

Annex I

DETAILED LIST OF ACTIVITIES

Component	Activity	Detailed Activities
1. Build capacity and create a regional institutional framework for the effective management of the Volta Basin	1.1. Establish the Project Management and coordination mechanism.	Establish and empower the Project Steering Committee, including nomination/ installation of the National Focal Points
		Establish the Inter-ministerial Coordination Committee in each country
		Develop a concept to achieve sustainability of the proposed Regional Coordination Unit, in particular the development of a funding mechanism beyond project termination.
	1.2. Determine and satisfy training needs in the region (for integrated land and water resources management)	Conduct survey on training needs and educational programs in region for management of the Volta Basin Environment
		Develop training courses for three priority training needs, in local languages
		Conduct one training session in each of the countries on each of the three priority training areas, using a train-the-trainers approach.
	1.3. Identify, strengthen and involve stakeholders	Prepare and implement a public participation and awareness plan for the project
		Involve stakeholders, including NGOs and natural resource users, by communicating the results of monitoring and alternative strategies for resource use through a regional information centre, newsletters, web-based informational packages, etc.
		Integrate private sector into activities of this project, as appropriate, as sub-contractor, consultant, or co-sponsor of specific activities
	1.4. Establish a river basin management framework	Prepare a draft framework document for the Volta Basin Commission/Authority
		Obtain national endorsements for the Commission/Authority and generate national (baseline) budgets for the Commission/Authority
	1.5 Develop databases and environmental monitoring systems	Establish and develop and national/regional land-based activities data and information management system (including GIS) as a tool for contaminant assessment and management

Component	Activity	Detailed Activities
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Component	Activity	Detailed Activities
2. Develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas	2.1 Develop quantitative understanding of present ecological situation and develop/agree on regional basis for actions (TDA)	Fill gaps in knowledge of priority transboundary concerns, including geographically specific data and hotspots
		Complete regional assessment of priority land-based activities, sources of contaminants, and pollutant levels in water and sediments
		Finalize the TDA
	2.2. Assist countries in developing National Action Plans (NAP) that address priority transboundary concerns	Prepare a regional biodiversity strategy document, including a gap analysis, and obtain endorsement by riparian states
		Prepare and approve six National Action Plans
	2.3. Create management plans for addressing priority transboundary concerns in identified hotspots and finalize and endorse SAP	Develop regional basin water management plan of action to be coordinated by the proposed Volta Basin Authority/Commission
		Identify hotspots using the African Process
		Develop management plans for addressing priority transboundary concerns with a focus on water scarcity and coastal erosion
		Update and obtain country endorsements of the SAP
		Identify concrete investments
	2.4. Develop basin-wide agreements for sharing water resources and for control of river flow regimes.	Review and strengthen existing river system agreements existing within the region; recommend changes where appropriate
		Agree regionally on appropriate mechanisms for the extraction of river water and control of river flow regimes
	2.5. Legal and institutional review of and harmonization of national water conservation and management and land tenure laws	Identify gaps in legal regimes and strengthen legal basis for protection of the coastline
		Identify gaps in legal regimes and strengthen legal basis for water conservation
		Perform investigation of the policy, legal, and cultural basis for land tenure policies in the Volta River Basin and recommend environmentally sustainable land tenure systems in the region

Component	Activity	Detailed Activities
		Review, harmonize, and strengthen relevant local, national, regional, and international legislation and conventions relevant to the conservation and management of wetlands, through support of regional institutions such as the Centre for African Wetlands
	2.6 Develop and ratify a convention/protocol for the rational management of the Volta Basin by the proposed Volta Basin Commission/Authority	Develop and ratify convention/protocol for the rational management of the Volta basin by the proposed Volta Basin Commission/Authority
	2.7 Enhance and develop legal basis and policy framework to sustainably manage the Volta Basin	Review of policy, legal, and regulatory frameworks, and institutional structure for addressing land-based activities
3. Initiate national and regional measures to combat transboundary environmental degradation in the Volta Basin	3.1 Develop guidelines for the management of land and water based on an effective regional EIA	Draft Regional EIA process review
		Adopt regional EIA
	3.2. Develop and implement 3 replicable demonstration projects	During a regional workshop, develop criteria and guidelines so as to identify priority demonstration projects (three) for addressing land and water degradation
		Select three replicable demonstration projects addressing water conservation, sewage treatment, and coastal erosion or wetlands protection. Hotspots and sensitive areas should be identified through the African Process.
		Integrate the private sector into activities of this project, as appropriate, as sub-contractor, consultant, or co-sponsor of specific activities
		Implement, monitor and report on demonstration projects
		Prepare concepts for six national demonstration projects for a support of co-financing partners.
	3.3. Agree on performance indicators for the Volta Basin management project through a broad stakeholder process and a process to monitor those indicators	Conduct a workshop to agree on performance indicators
		Use the performance indicators to assess the effectiveness of the Project in achieving EQOs

Component	Activity	Detailed Activities
	3.4. Coordinate and collaborate with other Sahel basin projects, with the GCLME and with other complementary projects in the region.	Develop and establish a mechanism to cooperate with other IAs and EAs of the Sahel basin projects, the GCLME and complementary projects to enhance links, complementarities and vital cooperation with all relevant GEF projects in the region and jointly cooperate to strengthen participation in IWLEARN.
		Cooperate with the other GEF IAs to organize one regional meeting to further coordination and information exchange between and among the other GEF projects in the region

ANNEX II: LOGFRAME MATRIX

Intervention Logic	OBJECTIVELY VERIFIABLE INDICATORS	Sources of Verification	Assumptions and Risks
<p>Long-term Objectives Enhance the ability of the riparian countries to plan and manage the Volta catchment areas within their territories and aquatic resources and ecosystems on a sustainable basis, by achieving sustainable capacity and regional institutional frameworks for effective management; developing national and regional priorities; and effective regulatory, legal and policy frameworks as a basis for action as well as initiating national and regional measures to achieve sustainable ecosystem management.</p> <p>Outcomes:</p> <ul style="list-style-type: none"> • Ensured sustainability of regional coordination mechanism. • Reduced water scarcity. • Prevented land and water degradation. • Conserved biological diversity. <p>Outputs:</p> <ul style="list-style-type: none"> • Regional coordination mechanism established and concept for sustainability of RCU developed. • Convention/protocol for the sustainable management of the Volta River Basin developed and endorsed. • System of stakeholders participation, training, education and monitoring programmes developed. • 6 countries incorporated transboundary environmental concerns into their own plans. 	<ul style="list-style-type: none"> • Sustainability of regional coordination mechanism ensured beyond project termination by year 4. • Regional water agreements in place by year 4 to achieve adequate freshwater and groundwater quantity by 2012. • Rate of land degradation is going to be reduced by 20% by 2012 and rate of coastal erosion is going to be reduced by 25% by 2012. • Regional biodiversity strategy document prepared by year 3. • Regional Coordination Unit set-up by end of year 1; • Effective national and regional frameworks in place by year 3. • Improved national and regional capacities for effective environmental management of land and water degradation by year 4. • National plans to be revised annually. 	<ul style="list-style-type: none"> • RCU documents • Policy and legislation documents and endorsed documents; results of EIA process; results of monitoring programmes. • Policy and legislation documents; results of EIA process; results of monitoring programmes. • Endorsed documents. • RCU and other project documents • Steering Committee (SC) annual reports • RCU documents and technical reports. • Working group reports. • Policy and legislation documents. 	<p>Project capacity to adequately develop and implement the needed national and regional coordination and communication frameworks</p> <p>Political will of riparian countries to continue to give priority to sustainable development and wise environmental management.</p> <p>Changes in economic, political and social conditions that may derail national commitments</p> <p>Extreme climatic events reducing or greatly increasing the availability of water</p>

<p>Project purpose Formulation of a Transboundary Diagnostic Analysis (TDA) and assist countries sharing the Volta basin to develop a regionally agreed Strategic Action Programme (SAP) for the integrated management of the Volta River Basin addressing the transboundary priorities with policy/legal/institutional reforms and investments</p>	<ul style="list-style-type: none"> • TDA available and accepted • Revised SAP available and endorsed at Ministerial levels. • Agreed set of environmental indicators (process, stress reduction, and environmental status) for monitoring • National Plans of Action for countries 	<ul style="list-style-type: none"> • TDA published and broadly disseminated • SAP endorsed by countries with national and donor commitment to funding SAP and Workplan elements • RCU and technical documents • National Action Plans, RCU and technical reports. 	<p>Riparian countries failing to participate fully and actively to ensure project success.</p> <p>GEF funds not adequately complemented by other donors and/or by country commitments</p> <p>The monitoring and evaluation program will provide technical information to assess the impact of to fine-tune future actions.</p>
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Component 1: Build capacity and create a regional institutional framework for the effective management of the Volta Basin	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<p>OUTPUTS</p> <ul style="list-style-type: none"> Sustainable framework for long-term management of the Volta Basin developed including TDA updated 	<ul style="list-style-type: none"> Updated TDA Country based and regional workshops RCU, SC, NFP and NIC created and project staff employed Effective project coordination and information exchange at all levels 	<ul style="list-style-type: none"> TDA published and broadly disseminated Executing Agency Records National Focal Points and National Implementation Committee reports 	<p>Riparian countries failing to participate fully and actively to ensure project success.</p> <p>GEF funds not adequately complemented by other donors and by country commitments</p> <p>Clear line of responsibility will ensure project implementation</p> <p>Willingness to commit physical space and other resources by host nation for RCU</p>
			<p>Willingness of national governments to provide space for NIC activities</p>
<ul style="list-style-type: none"> Convention/protocol for basin management developed 	<ul style="list-style-type: none"> Signed protocol for basin management 	<ul style="list-style-type: none"> Policy and legislation documents and endorsed documents 	<p>Political interference in the approved project will hamper success</p>

