots Development Initiative)  
Institute for Biodiversity Conservation and Research (IBCR)  
Japan International Volunteer Center (JIVC)  
Ministry of Agriculture  
Ministry of Mines and Energy  
Ministry of Planning and Economic Development

<b>COUNTRY</b>	<b>STAKEHOLDER</b>
	Ministry of Transportation and Communication Ministry of Water Resources Natural Resources Management in Amhara National Regional Government OXFAM-Great Britain Regional Conservation Coordinating Committee Soil Conservation Program-Sweden United Nations Industrial Development Organization (UNIDO)
<b>KENYA</b>	Africa Water Network Care Kenya Department of Civil Engineering – University of Nairobi East African Cross-Border Biodiversity Project Forest Department International Centre for Insect Physiology and Ecology (ICIPE) – Mbita Point Station International Network for Water and Sanitation (NETWAS) Irrigation and Drainage Branch – Ministry of Agriculture and Rural Development IUCN – East African Regional Office Kenya Association of Manufacturers Kenya Marine Fisheries Research Institute (KMFRI) – Kisumu Kenya Water Institute Kenya Wildlife Society (KWS) Kipsaina Youth Conservation Group Kisumu Municipal Council Lake Basin Development Authority Lake Victoria Environment Management Project Maseno University College MENR - Uasin Gishu District Ministry of Environment and Natural Resources Ministry of Environment and Natural Resources (MENR) - Suba District Ministry of Finance and Planning Ministry of Local Authorities Moi University National Environment Secretariat National Irrigation Board National Museums of Kenya Osienala Kisumu Pan-African Paper Mills Water and Sanitation Department (WSD) - Kisumu Municipal Council Water Development Department Wetlands Program World Wild Fund for Nature (WWF)
<b>RWANDA</b>	Association pour la Recherche en Aménagement du Territoire (ARAMET) CESTRAR Division Aéronautique au Ministère des Travaux Publics, du Transport et des Communications (MINITRACO) ELECTROGAZ Institut de Recherche Scientifique (l'IRST) Institut des Science Agronomiques de Rwanda (l'ISAR) Ministère de l'Agriculture, de l'Elevage et des Forêts (MINAGRI) Ministère de l'Eau et des Ressources Naturelles (MINERENA) Ministère de l'Energie Ministère de la Justice (MINIJUST) Ministère des Terres, de la Réinstallation et de la Protection de l'Environnement (MINITERE) Ministère du Commerce, de l'Industrie et du Tourisme (MINICOM) National Office for Population (ONAPO) Office Rwandais du Tourisme et des Parcs Nationaux (ORTPN) United Nations Development Programme (UNDP) United Nations Children's Fund (UNICEF)

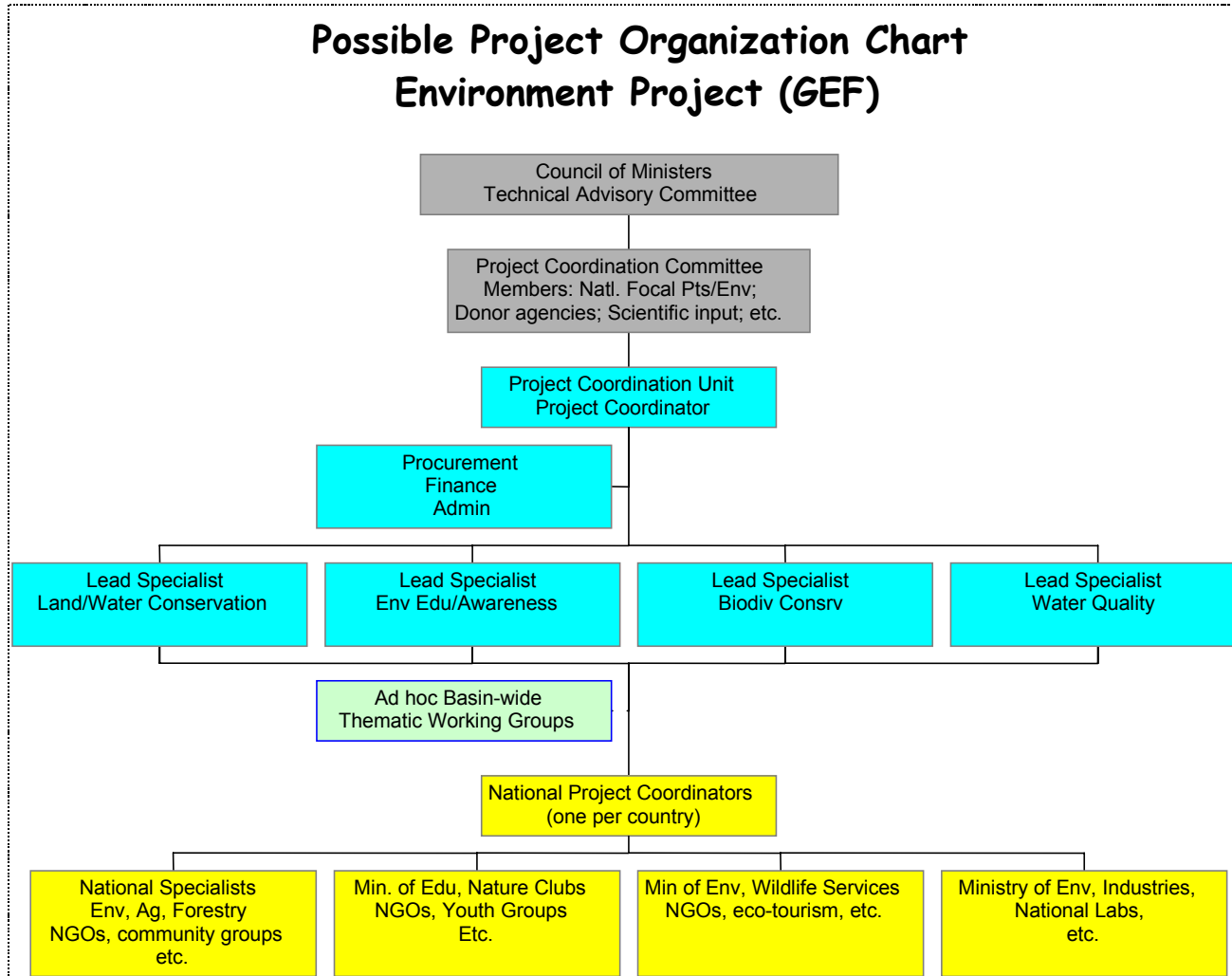


<b>COUNTRY</b>	<b>STAKEHOLDER</b>
<b>SUDAN</b>	Animal Resources Research Corporation Arab Organization for Agricultural Development Environmentalist Society Farmers Union Fisheries Research Center Food & Agriculture Organization (FAO) Geologist Trade Union Higher Council of Civil Defense Higher Council of Environment and Natural Resources Hydraulic Research Station Institute of Disaster Management Institute of Environment and Natural Resource Research Institute of Environmental Studies Juba University – College of Environment and Natural Resource Studies Ministry of Agriculture and Forestry Ministry of Animal Resources Ministry of Economic Planning Ministry of International Cooperation and Investment Ministry of Irrigation and Water Resources Ministry of Justice National Forest Corporation Save the Children – Great Britain Sudanese Environmental Conservation Society Union of Engineers UNESCO National Committee University of Khartoum – College of Agriculture Wildlife Department Wildlife Research Center World Health Organization (WHO)
<b>TANZANIA</b>	Environment Division of the Vice President’s Office Green Shinyanga Group Health through Sanitation and Water Project - Mwanza Journalist Environmental Association (JET) Lake Victoria Environment Management Project Mwanza Town Council Directors Office Ministry of Agriculture and Co-operatives – Crop and Irrigation Division Ministry of Communication and Transport Ministry of Energy and Minerals Ministry of Health Ministry of Lands – Fisheries Division Ministry of Local Government Ministry of Natural Resources and Tourism Ministry of Water National Environment Management Council National Land Use and Planning Commission Tanzania Association of Non-Governmental Organizations (TANGO) Tanzania Traditional Energy and Environment Organization (TATEDO) United Nations Development Programme University of Dar es Salaam Urban Water Supply and Sewerage Authority - Mwanza Wildlife Conservation Society (WCS) World Wildlife Fund (WWF)
<b>UGANDA</b>	Action for Rural Development Auxfound Environmental Awareness District Environment Office of Jinja District Environment Office of Mukono Environment Protection and Economic Development Project (EPED) Friends of Wetlands

**COUNTRY    STAKEHOLDER**

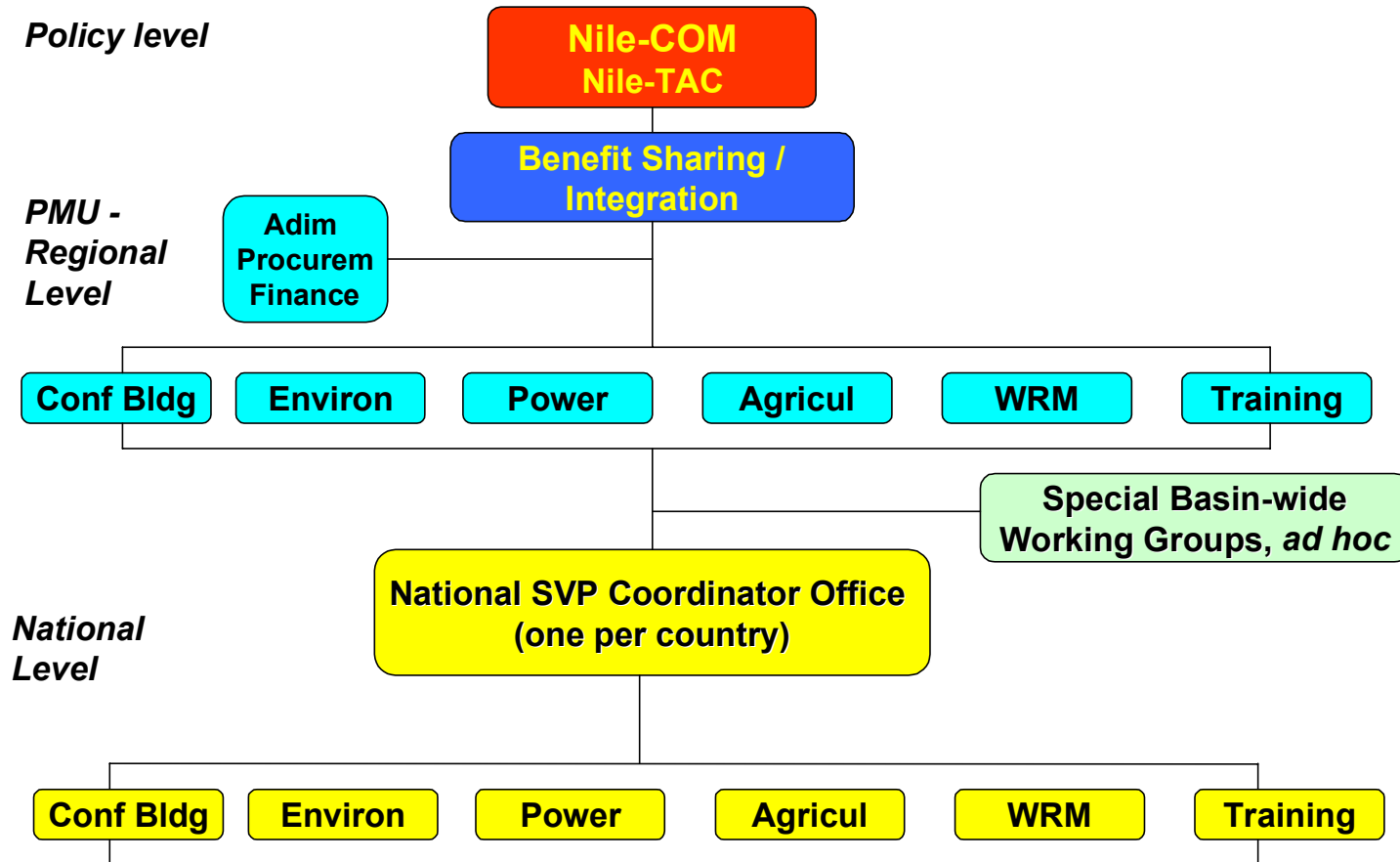
Greenwatch  
IUCN - Kampala  
Jinja District  
Jinja Municipal Council  
Jinja Urban Wetlands  
Kakuto Fish Farming  
Kampala City Council  
Lugazi Peoples Enterprise Development  
Makerere University Institute of Environment and Natural Resources  
Ministry of Agriculture, Animal Industry and Fisheries  
Ministry of Agriculture, Animal Industry, and Fisheries - Agriculture Department  
Ministry of Energy and Mineral Development  
Ministry of Energy and Mineral Development - Directorate of Energy  
Ministry of Health  
Ministry of Tourism Trade and Industry  
Ministry of Water, Land and Environment  
Ministry of Water, Land, and Environment - Directorate of Water Development  
Ministry of Water, Land, and Environment - Forestry Department  
Ministry of Works, Transport and Communications  
Mukono District  
National Association of Professional Environmentalists  
National Environment Management Authority (NEMA)  
National Strategy for the Advancement of Rural Women in Uganda  
National Wetlands Program  
NEMA - GEF Biodiversity Conservation Project  
Uganda Electricity Board  
Uganda Environmental Protection Forum  
Uganda Investment Authority  
Uganda National NGO Forum  
Uganda Neem Movement  
Uganda Wetlands and Resource Conservation Association  
Uganda Wildlife Authority  
Uganda Women Tree Planting Movement