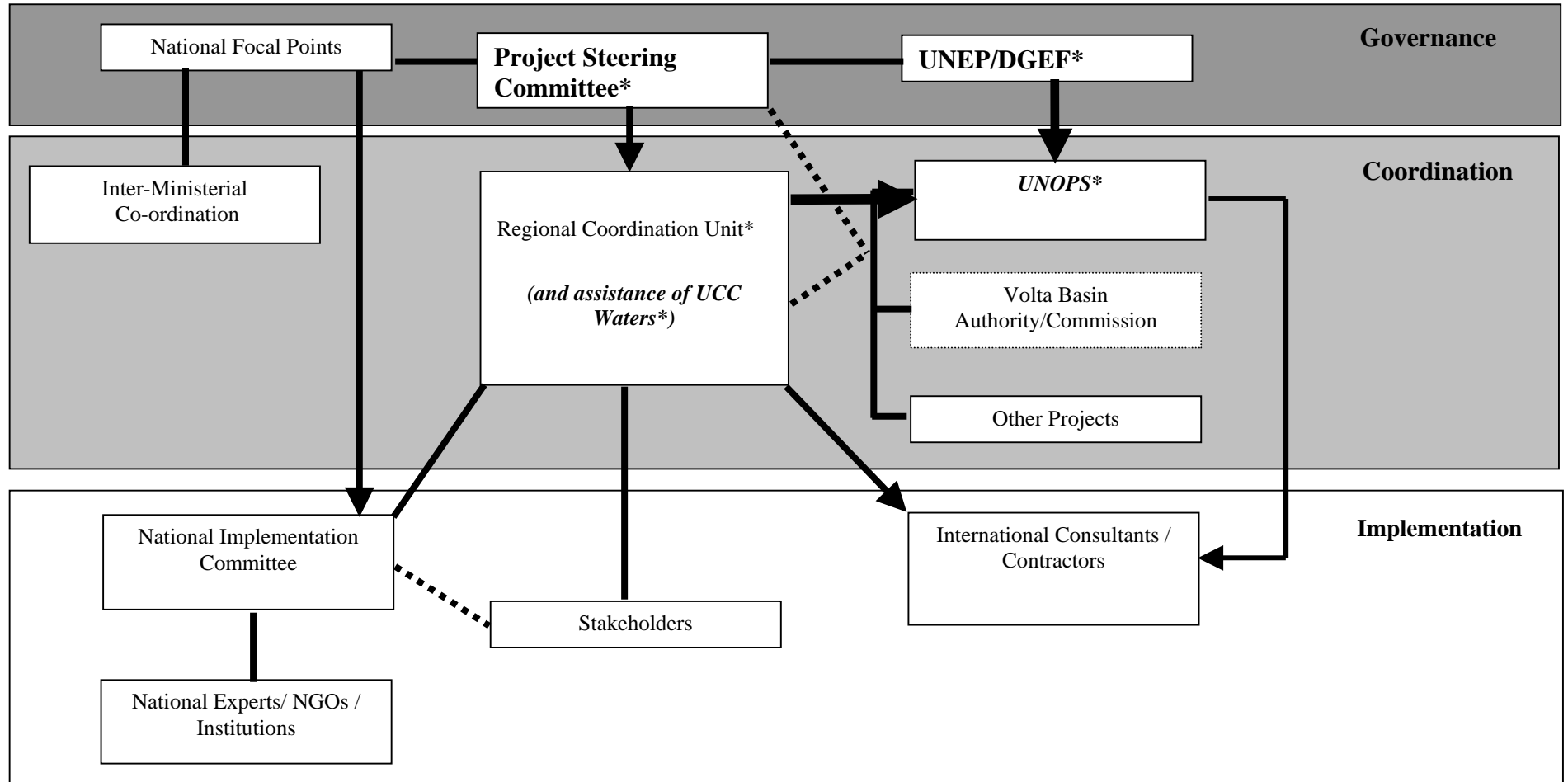
Component 1: Build capacity and create a regional institutional framework for the effective management of the Volta Basin	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<ul style="list-style-type: none"> Enhanced capacity for sustainable environmental management including education, training, institutions and monitoring developed 	<ul style="list-style-type: none"> Increased capacity for national and regional level participation Increased capacity to create national benefits through enhanced transboundary management strategies Development of replicable modules and other training materials relevant to the training of key stakeholders 	<ul style="list-style-type: none"> Country specific work plans National Focal Points and National Implementation Committee reports Course module documents, training materials and public awareness campaign reports 	<p>Countries see long term benefit to land/water degradation mitigation efforts</p> <p>Countries and key stakeholders not willing to participate fully in training and awareness campaigns</p>
	<ul style="list-style-type: none"> Awareness campaigns developed, organised and conducted by the project Increased knowledge and awareness by local stakeholders of land and water degradation issues Country-based and regional workshops 	<ul style="list-style-type: none"> Approved work plan and training schedule for each country Trained stakeholders Workshop reports from RCU 	<p>Project capacity to adequately develop and implement the needed national and regional coordination and communication frameworks</p>
<ul style="list-style-type: none"> Stakeholders fully involved and regional networks and data exchange mechanisms developed 	<ul style="list-style-type: none"> Country-based and regional workshops Increased participation and involvement by local stakeholders of land and water degradation issues Increased awareness among key stakeholders on the existing technologies and skills to mitigate land & water degradation. 	<ul style="list-style-type: none"> Existence of local stakeholder groups Existence of public awareness materials 	<p>Willingness of key stakeholders to participate in project activities</p> <p>Project capacity to adequately support the needed national and regional coordination and communication frameworks</p>

Component 2. Develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<p>OUTPUTS</p> <ul style="list-style-type: none"> Ratified convention/protocol on the Volta basin 	<ul style="list-style-type: none"> Country based and regional workshops Signed convention/protocol on the Volta Basin 	<ul style="list-style-type: none"> Workshop reports at RCU Signed document RCU and project documents 	<p>Political will of riparian countries to continue to give priority to sustainable development and wise environmental management.</p> <p>Participating countries will appreciate the advantages of reviewing existing policies and legislation to address land water degradation issues</p>
<ul style="list-style-type: none"> Management plans to restore and maintain the ecological integrity of sensitive habitats such as wetlands and strategies for basin-wide protected area network developed and finalized and endorsed SAP with concrete investments identified to address priority transboundary problems 	<ul style="list-style-type: none"> Country based and regional workshops Management plans prepared SAP endorsed by countries Identified sources of additional funding 	<ul style="list-style-type: none"> Management plans PCU and other project documents SAP endorsed by countries National and donor commitment to funding SAP and Workplan elements 	<p>Countries will have the ability to implement management plans and realise strategies</p> <p>Adequate funding for plans and strategies</p>
<ul style="list-style-type: none"> Basin-wide agreement to develop an appropriate mechanism for the extraction of river water and control of river flow 	<ul style="list-style-type: none"> Country-based and regional workshops Signed agreement on the a mechanism to control the flow of water and the extraction of river water in Volta Basin 	<ul style="list-style-type: none"> Workshop proceedings Signed document available at RCU and in countries 	<p>Riparian countries willingness discuss river water extraction and control of river flows</p> <p>Extreme climatic events reducing or greatly increasing the availability of water</p>

Component 3: Initiate national and regional measures to combat transboundary environmental degradation in the Volta Basin	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<p>OUTPUTS</p> <ul style="list-style-type: none"> Three Demonstration projects successfully implemented 	<ul style="list-style-type: none"> Utilisation of improved methods of land and water management at demonstration sites Improved productivity and efficiency at demonstration sites 	<ul style="list-style-type: none"> Site visits and project documents at RCU, including EA contractual materials Site visits and project documents at RCU, including EA contractual materials 	<p>Demonstration projects sites selected through criteria that maximises clear understanding of land water degradation problems</p> <p>Willingness of key stakeholders to participate in demonstration projects</p>
<ul style="list-style-type: none"> Regionally accepted performance indicators and process to monitor those indicators to assess progress towards EQOs in place 	<ul style="list-style-type: none"> Guidelines on environmental standards defined Existence of monitoring plans based on EQSs Improved availability of data at the national and basin level for environmental management planning Increased capacity at the national and regional level to conduct continuous monitoring of land and water degradation Country based and regional workshops 	<ul style="list-style-type: none"> Guideline documents with EQSs Monitoring programmes and installed laboratory equipment Field data reports Database existing at RCU and available elsewhere over the www. Rehabilitation and mitigation documents 	<p>Participating countries and stakeholders will appreciate the benefits of EQSs and EQOs</p> <p>Political will of riparian countries to continue to enforce EQOs</p>

Component 3: Initiate national and regional measures to combat transboundary environmental degradation in the Volta Basin	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<ul style="list-style-type: none"> • Coordination mechanism between IAs and EAs of the Sahel basin projects and other complementary projects functioning and sustainable collaboration set up 	<ul style="list-style-type: none"> • Needs analysis done • Coordination strategy developed • Involved parties held regular and ad-hoc dialogues • IWLEARN discussion foras held • Relevant workshops conducted 	<ul style="list-style-type: none"> • Needs analysis document • Strategic document • Inter-agency plan of complementarity • IWLEARN website • Workshop proceedings 	<p>IAs will further strengthen the Strategic Partnership; willingness of EAs to collaborate; willingness of countries to strengthen targeted regional cooperation; GEF effort continues to enhance multiple benefits in the region.</p>

ANNEX III: INSTITUTIONAL ARRANGEMENTS



**Coordination
Reporting**

*Tri-Partite Review Process

A line with no arrows indicate the relationship goes both directions

ANNEX IV – DETAILED BUDGET

		2006	2007	2008	2009	2010	Total
		US\$	US\$	US\$	US\$	US\$	US\$
Project Personnel							
1101	Regional Project Coordinator 48 (w/m)	100,000	150,000	150,000	150,000	100,000	650,000
1102	Scientific and Information Officer 48 (w/m)	60,000	100,000	100,000	100,000	60,000	420,000
1199	Total	160,000	250,000	250,000	250,000	160,000	1,070,000
Consultants							
1201	International Consultant - Component 1		6,000	6,000	10,000	-	22,000
1202	Local Consultants - Component 1		60,000	21,200	26,000	12,000	119,200
1203	International Consultant - Component 2	-	2,500	32,000	33,000	-	67,500
1204	Local Consultants - Component 2	-	26,400	57,000	48,000	2,000	133,400
1205	International Consultant - Component 3	-	18,000	6,000	-	-	24,000
1206	Local Consultants - Component 3	-	20,000	26,000	14,000	10,000	70,000
1299	Total	-	132,900	148,200	131,000	24,000	436,100
Administrative Support							
1301	Admin. Ass. 48 (w/m)	6,000	12,000	12,000	12,000	6,000	48,000
1302	Secretary Salary 48(w/m)	4,200	8,400	8,400	8,400	4,200	33,600
1303	Project Execution Costs -UNOPS	24,096	101,967	117,470	104,093	48,477	396,102
1399	Total	34,296	122,367	137,870	124,493	58,677	477,702