**ANNEX G**  
**ORGANIZATIONAL CHART TRANSBOUNDARY ENVIRONMENT PROJECT**





ANNEX H  
ORGANIZATIONAL CHART SHARED VISION PROGRAM





**ANNEX I**  
**NILE BASIN-WIDE ENVIRONMENTAL THREATS**

ISSUE	SYMPTOMS/ IMPACTS	IMMEDIATE CAUSES	ROOT CAUSES	EXTENT <sup>1</sup>	SEVERITY
<b>1. Land Degradation</b>					
<b>A. Deforestation</b>	<ul style="list-style-type: none"> <li>• Decreasing vegetation/forest cover; loss of density and diversity</li> <li>• Deterioration of watershed: high run-off associated with increased erosion leading to loss of fertile soils and sedimentation and siltation downstream</li> <li>• Energy crisis associated with price increases due to decreased availability of fuelwood and charcoal</li> <li>• Large scale habitat destruction and loss of wildlife in terms of numbers and biodiversity; progressive disappearance of National Parks</li> <li>• Variability in local climate and rainfall patterns</li> </ul>	<ul style="list-style-type: none"> <li>• Land use conversion due to increasing need for arable land and grazing areas; slash and burn practices for land clearing and shifting cultivation</li> <li>• Uncontrolled logging for fuelwood and charcoal production (especially with increased fuelwood prices), construction material and local industry fuel needs</li> <li>• Unsustainable and inefficient resource use (e.g. overgrazing, extensive cultivation on steep hillslopes and uncontrolled logging)</li> <li>• Lack of local planting/replanting</li> <li>• Human migration and resettlement; encroachment into forested areas</li> </ul>	<ul style="list-style-type: none"> <li>• Poverty and population pressure leading to pressure on resources; absence of alternative livelihoods and weak capacity to increase unit agricultural production</li> <li>• Insufficient energy alternatives to fuelwood</li> <li>• Unsustainable land use practices perpetuated through weak policies and laws and failure to enforce laws and regulations; lack of forest protection</li> <li>• Insufficient awareness and knowledge of sustainable land use practices and effects of deforestation</li> <li>• Land tenure system leading to allocation and use of marginal lands and lack of incentives for sustainable land use practices</li> <li>• Large number of refugees and resettlements without basic support</li> <li>• Drought and overall arid climate and topography</li> </ul>	<p>Basin-wide</p> <p>Critical areas:</p> <ul style="list-style-type: none"> <li>• Burundi: along Ruvubu River and other river basins, along steep slopes of high mountains</li> <li>• D.R. Congo: Territories of Beni, Lubero, Rutshuru and Irumu; Virunga National Park</li> <li>• Border area between D.R. Congo, Rwanda, Uganda</li> <li>• Ethiopian highlands</li> <li>• Rwanda: Nyungwe National Forest, Gishwati Forest</li> <li>• Sudan: Nile Basin south of Khartoum, Atbara River, Blue Nile</li> <li>• Tanzania: Several divisions in Mwanza region; some districts in Kagera region</li> <li>• Uganda: Mt. Elgon and Rwenzori areas; SW highlands</li> </ul>	Severe

<sup>1</sup> Specific locations are indicated on the country maps attached to this report