Official Travel							
1601	Act. 1.1.3 Travel by RCU	5,000	25,000	25,000	25,000	25,000	105,000
1602	Act. 1.1.3 Travel 2 UNOPS staff		4,000	4,000	4,000	4,000	16,000
1699	Total	5,000	29,000	29,000	29,000	29,000	121,000
Component Total		199,296	534,267	565,070	534,493	271,677	2,104,802
2201	Sub-contract with International organisation including UCC-Water	10,000	50,000	60,000	60,000	25,000	205,000
2202	Sub-contract with Cons.firm for Activity 1.1.3: Update/expand TDA and Create SAP (Int..Cons., Local Cons.)		50,000				50,000
2203	MOUs with governments - NPCs	6,000	20,000	20,000	20,000	15,000	81,000
2204	MOU with governments;Act.3.2: implement replicable Demonstration Projects 1	-	30,000	30,000	25,000	-	85,000
2204	MOU with governments;Act.3.2: implement replicable Demonstration Projects 2	-	100,000	100,000	50,000	-	250,000
2205	MOU with governments;Act.3.2: implement replicable Demonstration Project 3	-	75,000	75,000	50,000	-	200,000
2299	Total	16,000	325,000	285,000	205,000	40,000	871,000
Group Training							
3201	Act.1 Regional Training Workshops - Comonent 1. To Build Capacity and create regional institutional framework for effective management of the volta tiver basin	-	28,800	12,000	12,000	12,000	64,800
3202	Act.1 National Training Workshops - Comonent 1. To Build Capacity and create regional institutional framework for effective management of the volta tiver basin	-	40,000	130,000	30,000	-	200,000
3203	Act.1 Sub-regional Training Workshops - Comonent 1. To Build Capacity and create regional institutional framework for effective management of the volta tiver basin			40,000	20,000		60,000
3299	Total	-	68,800		62,000	12,000	324,800

				182,000			
Meetings/Conferences							
3301	Act.1.1.1 Inception meeting	24,000					24,000
3301	Act.1.1.1 Steering Committee Meetings (Accra, Mar 2007 to 2010 each yr) travel & DSA for 14 participants		20,000	20,000	20,000	20,000	80,000
3302	Act.1.1.2 Inter-Ministerial Coordination Committee (Each of the 6 countries, 3/yr for 4 yrs) Logistics	3,000	9,000	9,000	9,000	6,000	36,000
3304	Basin Initiatives Meeting (1)					100,000	100,000
3305	Act.1 National Workshops - Component 1 to Build Capacity and create regional institutional framework for effective management of the volta tiver basin	30,000	-	30,000	30,000	-	90,000
3306	Act.1 Stakeholders Meetings - Component 1 to Build Capacity and create regional institutional framework for effective management of the volta tiver basin	-	20,000	31,300	31,300	11,300	93,900
3307	Act.1 Regional Workshops - Component 1to Build Capacity and create regional institutional framework for effective management of the volta tiver basin	-	-	48,000	24,000	-	72,000
3308	Act. 2 National Workshops - Component 2. To develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas	-	30,000	90,000	90,000	-	210,000
3309	Act. 2 Stakeholders meeting - Component 2. To develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas	-	-	11,300			11,300
3310	Act. 2 Regional meetings/workshops - Component 2. To develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas	-	-	-	72,000	48,000	120,000
3311	Act. 3 Regional meetings/workshops - Component 3. To initiate national and regional measures to combat transboundary environmental degradation in the volta river basin	-	24,000	72,000	48,000	24,000	168,000

3312	Act. 3 National meetings/workshops - Component 3. To initiate national and regional measures to combat transboundary environmental degradation in the volta river basin	-	30,000	60,000	90,000	30,000	210,000
3313	Act. 3 Stakeholders Meeting - Component 3. To initiate national and regional measures to combat transboundary environmental degradation in the volta river basin	-	-	37,200	18,600	-	55,800
3399	Total	57,000	133,000	408,800	432,900	239,300	1,271,000
Component Total		57,000	201,800	590,800	494,900	251,300	1,595,800
Expendable equipment (items under \$1500)							
4101	Act.1.1.3 Office Supplies	2,000	5,500	5,500	5,500	3,000	21,500
4102	Act.1.1.3 Computer Software	2,000	2,000				4,000
4199	Total	4,000	7,500	5,500	5,500	3,000	25,500
Non-expendable equipment							
4201	Act.1.1.3 Computer Hardware (Inc. 1 Laptop)	6,000	6,000				12,000
4202	Act.1.1.3 Office Equipment	5,000	3,000	3,000			11,000
4203							
4204	Act.1.1.3 Digital Video/Camera	1,856	-				1,856
4205	Act.2.1.4 Monitoring Equipment to conduct a first demonstration assessment (3-year interval) of river quantity and quality		72,000				72,000
4206	Act.2.1.5 Monitoring Equipment to conduct the first demonstration assessment of groundwater quantity and quality		72,000				72,000
4299	Total	12,856	153,000	3,000	-	-	168,856
Premises							
4301	Act.1.1.3 Office Maintenance	10,000					10,000
4399	Total	10,000	-	-	-	-	10,000
Component Total		26,856	160,500	8,500	5,500	3,000	204,356
Rental Operation and							

maintenance of equipment							
5101	Act.1.1.3 Office Equipment			1,000			1,000
5102	Act.1.1.3 Computer Equipment			2,000			2,000
5199	Total	-	-	3,000	-	-	3,000
Reporting Cost (reports and publications)							
5201	Act. 1.1.3: Reports/Publications	1,500	7,000	7,000	7,000	2,000	24,500
5202	Act. 1.1.3. Translation (Meetings & documents)	3,728	5,000	5,000	5,000	5,000	23,728
5203	Act. 1.2 Materials for Training Needs(1.2)		30,000	40,000	50,000		120,000
5204	Act.1.1.3: Public Participation & Awareness Program (UN Env. Days, Web Page, Misc PPA Act.)		20,000	15,000	15,000	15,000	65,000
5205	Act.1.4.2 Publication of Basin Management Framework					5,000	5,000
5206	Act.1.5.3: Outputs of information management system (including GIS)		30,000	30,000	30,000		90,000
5207	Act.1.6.3 Outputs of operation of working group for protection and management functions, financial arrangements, recommending new protected areas and addressing management of protected areas located along international borders			4,000	7,500	7,500	19,000
5208	Act. 2.1 Reporting on developing quantitative understanding of present ecological situation and develop/agree on regional basis for actions (TDA) including broad dissemination			15,000			15,000
5209	Act.3.3.7 Publication of results of a desertification monitoring system					7,000	7,000
5299	Total	5,228	92,000	116,000	114,500	41,500	369,228
Sundry							
5301	Act.1.1.3 Communication	3,500	11,000	11,000	11,000	5,500	42,000
5302	Act. 1.1.3 Auditing		5,000	5,000	50,000	5,000	65,000
5303	Act.1.1.3 Unspecified	1,500	3,500	3,500	3,500	3,194	15,194
5399	Total	5,000	19,500	19,500	64,500	13,694	122,194

Hospitality							
5401	Act. 1.1.3 Refreshments for participants at the end of Steering Committee Meetings and Regional Workshops	1,000	4,000	4,000	4,000	4,000	17,000
5499	Total	1,000	4,000	4,000	4,000	4,000	17,000
Monitoring and Evaluation							
5501	Evaluation costs			25,000		35,000	60,000
5499	Total	-	-	25,000	-	35,000	60,000
Component Total		11,228	115,500	167,500	183,000	94,194	571,422
	Project Total	310,380	1,337,067	1,616,870	1,422,893	660,171	5,347,380

ANNEX V: TERMS OF REFERENCE FOR THE REGIONAL LEVEL IMPLEMENTATION

REGIONAL LEVEL

- **Steering Committee (SC)**
- **Regional Coordination Unit (RCU)**
- **TOR for the UNEP Collaborating Centre (UCC-Water) Regional Coordinator (RC)**
- **Scientific and Information Officer (SO)**
- **Administrative Assistant (AA)**
- **Bilingual Secretary (BS)**

Terms of Reference – Steering Committee

Background:

The Steering Committee (SC) will function as the principal policy guidance body of the Project. The Committee will provide guidance to the Regional Coordination Unit on issues pertaining to the regional administration of the project and to the National Inter-ministerial Implementation Committees on issues pertaining to the national administration of the Volta river basin project.

The Steering Committee will be composed of high-level individuals who are the National Focal Points (NFP) for this GEF Project, or their designees, representatives of key GEF Implementing Agencies and significant project co-financiers/partners as well as invited technical experts. Regional or local NGOs and the private sector will be invited to have observers sit at the Steering Committee Meetings. At later stage the SC may approve adding of the representatives from NGOs and the private sector as the members of the SC. The maximum membership of the SC will be 15.

The Regional Project Coordinator will serve as the Secretary to the Steering Committee.

A National Focal Point (on a rotational basis) will chair the Committee on election as chair by members. The Steering Committee will meet annually to monitor past progress in project execution, and to review and approve annual work plans and budgets. The Steering Committee may also appoint a part-time Senior Technical Advisor to assist its work.

The Committee will set its own operational procedures and in addition to the draft TOR, SC will prepare and approve its detailed Terms of Reference.

Tasks:

- Provide overall strategic policy and management direction to the Project;
- Facilitate Project coordination and ensure that Project activities meet global, regional and national environmental concerns and priorities
- Annually review and approve the work plan and the budgets of the Project, and provide strategic direction on the work plan;
- Annually review and assess the progress of the Project;
- Facilitate and promote regional and national inter-project coordination
- Provide guidance to the RCU and NIMIC in coordinating and managing the Project;
- Create mechanisms for interaction with the Private Sector (e.g., participation in Steering Committee, co-funding of projects and activities, solicitation of investment ideas and investment funding); and
- Share and disseminate Project-funded and Project-generated results and experiences within the region and among the GEF network, and seek additional funding to support the outputs and activities of the Project.

Terms of Reference - Regional Coordination Unit (RCU)

Background:

The Regional Coordination Unit (RCU) will provide a coordination and management structure for the development and implementation of the project for the Volta River Basin accordance with the rules and procedures of UNEP/DGEF and consistent with directions provided by the Steering Committee.

The RCU will be hosted by the Ghana Environmental Protection Agency in Accra, and will consist of a Project Coordinator, a Scientific Officer and a bilingual Administrative Assistant/Secretary. The RCU will be independent of the Environmental Protection Agency and other national bodies, but will work closely with them to help develop capacity even further.