ISSUE	SYMPTOMS/ IMPACTS	IMMEDIATE CAUSES	ROOT CAUSES	EXTENT <sup>1</sup>	SEVERITY
<b>B. Soil Erosion</b>	<ul style="list-style-type: none"> <li>Loss of top soil and reduction of soil fertility leading to decrease in agricultural production and food security</li> <li>Reduction of vegetative cover and loss of habitats and biodiversity</li> <li>Water quality degradation from high sediment loads, siltation of shallow lakes, wetlands, reservoirs, and low lying lands downstream</li> <li>Degradation of river beds and river bank erosion; desertification and wind erosion (northern arid regions); sheet and rill erosion and gully formation (after heavy rainfall) in highlands</li> <li>Landslides and flooding leading to destruction of infrastructure (houses, means of communication, communal facilities)</li> </ul>	<ul style="list-style-type: none"> <li>Massive continued loss of vegetative cover due to deforestation and loss of other land cover, deterioration of catchment buffer zones</li> <li>Inappropriate agricultural practices leading to decreased soil quality and erosion, such as use of marginal lands, overgrazing and free grazing</li> <li>Lack of soil and water conservation measures and/or abandonment and poor maintenance of anti-erosion works</li> <li>Bush fires and slash and burn practices</li> </ul>	<ul style="list-style-type: none"> <li>Population pressure and poverty leading to unsustainable land use practices</li> <li>Topography (uneven relief, high stream flow velocities) and rainfall patterns (floods, droughts, climate variability)</li> <li>Lack of land use policies and improper land use management; weak extension service on soil conservation and lack of incentives for conservation often connected with prevalent land tenure system</li> <li>High livestock density</li> <li>Lack of awareness of land-water interaction</li> <li>Lack of EIAs or systematic implementation of EIA for infrastructure projects due to lack of financial and human resources</li> </ul>	<p>Regional</p> <p>Critical areas:</p> <ul style="list-style-type: none"> <li>Burundi: Ruvubu River region, steep slopes/hillsides</li> <li>D.R. Congo: Lubero; near Kasenyi (south shore of Lake Albert)</li> <li>Egypt: River bank/river bed erosion north of Aswan dam</li> <li>Ethiopia: Blue Nile and Tekeze area, Baro and Akobo region</li> <li>Kenya: Trans-Nzoia district; Uasin Gishu district; Kakamega/Vihiga districts; Kisii and Migori districts; lakeshore</li> <li>Rwanda: Runyinya, Murama, Bulinga, Nyamutera, Kibali</li> <li>Sudan: Sobat region; along Blue Nile; Atbara region; wind erosion along main Nile (Nile State and Northern State)</li> <li>Tanzania: Steep hills in Mwanza, Mara, and Kagera region; lakeshores</li> <li>Uganda: Mt. Elgon and Rwenzori and SW mountain areas</li> </ul>	Severe
<b>C. River Bank and Lakeshore Degradation</b>	<ul style="list-style-type: none"> <li>Destruction of vegetative cover especially in riparian and lakeshore buffer zones</li> <li>Erosion, landslides, and downstream sedimentation leading to change in river course</li> <li>Adverse effects on riverine aquatic life and lake ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>Poor land use and agricultural practices such as dry season cultivation near banks and destruction of vegetative cover to increase arable land area; high animal density</li> <li>Drop in water levels and drying up of waterways</li> <li>Increased urban development and construction and industrial activities near river banks; poorly planned tourism centers</li> </ul>	<ul style="list-style-type: none"> <li>Lack of or insufficient national land use plans, laws and regulations, and/or enforcement of existing laws</li> <li>Population pressure and rapid growth of urban centers</li> <li>Expansion of farm lands and inadequate agricultural practices near river banks and shores, including overgrazing</li> <li>Land subsistence; relief and morphological structure of soil</li> <li>Climatic variability and conditions; seasonal floods and intermittent increase of lake levels</li> </ul>	<p>Mostly sub-regional</p> <p>Critical areas:</p> <ul style="list-style-type: none"> <li>Burundi: Lake Cohoha</li> <li>Ethiopia and Sudan: Atbara and Sobat, Blue Nile and tributaries; main Nile (Sudan)</li> <li>Egypt: Nile below Lake Nasser</li> <li>Rwanda: Nyabarongo River</li> <li>Tanzania: estuaries of rivers into Lake</li> <li>Uganda: Severe in seasonal wetlands near shore of Lake Kyoga</li> </ul>	Moderate to severe



ISSUE	SYMPTOMS/ IMPACTS	IMMEDIATE CAUSES	ROOT CAUSES	EXTENT <sup>1</sup>	SEVERITY
D. Mining Impacts	<ul style="list-style-type: none"> <li>Water and air pollution</li> <li>Soil degradation and erosion of sites and adjacent river banks; deforestation and landslides leading to river siltation</li> <li>Adverse impact on flora and fauna</li> </ul>	<ul style="list-style-type: none"> <li>Use of toxic chemicals and lack of containment and treatment facilities (esp. mercury use in gold mining)</li> <li>Lack of or inadequate site rehabilitation</li> <li>Inadequate mining practices</li> <li>High demand for construction materials and indiscriminate clearing vegetation</li> </ul>	<ul style="list-style-type: none"> <li>Inadequate policy guidance, lack of or insufficient safeguards (EIA, anti-pollution/ environmental legislation) and enforcement</li> <li>No regulation/ enforcement of private mining entrepreneurs</li> <li>Lack of (government) planning and oversight</li> </ul>	<p>Localized- Mining operations in the Basin include gold, coal, copper, diamond, iron ore, phosphate, manganese, tin, wolfram and zinc mines</p> <p>Critical areas mainly:</p> <ul style="list-style-type: none"> <li>Burundi: Kibira</li> <li>D.R. Congo: Irumu, Mahagi, and Aru regions</li> <li>Rwanda: Biseseo, Rutsiro, Gatumba, Rutongo, Nyakabingo, Nemba, Rwinkwavu, Musha</li> <li>Tanzania: Mara, Mwanza, parts of Shinyanga, and Kagera regions</li> <li>Sudan: Gissan and Kurmuk on Blue Nile and in northern Sudan; north of town of Atbara</li> <li>Uganda: Lake George area (past copper and current cobalt processing)</li> </ul>	<p>Overall low</p> <p>Severe in certain locations</p>