Tasks:

- Assistance in networking between National Focal Points, National Inter-Ministerial Implementation Committees (NIMIC) in all six countries (Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo) and Steering Committee;
- Organization of participation interventions and promotion of cooperation between national institutions and experts on regionally coordinated activities including capacity-building, environmental policy, management, etc as given in the project document.
- Establishment of and assistance in networking between specialized institutions in participating countries and technical specialists from elsewhere;
- Organization of consultative meetings for introducing and implementing project activities;
- Collection and dissemination of information on policy, economic, scientific and technical issues related to the project;
- Coordination of international, multi-lateral and bi-lateral environmental activities in the Volta River Basin, where appropriate;
- Facilitate effective involvement of stakeholders in environmental and resource management, as well as the decision-making process, to address the Volta River Transboundary environmental issues and root causes.
- Conducting stakeholder outreach;
- Overseeing and assisting the National Inter-ministerial Implementation Committees (NIMIC);
- Preparation relevant TORs, work programmes and guidelines for project activities.
- Managing international consultants and contractors.
- Preparation of guidelines and selection criteria for demonstration projects.
- Assistance in implementing pilot demonstration projects for the environment;
- Preparation of progress reports (administrative and financial) in implementing pilot projects for the environment;
- Direct coordination of “Stakeholders participation and Public Awareness”;
- Direct coordination of “Clearing house mechanism component”
- Direct coordination of database development and environmental monitoring system protocols;
- Development of a coordination mechanism with other basin projects in the region, with the GCLME, and with other complementary projects in the region,
- Organization and hosting of at least one regional meeting in agreement and cooperation with the other GEF IAs.
- Development of performance indicators for the Volta Basin management
- Assistance in an integration of the private sector into activities of this project, as appropriate, as sub-contractor, consultant, or co-sponsor of specific activities
- Coordination of management plans preparation for addressing priority transboundary concerns in identified hotspots, including hotspots identified through the African Process and the Environmental Initiative of NEPAD
- Assistance to all six countries to develop NAP's that address issues of priority transboundary concerns
- Assistance in and Coordination of TDA and SAP finalization
- Project management (financial, logistical and strategic)

Terms of Reference - THE UNEP COLLABORATING CENTRE ON WATER AND ENVIRONMENT (UCC-WATER)

Background:

UNEP Collaborating Centre on Water will be contracted by UNOPS to facilitate a smooth and timely implementation of the project by drawing upon the experience of the Centre related to project preparation and implementation from similar projects in the region as well as gaining access to the network of specialists associated to the Centre.

The UNEP Collaborating Centre on Water and Environment will support and work through the Regional Coordination Unit (RCU). The assistance of the Centre will address technical and scientific (if requested) aspects of the project and support the Regional Coordination Unit (RCU) in activities described in TOR. Further, the Collaborating Centre will provide short-term input on specific technical subjects. The Collaborating Centre will report to the RCU and the SC.

Tasks:

The assistance of the Centre will address organisational as well as technical aspects of the project and support the Regional Coordination Unit (RCU) in the following activities:

- Preparation of overall work plan including cost estimates and budgeting.
- Preparation of the revised Strategic Action Plan.
- Proposal for environmental indicators to be monitored.
- Preparation of Convention/Protocol for basin management.
- Preparation of National Action Plans.
- Facilitate the contact between RCU and the National Focal Points during preparation and implementation of the project activities.
- Assistance in preparation of terms of reference, pre-qualification, and evaluation of offers for specific tasks to be carried out by regional or international consultants (incl. demonstration projects).
- Preparation and execution of stakeholder workshops.
- Identification of sources for financing.
- Propose updated and appropriate technologies/tools to be applied (e.g. monitoring, exchange and presentation of data)

Further, the Collaborating Centre will provide short-term input on specific technical subjects, including training and capacity building activities, when needed. These may include legislation, implementation of IWRM, institutional aspects, environmental, socio-economical and health aspects.

Detailed work plans and intervention periods shall be agreed with the Regional Coordination Unit and the Executing Agency.

The staff of the UNEP Collaborating Centre will, when working in Ghana, share office- and secretarial facilities with the Regional Coordination Unit.

A total of 5 man months per year are foreseen to be provided by the UNEP Collaborating Centre. Hereof is 80% planned to be spent in the project area while the remaining time will be allocated for back up and long distance support by the Senior Technical Advisor to RCU between his interventions in the project area.

A total input over the full project period (4 years) will thus be 20 man months.

STAFF TO BE ALLOCATED BY THE UNEP COLLABORATING CENTRE

The UNEP Collaborating Centre will provide:

- A Senior Technical Advisor corresponding to 3 man months per year.
- Short-term Specialists (biologists, legislation adviser, marine- and freshwater specialists, economists, health experts, etc) as required corresponding to 2 man months per year.

The qualifications of the Senior Technical Advisor will include:

- More than 12 years of professional experience in water resource management including extensive working experience gained in the region.
- Project management of multidisciplinary projects in developing countries.
- Experienced in working with ministries, governmental institutes, and UN agencies as well as with the private sector.
- Experienced in preparation and implementation of IWRM concepts from the region including stakeholder participation.
- Experienced in project design, project monitoring and administrative procedures.
- Fluent in French and English language

CV of short-term specialists as well as specific terms for the work to be carried out shall be approved by the Executing UN Agency before the intervention of the short-term specialists.

DURATION OF ASSISTANCE FORM UNEP COLLABORATING CENTRE

The assistance of the UNEP Collaborating Centre will be provided throughout the project period (Oct. 2003 – Oct. 2007).

Terms of Reference - Regional Project Coordinator (RPC)

General Description:

The Regional Project Coordinator will be responsible for the overall coordination, supervision, management and monitoring of all aspects of the GEF Volta River Basin project, under the policy/technical guidance of Steering Committee.

He/she shall liaise directly with the National Focal Points and National Project Coordinators and the representatives of the GEF partners and other donors, in order to develop and coordinate the annual and quarterly work plans and budgets for the project. The work plan will provide guidance on the day-to-day implementation of the current project document and on the integration of the various donor funded parallel initiatives.

He/she shall be responsible for all substantive, managerial and financial monitoring and reporting of the Project. He/she will provide overall supervision for all staff in the Regional Coordination Unit as well as guiding and supervising all external policy relations. He/she is responsible for the coordination and monitoring of international inputs.

He/she will provide overall supervision for all GEF staff in the Regional Coordination Unit as well as guiding and supervising all external policy relations.

He/she will also seek additional funding and partners, and integrate their inputs to project workplans and budgets. Funding could be cost-shared or in parallel. He/she should closely liaise with other complementary or parallel initiatives to ensure maximum synergy.

Specific Duties:

- Manage the Regional Coordination Unit: its staff, budget, and funds allocated.
- Ensure consistency between the various programme elements and related activities provided or funded by other donor organizations;
- Prepare the annual and quarterly work plans and budgets of the Project on the basis of the Project Document
- In close consultation with the National Project Coordinators, coordinate and monitor the activities described in the work plans, and ensure timeliness and quality of outputs. Workplans will be prepared, reviewed and forwarded to UNOPS and UNEP-GEF Task Manager.
- **Coordinate and oversee the preparation of the substantive and operational reports from the project, including the reports from NPCs**
- Prepare Terms of Reference for all project activities, including consultants and contractors
- Supervise the work of consultants (long-term and short-term) to be based at the RCU;
- Organise, coordinate and participate in the completion of the TDA and in the formulation of the final version of the SAP.
- Coordinate and oversee the full implementation of the pilot projects indicated in the project documents;
- Liaise with the NFPs, NPCs, and GEF
- Liaise with other donors to ensure maximum synergy, avoid duplication with existing initiatives, and also seek additional funding for the project
- Act as Secretary for the Regional Steering Committee;
- Directly coordinate “Stakeholders participation and Public Awareness”:

- Foster and establish links with other regional GEF IW projects including participation in IW-LEARN;
- Provide technical assistance as required;
- Organise Monitoring and Evaluation visits.

Eligibility:

Candidates must be nationals or permanent residents of one of the riparian countries.

Skills and Experience Required:

- PhD degree in water resources management or environmental management or a directly related field (e.g. hydrology, hydrobiology, etc.).
- At least ten years experience in the field and at least five years experience at a senior project management level
- Proven knowledge of the sub-region and, in particular, the basin and its downstream coastal areas
- Familiarity with the goals and procedures of international organizations, in particular those of GEF partners
- Demonstrated diplomatic and negotiating skills and excellent interpersonal skills with sensitivity to cultural and socio-political issues in the sub-region.
- Good knowledge of both English and French for good communication among all the riparian countries and also for technical evaluation of reports in each of the languages

Duty Station:

Environmental Protection Agency, Accra, Ghana.

Duration of Contract: One year (renewable)

Terms of Reference - Scientific and Information Officer (SIO)

General Description:

The Scientific Officer will be responsible for information capture, exchange and networking between a wide range of participants in the Volta River basin project including government officials, scientists, non-governmental organizations and the public at large. He/she will work closely with institutional focal points, specialized UN Agencies, international, and will cooperate with and encourage activities of other donors. He/she shall work under the supervision of the Regional Coordination within the Regional Coordination Unit (RCU) and under the guidance of The Senior Technical Advisor (if he/she is appointed by the SC).

Specific Duties:

- Coordinate and supervise the scientific and research activities of the project;
- Liaise with donors, specialized UN Agencies, international NGOs and other organizations involved in establishing and managing scientific research programmes in the Volta River basin;
- Provide support in a development of guidelines for the management of land and water based on an effective regional EIA
- Provide a support in a development of guidelines on a demonstration project preparation and a selection
- Provide an assistance in a preparation of demonstration projects and their implementation
- In a consultation with the RC prepare and develop of performance indicators for the Volta Basin management
- Coordinate “Clearing house mechanism component”
- Coordinate of database development and environmental monitoring system protocols;
- Generate and maintain a directory of all persons and institutions engaged in work related to the implementation of the project;
- Supervise data exchange and the maintenance of the data communications network between cooperating institutions;
- Edit a regular information bulletin on the project (issued in English and French and widely distributed within the basin);
- Supervise the development of a library for the RCU;
- Supervise the development and maintenance of information management tools (Information Systems, DBMS, GIS);
- Develop the content and update the information as needed for a web based Home page of the project;
- Supervise the production of the relevant publications/information material; and
- Assist with the administration of other information-related technical issues where required by the Regional Coordinator;
- Provide scientific assistance in ones area of competence as required;
- Act for the RC as required.

Eligibility:

Candidates must be nationals or permanent residents of one of the riparian countries.

Skills and Experience Required:

- Post-graduate degree degree in environmental science, information management with focus on environmental management or a directly related field;

- At least six years experience in the field and at least three years experience in similar international projects dealing with international scientific/environmental management projects and information exchange;
- Experience with computer data bases, GIS, web design and information systems;
- Familiarity with the goals and procedures of international organizations, in particular those of GEF partners;
- Experience in training other specialists would be an asset;
- Familiarity with the problems of the Volta River Basin would be advantageous;
- Demonstrated diplomatic and negotiating skills, and excellent interpersonal skills with sensitivity to cultural and socio-political issues in the sub-region.
- Good knowledge of both English and French for good communication among all the riparian countries and also for technical evaluation of reports in each of the languages

Duty Station:

Environmental Protection Agency, Accra, Ghana.

Duration of Contract: One year (renewable)

Terms of Reference - Administrative Assistant (AA)

General Description:

Under the supervision of the RC and close collaboration with the Secretary, the Administrative Assistant will manage the day-to-day operations of the RCU, particularly with respect to finances, technical services, procurement and personnel matters (in close cooperation with the counterpart staff of UNOPS).

The post holder will be the principal line of liaison between the RCU and the UNOPS in all financial and administrative matters.

The Administrative Assistant will perform two major tasks requiring a knowledge of computer data base management:

- (1) maintain the project accounts in association with the relevant Administrative Officer(s) of the EA to; and
- (2) to assist the Regional Coordinator and the Scientific Officer the maintenance of computer-based statistics regarding the management of the project (particularly contracting), project activities and use of the outputs.

Specific Duties:

Management Information

The Assistant will work closely with the Regional Coordinator, the Scientific Officer on the development and maintenance of a statistical database on project management. This work will include *inter alia*, records of all contracts (including Inter-Agency Agreements), participation in Volta River basin events, information regarding the project expenditures within each budget category and for each project thematic area.

Budget Management and Finances

He/She will monitor Programme expenditures with reference to the approved budget. He/she will prepare budget proposals and also attend to all financial and budgetary aspects of the implementation of the programme including the following specific duties:

- to monitor expenditures
- to prepare draft budget revisions and working budgets in consultation with the Regional Coordinator;
- to assist the project staff to prepare budgets for meetings and activities and to review incoming authorizations to ensure adequate recording against budget lines (and take appropriate action to correct and/or revise requests and alert UNOPS); and
- to assist the Regional Coordinator to prepare special budget and financial statements (for Steering Committee meetings, etc.) and to regularly brief the Project Coordinator on the financial status of the project.

The Assistant will administer the petty cash and imprest account on behalf of the Regional Coordinator and prepare relevant documents including monthly cash statements, requests for replenishment and budget reviews and revisions. The Administrative Assistant shall also be responsible for paying DSAs, etc., for participants in all project-financed workshops organized by, or on behalf of, the RCU. He/she shall be responsible for preparing all relevant documents for administering the imprest account for final approval by the Regional Coordinator, in conformity with the stipulations of the financial regulations of UNOPS.

Procurement

The Assistant will undertake all duties relevant to local procurement. He/she will maintain records of suppliers, obtain competitive bids for the consideration of the Regional Coordinator and complete the relevant documentation including that pertinent to the tax status of the RCU. In close contact with the

UNOPS he/she will arrange for customs clearance of imported goods and for shipping documents in the event of supply of locally purchased equipment to the regional institutional network. He/she will maintain precise records of all goods purchased on behalf of the Project. The incumbent will also be responsible for maintaining proper equipment inventories as well as for ensuring the proper labeling and recording of equipment delivered to the field. Records will also be maintained of all materials purchased by the other donors and used within the regional network.

Skills and Experience Required:

- higher educational diploma in a directly relevant field;
- proven experience in the management of computer or other office technology equipment
- proven experience in accounting, administration and budget management;
- management of computer data bases would be an asset;
- excellent organizing skills;
- fluency in English and French.

Duty Station:

Environmental Protection Agency, Accra, Ghana.

Terms of Reference - Bilingual Secretary (BS)

General Description:

The Secretary, working under the close supervision of Regional Coordinator and cooperating closely with Administrative Assistant, will have responsibility for a variety of tasks essential to maintaining the efficient operation of the RCU. These include communications tasks, administrative functions, assisting with travel arrangements, and general secretarial duties. The post requires language abilities/fluency in French (primary language) and English experience with PCs, good communication skills, and a capacity for clearly discerning priorities under irregular work pressure. The incumbent will be required to keep regular working hours in order to assure the proper manning of the RCU office.

Duties

Communication tasks

The incumbent will be responsible for the external communication of the RCU. This includes: (a) managing telephone, fax and electronic mail communication and the RCU address book; (b) updating the mailing; and (c) organizing outgoing official mail, particularly the mailing of all circulars, invitations to meetings and meeting reports (d) translation of documentation and communications between French and English.

Administrative Functions

The Secretary will assure the proper day-to-day functioning of the RCU by supervising the provision of all necessary supplies and services including maintenance contracts, office supplies and communications. He/she shall be responsible for the proper running and upkeep of the RCU hardware including the computers, copiers, etc.

Staff travel

The Secretary will organize staff travel in close cooperation with the Administrative Officer and following the current staff travel rules. He/she will assist the staff and consultants with the advance planning of travel, investigating routes, connections and hotel arrangements. He/she will also assist the project staff with the travel plans for external meetings. He/she shall organize, the hotel arrangements and programme of activities for participants in meetings organized by the RCU.

General Secretarial Duties

The Secretary will be requested to assist with the maintenance of project files and the photocopying of specific documents. He/she will also prepare and type texts for the project staff where there is an urgent need and where the work plan permits.

Skills and Experience Required:

- higher educational diploma in a directly relevant field;
- proven experience in the office technology equipment
- proven experience in administration
- proven computer skills including database management
- excellent organizing skills
- fluency in English and French

Duty Station:

Environmental Protection Agency, Accra, Ghana.

ANNEX VI: TERMS OF REFERENCE FOR THE NATIONAL LEVEL IMPLEMENTATION

NATIONAL LEVEL

- National Focal Point (NFP)
- National Inter-Ministerial Implementation Committee (NIC)
- National Project Coordinator (NPC)

Terms of Reference - National Focal Point (NFP)

Background:

The National Focal Point is the high level government official from each country who bears responsibility for quality and timely implementation of the Volta River basin project in that country. This position should be held by senior official at a decision-making level. The individual must carry authority not only due to his/her high rank, but also because he/she represents the most relevant organization in that country concerned with the ecosystem issues related to the project.

The National Focal Points will help assure intersectoral coordination with their country, as a step towards sustainability. Through the establishment of inter-ministerial dialogue, it is anticipated that wide involvement of many ministries and government departments as stakeholders will be assured. This will result in high-level government acceptance of the outcomes of the preparatory activities and hence approval of the Strategic Action Programme.

The National Focal Point from each country will be the chair of duly appointed representatives of a relevant National Inter-ministerial Implementation Committee of the project.

Tasks:

- Assures effective interministerial coordination;
- Assures the Government and Parliament (or equivalent) is continuously briefed on the Volta River basin project, and is aware of the policy and legislative interventions that may be proposed by the project;
- Assures national ownership of the TDA/SAP process, by the Government, by communicating to the Volta river basin project the concerns and interests of the Government;
- Maintains regular oversight of the National Project Coordinator, remains current on the status of the Volta River Basin project, and maintains regular communication with the Regional Coordinator.
- Assists where necessary in solving of national and regional issues and constraints to project success;
- Serves as Steering Committee Member;
- Facilitate communication with his/her counterpart in the other country, and assists in harmonizing points of view of the region.

Terms of Reference - National Inter-Ministerial Implementation Committee (NIC)

Background:

The National Inter-Ministerial Implementation Committee will provide guidance and ensure coordination of a wide range of national institutions and organizations directly responsible for the implementation of the Project at the national level.

The Committee will be facilitated by the National Project Coordinator reporting to the National Focal Point.

The Committee will oversee a network of national/regional educational, research, governmental and non-governmental agencies and organizations, which will be responsible for administering and implementing project activities according to a common workplan.

The Committee and network will work closely through the National Focal Points to assure that the governments will endorse their work products, but the project will retain some independence in naming individuals to the committees to assure broad representation of stakeholders.

Some countries already have strong interministerial coordination, and thus the Committee may already be taken care of there. Some countries may need to set up ad hoc committees to carry out this coordination. In this case, committees should be comprised of all Ministries having a major stake or interest in the Project, including resource ministries, foreign ministries, economic/ finance ministries, environmental ministries, transport ministries, industrial ministries, etc. As such, the Committee will have the above key Ministries and a full time, small secretariat (national and donor-supported) headed by the National Project Coordinator reporting to the National Focal Point.

Tasks:

- Ensure an integrated and coordinated approach to facilitating the sectoral changes needed for the long-term sustainable management of the Volta River basin;
- Identify appropriate national modalities for the implementation of various components of Project, according to national capabilities, division of national responsibilities, and other national considerations;
- Coordinate country actions across ministries;
- Develop national positions on policy issues;
- Coordinate and assure timely delivery of national contributions to and national expert participation in the Project;
 - (1) Assume responsibility for national contributions to Transboundary Diagnostic Analysis (TDA) and Strategic Action Programme (SAP), and preparation of National Action Plans;
 - (2) Facilitate timely national and donor contributions to necessary 'baseline' activities needed to rehabilitate the Volta River Basin; and
 - (3) Assist the RCU in monitoring the tracking and timeliness of work on contracts issued by the RCU, quality control of nationally-prepared materials for the Project, and intersectoral coordination progress.
- Liaise with NFP, RCU through the NPC
- Assist with the development of demonstration projects set.

Terms of Reference - National Project Coordinator (NPC)

General description:

The National Project Coordinator will serve as a Secretary to the National Inter-Ministerial Implementation Committee, reporting to the National Focal Point.

The NPC will serve as the primary national contact with the RCU, and will be the lead national for operational purposes.

The NPC will assure full participation of needed resources in each country, and control the timeliness and quality of the products provided during the project. Therefore, this individual must have the broad recognition as a high level expert in the Volta River basin, and cognizance of the various Ministries.

Specific Duties:

(1) In the National Inter-Ministerial Implementation Committee:

- As the secretary to the Committee, works with national governments and agencies to bring necessary human and other resources to the Project;
- Assists the NFP by coordinating the Committee meetings, and keeping detailed notes of their outcomes;
- Supervises the Committee secretariat activities;

(2) At the national level:

- Ensures national sub-contracts and other project funded activities are undertaken in a timely fashion and in accordance with the national quarterly work plans;
- Monitors the progress of national experts and helps assure timely completion of activities;
- Serves as lead national individual for coordinating inputs into the TDA and SAP;
- Promotes wide stakeholder participation in the project;
- Generally assures full coordination of national inputs; and
- Liaise continuously with and supports the RC on matters regarding the conduct of the project, including early warning of potential deviations from quarterly workplans and implementation difficulties.

ANNEX VII: TERMS OF REFERENCE FOR ACTIVITIES AND CONSULTANCY

Terms of Reference Activity 1.2 Training & Educational Needs

Background:

The Project entitled “Addressing Transboundary Concerns in the Volta River Basin and its Downstream Coastal Area” has three main objectives:

- Build capacity and create a regional institutional framework for the effective management of the Volta Basin
- Develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas
- Initiate national and regional measures to combat transboundary environmental degradation of the Volta Basin.