## 2. Water Quality Degradation

A. Pollution (point and non-point source)	<ul style="list-style-type: none"> <li>Degradation of water quality, rendering water unsuitable for domestic, agricultural, industrial and other uses</li> <li>Adverse impacts on water-dependent flora and fauna; loss of habitats and biodiversity; nutrient discharges leading to increased eutrophication</li> <li>Pollution of lakes and tributaries, resulting in contamination of drinking water</li> <li>Lack of adequate liquid and solid waste disposal systems and accumulation of refuse</li> <li>Decrease in environmental quality, disappearance of natural habitats and proliferation of water hyacinth</li> </ul>	<ul style="list-style-type: none"> <li>Discharge and run-off of untreated water from urban and industrial sources containing dissolved nutrients, industrial pollutants, agricultural chemicals/fertilizers; lack of recycling of waste matter; uncontrolled dumping of waste</li> <li>Non-point source pollution from agriculture due to improper and high application rates of agro-chemicals</li> <li>Degradation of vegetative cover especially riparian buffer zones and wetlands in Basin which could act as filters</li> </ul>	<ul style="list-style-type: none"> <li>Weak policies, laws and regulations for environmental protection (e.g. EIA); insufficient enforcement and monitoring especially in respect to industrial facilities; low budgetary provision for enforcement of existing regulations; lack of sufficient human resources</li> <li><i>Point Sources:</i> Inadequate funding of investments; high capital costs; high operation and maintenance costs; inadequate containment and treatment of wastes and lack of sanitary facilities</li> <li><i>Non-point sources:</i> Unsustainable land use practices in combination with lack of security of land tenure</li> <li>Inadequate zoning regulations and/or enforcement; inadequate environmental and land use planning</li> <li>Low environmental awareness and sense of value of environmental protection</li> </ul>	<p>Basin-wide –</p> <p>Critical areas:</p> <ul style="list-style-type: none"> <li>Point source pollution: localized around urban centers, such as Kampala, Khartoum, Cairo and other urban centers in Egypt</li> <li>Non-point sources: regional problem mostly from agricultural sources. Hotspots include large irrigation schemes in Sudan and Egypt, and nutrient pollution from agricultural areas around Lake Victoria and its tributaries</li> </ul>	Moderate
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ISSUE	SYMPTOMS/ IMPACTS	IMMEDIATE CAUSES	ROOT CAUSES	EXTENT <sup>1</sup>	SEVERITY
<b>B. Sanitation Concerns – Water borne Diseases and Environmental Health</b>	<ul style="list-style-type: none"> <li>• Pollution of drinking water sources (ground and surface water) and high dissolved nutrient loads resulting in increasing eutrophication and spread of infectious diseases (diarrhea, malaria, bilharzia, dysentery, intestinal worms)</li> <li>• Risks to public health due to poor sanitation conditions, especially during rainy season and floods</li> <li>• Increased absence from work due to sickness; increase in malnutrition and death rates especially among vulnerable groups such as small children, the displaced and the elderly</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of water supply systems and/or other reliable drinking water source; drinking water contamination with fecal matter leading to spread of pathogens</li> <li>• Lack of or insufficient sewerage or alternative sanitation systems; leaks and insufficient maintenance of existing facilities; lack of urban stormwater sewers and solid waste disposal facilities</li> <li>• Insufficient sanitation and hygiene training in conjunction with widespread poor sanitary conditions</li> <li>• Increased breeding ground for mosquitoes in water weed infested areas and irrigation canals</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of environmental regulations and laws, monitoring and enforcement and general waste management strategies</li> <li>• Rapid growth of urban centers and lack of financial resource base to build needed water supply and sanitation infrastructure, combined with lack of planning for urban expansion and required infrastructure</li> <li>• High capital costs for investments; high operation and maintenance costs</li> <li>• Previous low priority given to sanitation by government and agencies; lack of awareness of connection between sanitation and safe drinking water; need for better hygiene education</li> <li>• Poverty and poor health condition of large parts of the population</li> </ul>	<p>Basin-wide – localized</p> <p>Critical areas:</p> <ul style="list-style-type: none"> <li>• All large urban centers, such as Kampala, Khartoum, Cairo and urban centers in Nile delta</li> <li>• Rural villages (local threats)</li> </ul>	Severe
<b>C. Eutrophication</b>	<ul style="list-style-type: none"> <li>• Algal blooms and increasing invasion by water weeds</li> <li>• Decreased water quality</li> <li>• Change/reduction in fish stock</li> </ul>	<ul style="list-style-type: none"> <li>• Discharge of nutrients from domestic and industrial waste water-sources and agricultural run-off</li> <li>• Degradation of catchment area especially wetlands</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate environmental provisions in planning of industrial and urban centers</li> <li>• Land degradation</li> <li>• Over-use of agro-chemicals</li> <li>• Poor land use and farming practices</li> </ul>	<p>Regional, sub-basin</p> <p>Critical areas:</p> <ul style="list-style-type: none"> <li>• Lake Victoria region, including Kagera basin (lakes and river),</li> <li>• Urban areas in delta area in Egypt</li> </ul>	Moderate
<b>D. Water Weed Infestation</b>	<ul style="list-style-type: none"> <li>• Continuing spread of weeds and infestation of lakes and rivers, eutrophication</li> <li>• Interference with ecology and economy, e.g. mats on water surface impair navigation and fishing activities and lead to decrease in fish yields as well as to eutrophication</li> <li>• Decrease in diversity of certain fish species</li> <li>• Increase in occurrence of water borne diseases; increased water evaporation</li> </ul>	<ul style="list-style-type: none"> <li>• High dissolved nutrient levels from pollutant discharge from industrial and domestic sources and agricultural run-off due to poor land use practices and lack of water treatment</li> <li>• Inadequate response mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of hyacinth; insufficient preventive measures against introduction of foreign species in general</li> <li>• Lack of capacity in water resources and environment departments in some countries resulting in insufficient enforcement of environmental regulations</li> <li>• Delay in mobilizing funds and creating national/regional programs to combat infestation</li> </ul>	<p>Regional</p> <p>Critical areas:</p> <ul style="list-style-type: none"> <li>• Burundi: Ruvubu River, Lake Cyohoha and Rwihinda</li> <li>• D.R. Congo: Lake Albert (severe), Lake Edward (moderate)</li> <li>• Kenya: Winam Gulf (Lake Victoria)</li> <li>• Rwanda/Tanzania/ Burundi: Kagera river</li> <li>• Rwanda: Lake Cyohoha, Lake Rwero, Nyabarongo River, entire stretch of Kagera</li> <li>• Sudan: White Nile south of Jebel Aulia dam</li> <li>• Tanzania: Southern shore of Lake Victoria, especially in bays of Mara and Mwanza regions</li> <li>• Uganda: Lake Victoria, Lake Kyoga and Victoria Nile</li> </ul>	Severe in certain areas