The first objective of Building Capacity to address transboundary concerns requires the identification of training needs in the riparian countries. A number of issues and problems were identified in the preliminary TDA/SAP. To tackle the problems and reverse the negative environmental trend, the knowledge base of the population in the sub-region will need to be assessed and appropriate training needs provided.

Six local consultants (one from each of the riparian countries) will work closely with one international consultant for this task.

Objective:

To identify the training needs required in the six riparian countries and the basin as a whole in addressing the transboundary issues/problems.

Activities:

- Conduct survey of training needs in the riparian countries (Local Consultant)
- Participate in the regional workshop for survey of training needs (International Consultant, Local Consultant)
- Develop training courses for three (3) priority training needs (Int.Cons., Loc. Cons)

Outputs:

- Identified and documented training needs of the region
- Training courses developed for three priority areas
- Educational courses at all levels developed for three priority areas
- Training materials in English and French developed

Budget:

Local Consultants (Fees, per diem)	\$15,600
International Consultants (Fees, Air Ticket, Per diem)	\$8,900

Terms of Reference

Activity 1.3 Identify, Strengthen and Involve Stakeholders in Addressing Transboundary Concerns/Issues in the Volta River Basin

Background:

In addressing Transboundary concerns/issues in the Volta River Basin, the role of stakeholders including NGOs is very crucial. However, the extent that they can pursue developmental goals with sound environmental consideration will depend on their training and skills for sustainable exploitation and utilisation of land and water resources.

The consultants will help identify the stakeholders and offer them training and relevant skills for development of water and related resources in a sustainable manner. UCC will work with 6 local experts.

Objective:

The specific goal is to identify and offer appropriate training to stakeholders and the general public for the purposes of addressing concerns/issues in the Volta River Basin.

Activities:

- Develop a draft outline for the preparation and implementation of a public participation and awareness plan (UCC)
- Participate in National Workshops for Public Participation and Awareness Assessment (2 Local Consultants)
- Identify Committee Members for PPA (2 Local Consultants)
- Offer training in 6 National Workshops for PPA (UCC, 2 Loc. Cons.)
- Provide training to strengthen capacity of local conservation groups to conserve wetlands in 6 National Workshops (UCC, 2 Loc. Cons.)
- Provide training in Public/Private Partnership Development (UCC, 2 Loc. Cons.)

Outputs:

- Committees for public participation and awareness plan formed and members trained as trainers
- Stakeholders including NGOs and natural resource users involved in PPA training
- The capacity of local conservation groups for wetlands is strengthened
- A developed Public/Private Partnership

Budget:

6 Local Consultants (Fees)	\$51,760
(Per diem is paid separately during the National Training Workshops)	

Terms of Reference
Activity 1.4 Establish a River Basin Management Framework

Background:

The Volta River Basin is one of the major basins in the West Africa sub-region which has no river basin management framework to address transboundary issues/problems and also for managing the basin in an integrated and sustainable manner.

The Strategic Action Programme (SAP) being developed for implementation will require such a body for its sustainable implementation.

Objectives:

The objective of this task is to define the basin management framework through consultations with governments and stakeholders at the national level and for its final endorsements.

Activities:

- Prepare a draft framework for the Volta River Basin Commission/Authority. The draft will include the structure, functions and sources of funding to sustain the body (6 Local Consultants, 1 International Consultant).
- Obtain national endorsements for the Commission/Authority and generate the national budgets for the Commission/Authority. The draft will include the structure, functions and sources of funding to sustain the body (6 Local Consultants, 1 International Consultant).

Outputs:

- A draft framework for the Volta River Basin Commission/Authority
- An endorsed framework for the Basin Commission/Authority established
- National budgets for the Commission/Authority generated.

Budget:

Local Consultants (Fees, travel expenses) per diem	\$21,600
International Consultants (Fees, travel expenses, per diem)	\$15,000

Terms of Reference
Activity 1.5 Develop Common Guidelines for Monitoring Water Quality

Background:

Monitoring of water quality in the basin is very essential for assessment of pollution Loads, the health of the environment, ecological integrity etc for addressing transboundary issues/ indices being monitored and procedure used are not uniform throughout the riparian countries and thus comparability and application for a holistic basin management may be very difficult if not impossible. This task is meant to streamline the methodologies, standards etc for easy networking.

Objective:

To develop common guidelines for monitoring water quality standard in the basin.

Activities:

- Assess the existing guidelines for monitoring water quality in the riparian countries
- Develop common guidelines for monitoring water quality.

Output:

- Established common guidelines for monitoring water quality

Budget

6 local Consultants (Fees)	\$7,200
1 International Consultant (Travel, Fees)	\$8,900

Activity 1.6 Establish regional networks and information exchange mechanism

Background:

At the regional level, the mechanism of exchange of environmental data and information is non-existent. This mechanism is very essential for the environmental management of the basin. Management of protected areas along international bodies, among other things, suffer from lack of exchange of information and data. There is the need also to establish Working Groups to harmonize operations of transboundary protected areas.

Objectives:

To establish regional information and data exchange mechanism and also create Working Group for effective management of transboundary protected areas.

Activities:

- Give technical support to the RCU in establishing a regional clearing house for the exchange of environmental data and information
- Identify and establish Working Groups, (In Conjunction with RCU) for the protection and management of protected areas located along international borders

Outputs:

- An established regional information and data exchange mechanism
- Created Working Groups for effective management of transboundary protected areas.

Budget:

Fees for the Regional Consultant	\$1,200
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Terms of Reference

Activity 2.1 Develop quantitative understanding of present ecological situation and develop and agree on regional basis for action

Background:

The preliminary Transboundary Diagnostic Analysis (TDA) of the Volta River Basin brought together some basic information, which depicted the ecological situation of the basin. Some hot spots of degraded environment were roughly identified. Water quality and quantity of transboundary water resources were not adequately described due to lack of accessible or existing information.

Pollution from land-based activities in the basin are not adequately assessed for coordinated efforts to minimize its occurrences. Knowledge about wetlands and their protection from pollution and habitat degradation needs to be strengthened for national and regional actions. The information to be collected will be essential for finalizing the TDA.

Objective:

To fill gaps in knowledge of the present ecological and physical conditions of the basin with the view to formulating regional actions for addressing transboundary issues/problems.

Activities:

- Fill gaps in knowledge of priorities in protecting wetlands
- Conduct regional assessment of priority land-based activities, sources of contaminants, and pollutant levels in water and sediments
- Review knowledge base of priority pollutant level and major sources of pollutants
- Conduct a first demonstration assessment (3-year interval) of groundwater quantity and quality in all the riparian countries
- Conduct a first demonstration assessment (3-year interval) of river quantity and quality in all the riparian countries.
- Determine the trend of the physical and the ecological conditions including rainfall of the basin.

Outputs:

- Adequate knowledge of the basin wetlands
- Levels and sources of land based pollutants identified and assessed
- Assessment of groundwater resources in terms of quantity and quality carried out knowledge of shared aquifers to be provided.
- Assessment of surface water resources in terms of quality and quantity carried out. Sediment characteristics of major tributary to be available. Transboundary flow magnitude and quality estimated.

Budget:

6 Local Consultants	\$93,600
1 International Consultant	\$42,500

Terms of Reference
**Activity 2.2 Assist Countries in Developing National Action Plans (NAP) for the
Volta River to Formulate National Priorities (SAP)**

Background:

The development of national action plans (NAPs) is essential to the development of the strategic action programme (SAP) for the basin. Some of the riparian Countries have developed their NAPs and others have not due to financial and human resource constraints.

In order to facilitate this process, consultants with international and local experience are hired to give the necessary support for the development of the NAPs.

Activities:

- Prepare a national biodiversity strategy document including a gap analysis and obtain endorsement by riparian states.
- Prepare and get approval for six National Action Plans.

Outputs:

- A regional biodiversity strategy document
- Six National Action Plans, one for each of the riparian countries

Budget:

Six Local Consultants	\$14,400
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Terms of Reference

Activity 2.3 Develop management plans and strategies to restore and maintain ecological integrity of the Volta River Basin

Background:

Basin Management Plans are essential for addressing transboundary issue/problems on a sustainable basis. The work of any institutional frame-work will depend on these formulated plans.

Presently, there are no such plans existing at the basin level and local and international consultants are required to execute this activity.

Objective:

To develop management plans and strategies as part of the Strategic Action Programme for addressing transboundary problems/issues.

Activities:

- Develop regional basin water management plan of action
- Develop national wetlands management strategies/plans/framework based on community participation and empowerment.
- Develop coastal erosion management plan through a participatory process
- Develop legislation for the protection of areas not currently covered and included in protected zones.

Outputs:

- Regional basin water management plan.
- National wetlands management plans
- Coastal erosion management plan
- Legislation for covering new protected areas.

Budget:

International Consultant (Act. i)	\$8,900
Local Consultants (Act. ii, iii, iv)	\$18,000

Activity 2.4 Develop a basin-wide agreement for sharing water resources and for control of river flow regimes

Background:

Water resource is finite and given the increase in population, the demand for water resources will increase in providing adequate goods and services for the community. The observed changes in climatic conditions and water scarcity also put further constraints on the water resources.

Water resources at the upper catchments of the basin have been extracted without much consideration of the environmental and expectations of the riparian countries downstream. Presently, agreements for water extraction upstream have been on bi-lateral basis and at the level of the development of the water resources system requiring no objection from the downstream riparian countries. Given the current rising water demand, a basin-wide agreement for sharing water resources is expedient.

Objectives:

To develop a basin-wide agreement for sharing water resources and also for controlling river flow regimes for socio-economic and sound environmental development of the basin.

Activities:

- Review the existing river system agreements
- Develop a basin-wide and far-reaching agreements on sharing of transboundary water resources
- Agree regionally on the framework for extraction of river water and control of river flow regimes.

Outputs:

- A review of river system agreements.
- A set of agreement on sharing of transboundary water resources
- Agreed framework for extraction of river water and control of river flow regimes

Budget:

Local Consultants	\$8,400
International Consultants	\$15,000

Terms of Reference

Activity 2.5 Strengthen and harmonise existing laws and regulations

Background:

Most of the riparian countries have laws for protection of coastlines, prevention of land degradation, reduction of impacts of agriculture and animal husbandry and regulation of waste disposal. These laws have gaps and need to be strengthened.

Fishing legislation and regulations also exist and need to be harmonised to make them more effective in tackling transboundary issues.

Legislation for conservation and management of land and water resources, including wetlands, also need to be harmonised and strengthened to be able to deal with transboundary issues. This task is meant to fulfil these needs.

Objectives:

To harmonise and strengthen existing laws and regulations for the protection of water and related resources.

Outputs:

- Gaps in legal regimes for the protection of coastline, prevention of land degradation and reduction of impacts from agriculture and animal husbandry identified and strengthened
- Gaps in laws for waste disposal identified and strengthened for enforcement
- Fishing legislation and regulations harmonised among the riparian countries.
- Local, national and international legislation and conventions relevant to the conservation of land and water resources reviewed, harmonised and strengthened among the riparian countries.

Budget:

Local Consultant	\$18,000
International Consultant	\$14,000

Activity 2.6 Develop legal basis for the establishment of basin wide management framework

Background:

It is envisaged that a basin wide management framework for the Volta River Basin will be established under Sub-Component 1.4 of the project.

A legal basis for its establishment and operation is very essential. UCC will provide the international expertise for the legal basis of the framework and local experts will provide the necessary input and support for its development.

Objective:

To develop a legal basis for the establishment of a Volta River Commission or Authority

Activities:

- Develop conventions and protocols for the rational management of the Volta River Basin
- Ratify the conventions and protocols for the rational management of the Volta River Basin

Budget:

Local Consultants	\$7,200
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Terms of Reference

Activity 2.7 Enhance and develop legal basis and policy framework to sustainably manage the land resources of the Volta Basin

Background:

The proper management of land resources of the basin is very critical in addressing the transboundary concerns/problems of the basin and its coastal area. Pollution of water resource and degradation of its quality and the aquatic ecosystem are most often related to the land-based activities.

Thus, the need to enhance and develop legal basis and policy framework for proper management of land resources is equally important and fundamental to effective water resources management.

Objectives:

To develop laws, regulations and policy framework for sustainable management of land resources with positive impacts on the water and fishing resources.

Activities:

- Evaluate national legislation addressing mining and use of non-living resources and make appropriate recommendations
- Review and improve regulations on the disposal of industrial and mining effluents
- Improve legal basis in each country for combating desertification, land degradation, deforestation and strengthen EIA and Planning procedures.
- Review policy, legal and regulatory frameworks, and institutional structures for addressing land-based activities within the riparian countries
- Assess the policy, legal and cultural basis of land tenure in the basin and suggest environmentally sustainable land tenure system in the basin.

Outputs:

- A review and improved regulations on the disposal of industrial and mining effluents
- Improved legal basis for combating desertification, land degradation and deforestation.
- A review of policy, legal and regulatory frameworks and institutional structures for addressing land-based activities.
- A review of land tenure system and suggested environmentally sustainable land tenure system in the basin.

Budget:

Local Consultants	\$18,000
International Consultant	\$5,000

Terms of Reference

Activity 3.1 Development of guidelines for the management of land and water resources and Regional EIA

Background:

The riparian countries have their own guidelines for the management of land and water resources. In order to harmonise these guidelines for coordination and integration, regional guidelines will be important since the national EIAs do not take into consideration the transboundary impacts and effects.

Objectives:

To develop common regional guidelines and EIA for the management of land and water resources.

Activities:

- Develop common guidelines for periodic assessment of river water quality
- Establish guidelines for determining healthy fisheries
- Develop legislation and technology basis for the free and regular exchange of environmental data and information within the region.
- Develop, review and adopt regional EIA
- Set limits on application of agrochemicals and develop strategies to encourage the use of organic fertilizer

Output:

- Guidelines for period assessment of river water quality
- Guidelines for determining healthy fisheries
- Legislation and technology basis for exchange of environmental data and information
- Developed and adopted regional EIA.
- Agreed limits for application of agro-chemicals

Budget:

Local Consultants	\$36,000
International Consultants	\$25,000

Terms of Reference

Activity 3.3 Develop a basin wide environmental quality management and monitoring programme

Background:

Monitoring programme is essential for assessing the health of the environment and also for planning strategies to redressing negative impacts.

Programmes of this nature had taken place in some of the riparian countries on an ad hoc basis and in specific sectors with varying standards.

The current exercise is to develop a sustained approach with common standards for easy comparability and assessment on a basin wide scale. This is also to give to the countries the required experience for environmental management.

Objective:

To develop environmental quality and monitoring programme across the whole basin

Activities:

- Conduct a demonstration, baseline targeted monitoring of riverine sediments and biota for purposes of identifying major hot spots of pollution and land based activities
- Identify major pollutants affecting water quality and regulatory levels for those pollutants
- Evaluate sustainable groundwater use rates and set appropriate monitoring system
- Evaluate sensitivity of aquatic habitats in the Volta River Basin identifying hot spots and levels of human impacts on them
- Develop a desertification monitoring system with wide dissemination of results

Outputs:

- Identified hot spots of pollution and land-based activities
- Knowledge of major pollutants and their regulatory levels
- Knowledge of sustainable groundwater use rates for the various rock formations
- Knowledge of the sensitive aquatic habitats in the basin
- Information about progression of desertification in the basin

Budget:

6 Local Consultant	\$115,920
1 International Consultant	\$10,000

Terms of Reference

Activity 3.4 Develop programmes to reduce the impact of agriculture including animal husbandry on environmental degradation

Background:

The preliminary TDA shows that agriculture is the major activity in the basin. However the practice in most cases has had adverse effect on the environment. Deforestation or devegetation is rampant with negative impacts on soil and water resources.

Animal husbandry and associated transhumance from drier vegetation to better watered region create socio-economic problems, which need to be addressed.

The task is to put in programmes to reduce the impact of agriculture

Objectives:

To develop programmes and measures to reduce the negative effect of poor agricultural practices on the environment

Activities:

- Identify main contributors to deforestation, including public and private sector, as well as legal and regulatory failures and provide alternatives
- Identify alternative sources for products historically produced from forest and link with appropriate incentives and disincentives
- Recommend basin-wide corridors for seasonal migration of livestock through adjacent countries based on historical common use zones.

Outputs:

- Main contributors to deforestation including institutional weakness and other socio-economic factors identified for redness in each country
- Alternate sources of products from forests as incentives identified .
- Defined basin-wide corridors for seasonal migration of livestock to adjacent countries recommended.

Budget:

6 Local Consultants	\$21,600
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Annex VIII
SELF-EVALUATION FACT SHEET FORMAT

(To be completed by UNEP Task Manager and approved by Executing Agency)

- 1. Project Title:**
- 2. Project Number:** (include number of latest revision)
- 3. UNEP Programme of Work Component Number: (3 digits), or Relevant UNEP Programme of Work (2002-2003) Subprogramme Number and Specific Objective Number**
Include a statement of how effective the project has been in attaining this component/objective and its contribution to overall Subprogramme implementation.
- 4. Performance Indicators:**
UNEP Programme of Work: {State the relevant Performance Indicators (with the Quantity figure) from the Programme of Work, and compare against actual results }
- 5. Scope:**
- 6. Implementation:**
- 7. Duration:**
 - (a) Initial {(as indicated in the original project document). List day/month/year of start and end of project. List project duration in terms of total months }.
 - (b) Actual {(as indicated in the latest project revision). List day/month/year of start and end of the project. List project duration in terms of total months }.
 - (c) Reasons for the variance {When there is a difference between the initial and actual duration, list the consecutive project revisions (number and date of approval), and summarize justification for each revision }.
 - (d) List day/month/year of start of current year Workplan.
 - (e) List day/month/year end of current Workplan.
- 8. Cost:**
 - (a) Initial {(as indicated in the project document). List the total project cost (UNEP and "Others") and give breakdown by funding source. Give actual figures and contribution in terms of percentages }.
 - (b) Actual {(as indicated in the latest project revision). List the total project cost (UNEP and "Others" and give breakdown by funding source. Give actual figures and contribution in terms of percentages }.
 - (c) Reasons for the variance {(When there is a difference between the initial and actual cost, list the consecutive project revisions (number and date of approval) involved in amending the project costs. List any other reasons for discrepancy }.
 - (d) Relate expenditure to achievement of outputs (e.g. 100% expenditure and 82% output completion).
 - (e) Relate expenditure to achievement of outputs to date against overall project Workplan.
- 9. Project status at the time of evaluation:**
- 10. Needs:**
 - (a) Identified needs (as indicated in the original project document).
 - (b) Satisfied/realized needs (List needs fulfilled due to implementation of the project).

11. Results:

- (a) Expected Results (as indicated in the original project document).
- (b) Actual Results (indicate actual results achieved/attained from project implementation) during current year.
- (c) Actual results to date against overall project work plan.
- (d) Reasons for the variance (state the reasons for the difference between expected and actual results).
- (e) State corrective action(s) to be taken.

12. Outputs:

- (a) Expected Outputs (as indicated in the original project document).
- (b) Actual Outputs (List actual outputs resulting from project implementation emphasizing activities undertaken during current year)
- (c) Reasons for the variance (state reasons for the difference between expected and actual outputs) during current year.
- (d) Actual outputs to date against overall project work plan.
- (e) State corrective action(s) to be taken.

13. What are UNEP's substantive inputs to the project?

(Do not repeat UNEP's financial contribution).

14. What are the catalytic effects of the project on other agencies or governments?

- (a) Intellectual:
- (b) Financial

15. On Gender - describe

- (a) Project's contribution to the advancement of women with regard to their participation in ecosystem related provisions of Agenda 21, Chapter 24.
- (b) Sensitive activities carried out by the project, for example: level of participation in decision making process in the planning and development and implementation of the project and women's participation in capacity-building and awareness activities.

16. On Sustainability

Describe sustainability of the project in terms of: enabling environment (e.g. national or regional legislation and policies); institutional capacity (human resource and planning and management systems); and financial sustainability (reliability of funding sources).

17. Describe the problems encountered during project implementation:

<u>Problems:</u>	<u>Causes:</u>	<u>Consequences:</u>
(a) Substantial/Programmatic		
(b) Institutional		
(c) Financial		

18. Lessons learned from the achievement and/or weaknesses of the project:

19. Further follow-up action required:

- (a) Action Required:
- (b) Responsible unit(s):
- (c) Schedule:

20. Evaluated by:

Name and position of Evaluator:

Date: _____

Noted by:

Cooperating Agency/Supporting Representative:

Date: _____

21. Approved by:

Name of Programme Manager/Regional Director

Date: _____

ANNEX IX: Format for UNEP Half-yearly Progress Report

As at 30 June and 31 December

(Please attach a current inventory of outputs/Services when submitting this report)

1. Background Information

1.1 Project Number:

1.2 Project Title:

1.3 Division/Unit:

1.4 Coordinating Agency or Supporting Organization (if relevant):

1.5 Reporting Period (the six months covered by this report):

1.6 Relevant UNEP Programme of Work (2002-2003) Subprogramme No:

1.7 Staffing Details of Cooperating Agency/ Supporting Organization (Applies to personnel / experts/ consultants paid by the project budget):

Functional Title	Nationality	Object of Expenditure (1101, 1102, 1201, 1301 etc.)