ISSUE	SYMPTOMS/ IMPACTS	IMMEDIATE CAUSES	ROOT CAUSES	EXTENT <sup>1</sup>	SEVERITY
E. Siltation	<ul style="list-style-type: none"> <li>Decreased life span of dams and reservoirs as well as siltation of flooded fields, plains and irrigation canals; additional threat often associated with toxic pollutants adsorbed in silt particles</li> <li>Siltation leading to decrease of wetlands and reduction of beneficial functions and uses</li> <li>Heavy silt loads in water bodies; sedimentation leading to formation of sand bars, changes in river course and river bank erosion</li> </ul>	<ul style="list-style-type: none"> <li>Climatic conditions and topographic features upstream (heavy rains and steep slopes) as well as land practices resulting in catchment degradation and soil erosion (such as encroachment for agricultural purposes)</li> </ul>	<ul style="list-style-type: none"> <li>Inappropriate land management practices and lack of soil conservation practices often perpetuated by specific land tenure systems; deterioration in catchment through deforestation (see above)</li> <li>Lack of stringent enforcement of environmental regulations and policies</li> <li>Lack of awareness of link between land based activities and water pollution</li> </ul>	<p>Basin-wide – localized</p> <p>Critical areas:</p> <ul style="list-style-type: none"> <li>Burundi: Shallow lakes in the NE</li> <li>Egypt: Aswan Dam reservoir</li> <li>Ethiopia: Finchaa, Tekeze</li> <li>Kenya: Lower reaches of Yara, Nzoia, Kuja, Sondu-Miriu, Nyando</li> <li>Sudan: Roseires, Sennar, Khasm el Girba reservoirs; Gezira, Rahad and new Halfa irrigation schemes; main Nile</li> <li>Tanzania: Mara River, Simiyu River, Shinyanga and Mwanza regions</li> <li>Uganda: Nile River system especially Kioga</li> </ul>	Moderate to severe (depending on location)
<b>3. Disaster Preparedness and Remediation</b>					
A. Floods and Droughts	<p><i>Floods -</i></p> <ul style="list-style-type: none"> <li>Direct impacts include loss of life and property (crops/ livestock and arable land, housing, infrastructure); other results are food insecurity (availability and increased prices), loss to economy and environmental impacts</li> </ul> <p><i>Droughts -</i></p> <ul style="list-style-type: none"> <li>Direct impacts are food insecurity, famine and human migration; long-term impacts include change in water availability (e.g. permanently dried springs, perennial rivers becoming seasonal)</li> </ul> <p><i>Floods/droughts -</i></p> <ul style="list-style-type: none"> <li>Dislocation of people and problems associated with high number of disaster victims such as food insecurity and high incidence of waterborne diseases</li> </ul>	<p><i>Floods -</i></p> <ul style="list-style-type: none"> <li>Heavy rainfalls in conjunction with specific natural terrain features, increased by certain land use practices; lack of planning of urban settlements to prevent settlement in flood prone areas, aggravated by population pressure and lack of land ownership</li> </ul> <p><i>Droughts -</i></p> <ul style="list-style-type: none"> <li>Long/prolonged dry season resulting in water shortage, aggravated by improper management of land and water resources (e.g. deforestation, overgrazing) leading to decrease in vegetative cover, water retention capacity, and groundwater recharge; and increased desertification</li> </ul> <p><i>Floods/droughts -</i></p> <ul style="list-style-type: none"> <li>Poorly equipped meteorological services and lack of efficient and reliable early warning systems contributing to lack of disaster preparedness</li> </ul>	<p><i>Floods -</i></p> <ul style="list-style-type: none"> <li>Irregular and large seasonal and year to year variability in rainfall patterns increased by climatic changes; mismanagement of land and water resources leading to soil erosion and increased run-off</li> </ul> <p><i>Droughts -</i></p> <ul style="list-style-type: none"> <li>Climatic zone/ geography; effects from El Niño</li> </ul>	<p>Regional</p> <p>Most critical areas:</p> <p><i>Floods -</i></p> <ul style="list-style-type: none"> <li>Blue Nile and Atbara from Ethiopian highlands to Lake Nasser</li> <li>Flash floods in wadis in dry areas (e.g. between Aswan and Cairo)</li> <li>Floods from recent rise in Lake Victoria lake levels</li> <li>Gambella plain in Ethiopia, lower river reaches in Kenya (Nzoia and Nyando River)</li> </ul> <p><i>Droughts -</i></p> <ul style="list-style-type: none"> <li>Severe drought prone areas north of 8<sup>th</sup> parallel</li> <li>-Localized droughts in all Nile countries</li> </ul>	Severe

ISSUE	SYMPTOMS/ IMPACTS	IMMEDIATE CAUSES	ROOT CAUSES	EXTENT <sup>1</sup>	SEVERITY
<b>B. Refugees and Displaced People</b>	<ul style="list-style-type: none"> <li>• Pressure on and destruction of surrounding ecosystems, for fuel or agriculture; threat to wildlife habitats and pressure on drinking water resources</li> <li>• Spread of disease in camps, especially waterborne, contributing to poor health, malnutrition and death</li> <li>• Migration of large numbers of people to refugee camps and establishment of new, unplanned settlements leading to conflict with existing population</li> </ul>	<ul style="list-style-type: none"> <li>• Sudden, large-scale refugee influxes overwhelming local capacity to provide protect, shelter and food</li> <li>• Inadequate basic subsistence resources such as fuelwood and water; inadequate waste containment and treatment facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Political instability, armed conflicts, governance problems and social unrest</li> <li>• Natural catastrophes such as famine</li> </ul>	<p>Localized</p> <p>Main areas of current settlements of refugees and displaced people:</p> <ul style="list-style-type: none"> <li>• Burundi: Rivubu River region</li> <li>• Ethiopia: Sudan /Ethiopia cross-border area near Dinder (=Alatish valley), Gambella region, Ben-Shangul-Gumuz region, Baro/Akobo area, Dobus swamp area, SW part of country</li> <li>• Rwanda: south of country near Burundi border</li> <li>• Sudan/Uganda border area and Sudan/ Uganda/D.R. Congo area</li> <li>• Sudan: Refugees in eastern Sudan, Kassala and Gedarif States; displaced people along selected areas of Nile</li> <li>• Tanzania: SW lakeshores, Muleba Ngara and Karagwe districts of Kagera region</li> </ul>	Moderate overall
<b>C. Uncertain Impacts of Climate Change</b>	<ul style="list-style-type: none"> <li>• Increase in severe floods and droughts</li> <li>• Potential negative impacts may include:</li> </ul> <p><i>Ecosystems:</i> Changes in species distribution and composition; changes in migration patterns; wildlife habitat deterioration</p> <p><i>Food security, agriculture and land-use:</i> Decreasing food security; land degradation e.g. through landslides and change in forest and rangeland cover; desertification</p> <p><i>Water resources:</i> Change in local water availability; deteriorating water quality</p> <p><i>Health and settlements:</i> Increase in waterborne diseases; possible increase in urbanization</p> <p><i>Economy:</i> Vulnerability of mostly agrarian based economies in SSA to climate change related impacts</p>	<ul style="list-style-type: none"> <li>• Climatic changes temperature, precipitation and wet and dry cycles</li> <li>• Changes in weather and rainfall patterns</li> <li>• Impacts and vulnerability due to floods and droughts</li> <li>• Population pressure on limited resources</li> </ul>	<ul style="list-style-type: none"> <li>• Global phenomenon related to anthropogenic activities leading to increased emission of green house gases</li> </ul>	Basin-wide	Low to moderate

ISSUE	SYMPTOMS/ IMPACTS	IMMEDIATE CAUSES	ROOT CAUSES	EXTENT <sup>1</sup>	SEVERITY
D. Navigation Risks, Aids, and Mapping (oil spills, boat discharges)	<ul style="list-style-type: none"> <li>Routine accidents (collisions, groundings, wreckage) and associated pollution risks/ pollution</li> <li>Navigation risks</li> </ul> <p><i>Oil discharge:</i></p> <ul style="list-style-type: none"> <li>Contamination of surface and groundwater, river banks and lake-shores</li> <li>Adverse impact on natural habitats and biodiversity and species loss</li> </ul>	<ul style="list-style-type: none"> <li>Poorly separated traffic and inaccurate navigation charts</li> <li>Limited navigational devices and aids and lack of technology</li> <li>Old and poorly constructed ships and additional overloading as well as non-qualified boat owners</li> </ul> <p><i>Oil discharge:</i></p> <ul style="list-style-type: none"> <li>Discharge from tankers (cleaning of tanks) and bilge and ballast water as well as increasing incidences of oil spills through accidents of tankers (ships)</li> <li>Discharge of petroleum products from industrial sectors and leaking storage tanks</li> </ul>	<ul style="list-style-type: none"> <li>Complex navigational hazards (e.g. hidden channels) combined with lack of mapping and insufficient maintenance of waterways (e.g. no regular dredging)</li> <li>No emergency response system; lack of government control</li> </ul> <p><i>Oil discharge:</i></p> <ul style="list-style-type: none"> <li>Lack of technology for preventive and remediation measures; high cost of water treatment; lack of reception and treatment facilities at ports</li> <li>Industrialization of coasts and river banks combined with lack of EIA and inadequate control and enforcement of environmental regulations</li> <li>Lack of oil spill emergency plans and measures</li> </ul>	<p>Subregional</p> <p>Critical incidents reported from Lake Victoria and Egyptian river traffic; generally relevant in large lakes, rivers and their ports</p>	Low overall
<b>4. Loss of Biodiversity, Habitat and Wetlands</b>					
A. Loss and Destruction of Valuable Species, Special Ecosystem, and Habitats	<p><i>Species loss and decline of ecosystems and unique habitats -</i></p> <ul style="list-style-type: none"> <li>Disappearance of unique animal and plant species, especially endemic ones; decline of species diversity</li> <li>Decrease in numbers of large mammals with negative impact on tourism and associated decrease in revenue</li> <li>Decrease in forest cover constituting decrease in food, fuel, timber and shelter</li> </ul> <p><i>Loss of agrodiversity-</i></p> <ul style="list-style-type: none"> <li>Loss of genetic base (cattle breeds, crops, vegetables/ fruits); loss of benefits from local variety qualities (tolerance, productivity, resilience); dependency on exotic seeds and breeds/ imported varieties</li> </ul>	<p><i>Species loss and decline of ecosystems and unique habitats -</i></p> <ul style="list-style-type: none"> <li>Poaching and illegal trade in valuable species as well as intensive and unsustainable resource use and land management, such as deforestation, wetlands conversion, expansion of agriculture (crops and livestock farming, overfishing, uncontrolled burning and forest fires)</li> <li>Lack of alternative income sources especially in areas of resettlement</li> </ul> <p><i>Loss of agrodiversity -</i></p> <ul style="list-style-type: none"> <li>Expansion of hybrid/ high yielding crop and livestock varieties leading to decrease of genetic diversity of domestic species</li> <li>Introduction of exotic species (not only restricted to agricultural species)</li> </ul>	<ul style="list-style-type: none"> <li>Population pressure and poverty combined with high reliance on primary natural resources and income from agriculture</li> <li>Low financial and staff capacity in management of protected areas and associated lack of control and monitoring; poor enforcement of laws protecting gazetted forests and game sanctuaries; lack of financial resources for development and implementation of effective and relevant programs</li> <li>Weak agricultural extension services</li> <li>Lack of awareness of biodiversity concerns and benefits from conservation</li> <li>Lack of regulations to prevent introduction of exotic species</li> <li>Inadequate and unregulated land use practices; insufficient integrated programs for people living in protected areas</li> </ul>	<p>Basin-wide</p> <p>Areas are related to specific issues of species loss*:</p> <ul style="list-style-type: none"> <li><i>Species and ecosystems/ unique habitat loss</i> <ul style="list-style-type: none"> <li>Wetlands</li> <li>Forest areas</li> <li>Specific protected Areas</li> </ul> </li> <li><i>Agrodiversity</i> <ul style="list-style-type: none"> <li>Intense primary agricultural areas</li> </ul> </li> </ul> <p><i>* For specific locations please refer to maps attached to this report</i></p>	Severe

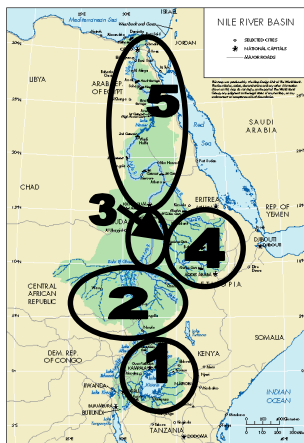
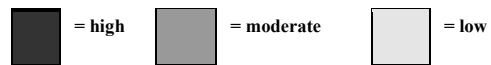
ISSUE	SYMPTOMS/ IMPACTS	IMMEDIATE CAUSES	ROOT CAUSES	EXTENT <sup>1</sup>	SEVERITY
<p style="text-align: center;"><b>B. Wetland Degradation</b></p>	<ul style="list-style-type: none"> <li>• Decrease and degradation of wetland areas (reclamation, siltation, flood damage; water weed infestation)</li> <li>• Decreased benefits from functioning wetlands, e.g. less groundwater recharge, decreased buffering of floods, loss of filter function to absorb and degrade pollutants and associated decrease in water quality; decreasing ability to act as sediment trap; destruction of habitats and loss of biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>• Reclamation of wetlands to expand agricultural production</li> <li>• Deforestation, erosion and sedimentation</li> <li>• Overuse of natural resources (overfishing/ hunting/ overgrazing, farming practices)</li> <li>• Pollution from industrial, agricultural and domestic sources</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of wetland protection and management regulations and measures and/or lack of implementation</li> <li>• Poverty and population pressure; shortage of land; inadequate land use policies</li> <li>• Lack of awareness of wetlands function and value; cultural habits</li> </ul>	<p>Basin-wide – Important and/or degraded wetlands:</p> <ul style="list-style-type: none"> <li>• Burundi: Ruvubu, Kanyaru valley and around Lake Rwihinda, Nyamuswaga wetland</li> <li>• D.R. Congo: SW lakeshore of Lake Edward</li> <li>• Egypt: Lake Nasser area, Nile delta (shores of Lake Mariut, Burullus and Manzala); Qarun and Rayan</li> <li>• Ethiopia: Gambella flood plain (Baro and Akobo River), Lake Tana, Finchaa area, Dobus Swamp/Alatish River</li> <li>• Kenya: Winam Gulf/ Kisumu, estuary of Nzoia River, Yara swamp</li> <li>• Rwanda: Upstream of Risumu Falls, lakes south of Kagera National Park (Lakes Rwehikama, Ihema, Hago, and Rwanyakizinga), Lake Cyohoha and entire Lake Bugesera area, Lake Rweru, Lake Mugesera</li> <li>• Sudan: Sudd, Machar Marshes, Dinder wetlands</li> <li>• Tanzania: Simiyu river, Lake Victoria shores, banks of Kagera River/swamps</li> <li>• Uganda: shores of Lake Victoria, Kyoga, Lakes Edward, George and Albert</li> </ul>	<p>Severe in most countries</p>

## ANNEX J COMMON CONCERNS BY SUB-REGION

COMMON CONCERNS	EQUATORIAL LAKES	LOWER ALTITUDE WATERSHED	WHITE NILE (MALAKAL TO KHARTOUM)	EASTERN HIGHLAND	LOWER NILE (KHARTOUM TO MED.)	BASIN-WIDE
<b>1. Land Degradation</b>						
A. Deforestation						
B. Soil erosion						
C. River bank and lakeshore degradation						
D. Mining impacts						
<b>2. Water Quality Degradation</b>						
A. Pollution (point and non-point source)						
B. Sanitation concerns (rural and urban sanitation)						
C. Eutrophication						
D. Water weed infestation						
E. Siltation						
<b>3. Disaster Preparedness and Remediation</b>						
A. Floods and droughts						
B. Refugee problems						
C. Uncertain impacts of climate change						
D. Navigation risks, aids, and mapping						
<b>4. Loss of Biodiversity, Habitat and Wetlands</b>						
A. Biodiversity – loss and destruction of valuable species and habitats						
B. Wetland degradation						

**NOTE: Key for table:**

Sub-regional severity of threats identified in basin-wide Transboundary Analysis is



- 1 *Equatorial Lakes*
- 2 *Lower Altitude Watershed*
- 3 *White Nile (Malakal to Khartoum)*
- 4 *Eastern Highlands*
- 5 *Lower Nile (Khartoum to Mediterranean)*