Sub-Contracts (if relevant):

Name and Address of the Sub-Contractee	Object of expenditure (2101, 2201, 2301 etc.)

2. Project Status

2.1 Information on the delivery of outputs/services

	Output/Service (as listed in the approved project document)	Status (Complete/ Ongoing)	Description of work undertaken during the reporting period	Description of problems encountered; Issues that need to be addressed; Decisions/Actions to be taken
1.				
2.				
3.				

2.2 If the project is not on track, provide reasons and details of remedial action to be taken:

3. Discussion acknowledgment (To be completed by UNEP)

Project Coordinator's General Comments/Observations	First Supervising Officer's General Comments
Name: _____ Date: _____ Signature: _____ _____	Name: _____ Date: _____ Signature: _____ _____

Annex X: Inventory of Outputs/Services

a) Meetings (UNEP-convened meetings only)

No	Meeting Type (note 4)	Title	Venue	Dates	Convened by	Organized by	# of Participants	List attached Yes/No	Report issued as doc no	Language	Dated
1.											
2.											
3.											

List of Meeting Participants

No.	Name of the Participant	Nationality

b) Printed Materials

No	Type (note 5)	Title	Author(s)/Editor(s)	Publisher	Symbol	Publication Date	Distribution List Attached Yes/No
1.							
2.							
3.							

c) Technical Information / Public Information

No	Description	Date
1.		

2.		
3		

d) Technical Cooperation

No	Type (note 6)	Purpose	Venue	Duration	For Grants and Fellowships		
					Beneficiaries	Countries/Nationalities	Cost (in US\$)
1.							
2.							

e) Other Outputs/Services (e.g. Networking, Query-response, Participation in meetings etc.)

No	Description	Date
1.		
2.		
3.		

Note 1 Meeting types (Inter-governmental Meeting, Expert Group Meeting, Training Workshop/Seminar, Other)

Note 2 Material types (Report to Inter-governmental Meeting, Technical Publication, Technical Report, Other)

NOTE 3 TECHNICAL COOPERATION TYPE (GRANTS AND FELLOWSHIPS, ADVISOR SERVICES, STAFF MISSION, OTHERS)

ANNEX XI: TERMINAL REPORT FORMAT

TERMINAL REPORT

Implementing Organization _____

Project No.: _____

Project Title: _____

1. Project Needs and Results

Re-state the needs and results of the project.

2. Project activities

Describe the activities actually undertaken under the project, giving reasons **why some activities were not undertaken, if any.**

3. Project outputs

Compare the outputs generated with the ones listed in the project document.

List the actual outputs **produced but not included in previous Progress Reports** under the following headings

(Please tick appropriate box)

(a) **MEETINGS** (UNEP-convened meetings only)

Inter-governmental (IG) Mtg. Expert Group Mtg. Training Seminar/Workshop Others

Title: _____

Venue and dates _____

Convened by _____ Organized by _____

Report issued as doc. No/Symbol _____ Languages _____ Dated _____

For Training Seminar/Workshop, please indicate: No. of participants _____ and attach **annex** giving names and nationalities of participants.

(b) **PRINTED MATERIALS**

Report to IG Mtg. Technical Publication Technical Report Others

Title: _____

Author(s)/Editor(s) _____

Publisher _____

Symbol(UN/UNEP/ISBN/ISSN) _____

Date of publication _____

(When technical reports/publications have been distributed, attach **distribution list**)

(c) **TECHNICAL INFORMATION** **PUBLIC INFORMATION**

Description _____

Dates _____

(d) **TECHNICAL COOPERATION**

Grants and Fellowships Advisory Services
 Staff Missions Others (describe)

Purpose _____

Place and duration _____

For Grants/Fellowships, please indicate:

<u>Beneficiaries</u>	<u>Countries/Nationalities</u>	<u>Cost(in US\$)</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

(e) **OTHER OUTPUTS/SERVICES**

For example, Networking, Query-response, Participation in meetings etc.

4. **Use of outputs**
 State the use made of the outputs.
5. **Degree of achievement of the objectives/results**
 On the basis of facts obtained during the follow-up phase, describe how the project document outputs and their use were or were not instrumental in realizing the objectives/results of the project.

6. **Conclusions**

Enumerate the lessons learned during the project execution. Concentrate on the management of the project, indicating the principal factors, which determined success or failure in meeting the objectives set down in the project document.

7. **Recommendations**

Make recommendations to:

- (a) Improve effect and impact of similar projects in the future;
- (b) Indicate what further action might be needed to meet the project objectives/results.

8. **Non-expendable equipment (value over US\$1,500)**

Please attach to the terminal report a **final** inventory of all non-expendable equipment (if any) purchased under this project, indicating the following:

Date of purchase, description, serial number, quantity, cost, location and present condition, together with your **proposal** for the disposal of the said equipment.

ANNEX XII

FORMAT OF QUARTERLY PROJECT EXPENDITURE ACCOUNTS FOR COOPERATING AGENCIES

Quarterly project statement of allocation (budget), expenditure and balance (Expressed in US\$) covering the period.....to.

Project No. **Agency Name**

Project title:

Project commencing:(date) **Project ending:**(date)

Object of expenditure by UNEP budget Code	Project budget allocation for year.....		Total expenditure for quarter	Total unliquidated obligations*	Cumulative expenditure for year	Unspent balance of budget allocation for year.	
	m/m (1)	Amount (2)	(3)	(4)	m/m (5)	m/m (6)	Amount (2)-(5)
1100 Project Personnel							
1200 Consultants							
1300 Administrative support							
1400 Volunteers							
1600 Travel							
2100,2200,2300 Sub-contracts							
3100 Fellowships							
3200 Group Training							
3300 Meetings/conferences							
4100 Expendable equipment							
4200 Non-expendable equipment							
4300 Premises(rent)							
5100 Operation and maintenance of equipment							
5200 Reporting cost							
5300 Sundry							
5400 Hospitality and entertainment							
99 GRAND TOTAL							

*See breakdown of unliquidated obligations, by object of expenditure attached as **ANNEX 4B**

Signed: _____
Duly authorized official

NB: The expenditure should be reported in line with the specific object of expenditures as per project budget

ANNEX XIII
FORMAT OF QUARTERLY FINANCIAL STATEMENTS REPORTING UNLIQUIDATED OBLIGATIONS

Project No. _____

Agency Name: _____

Unliquidated obligations during _____
 (period covered)

Expressed in US\$

UNEP allocation	1100	1200	1300	1400	1600	2100	2200	2300	3100	3200	3300	4100	4200	4300	5100	5200	5300	5400	Total 99
TOTAL																			

NB: The unliquidated obligations should be reported in line with the specific object of expenditures as per project budget

ANNEX XIV: FORMAT FOR CASH ADVANCE STATEMENT

Cash advance statement

Statement of cash advance as at

And cash requirements for the quarter of

Name of cooperating agency/
Supporting organization _____
Project No. _____
Project title _____

I. Cash statement

1. Opening cash balance as at US\$ _____

2. Add: cash advances received:

Date	Amount
.....
.....
.....
.....

3. Total cash advanced to date US\$ _____

4. Less: total cumulative expenditures incurred US\$ (_____)

5. Closing cash balance as at US\$ _____

II. Cash requirements forecast

6. Estimated disbursements for quarter
ending US\$ _____

7. Less: closing cash balance (see item 5, above) US\$ (_____)

8. Total cash requirements for the
quarter US\$ _____

Prepared by _____ Request approved by _____

Duly authorized official of cooperating agency / supporting organization

ANNEX XV: UNEP INVENTORY OF NON-EXPENDABLE EQUIPMENT PURCHASED AGAINST UNEP PROJECTS

UNIT VALUE US\$ 1500 AND ABOVE AND ITEMS OF ATTRACTION

As at _____

Project No. _____

Project Title _____

Executing Agency: _____

Internal/SO/CA (UNEP use only) _____

FPMO (UNEP) use only) _____

Description	Serial No.	Date of Purchase	Original Price (US\$)	Present Condition	Location	Remarks/recommendation for disposal

The physical verification of the items was done by:

Name: _____

Signature: _____

Title: _____

Date: _____

**Annex XVI
Format for Report on Co-Financing**

Title of Project:							
Project Number:							
Name of Executing Agency:							
Project Duration:	From:		To:				
Reporting Period <i>(to be done annually):</i>							
Source of Cofinance	Cash Contributions			In-kind Contributions			Comments
	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	
Total	0	0	0	0	0	0	

Name:

Position:

Date:

All amounts in US dollars

Annex XVII
Endorsement letters from Governments

See attached files

Annex XVIII
UNEP Responses to GEF Council members comments

UNEP/DGEF Responses to the Comments on project
“Addressing transboundary concerns in the Volta River Basin and its downstream coastal
area”
from GEF Council Members: Sweden, USA, Germany

SWEDEN

COMMENT:

The Development goal of the project is to "address the transboundary major perceived problems and issues of the Volta Basin leading to the degradation of the environment as a result of human activities, by reducing those activities that lead to water scarcity and land and water degradation". In annex A of the document however, another development goal is given: "To enhance the ability of the countries to plan and manage the Volta catchment areas within their territories and aquatic resources and ecosystems on a sustainable basis". This is of course a complex and far-reaching goal. At the same time it indicates a defensive approach reminiscent of rather old-fashioned ideas of environmental protection, which contrasts to approaches applied in other joint river basin projects on the continent, where the key word is sustainable **management** coupled with sustainable **development**. The issue should not be to protect the environment alone, but to pursue the integration of environmental concerns with present and future development in the basin.

RESPONSE:

The Project considers **“an enhancement of the ability of the countries to plan and manage the Volta catchment areas within their territories and aquatic resources and ecosystems on a sustainable basis”** as a complex and ultimate goal only being reached through a long-term process.

To catalyze this process, the project will focus on some of the major environmental problems and issues of the basin leading to the degradation of the environment by human activities. This will be necessarily accompanied by actions, which will bring about the successful integration of improved land and water resource management practices on an area-wide basis.

An integrated approach being applied to this project shall ensure an integration of environmental concerns with a present and future development of the basin on a sustainable basis. This is a key need and a primary condition. This is *i.a.* stated in the Project Summary - *“The project recognizes the complex and interlinked nature of Volta River basin and aims to develop a more sectorally-coordinated management approach, based on IWRM, both at the national and the regional level, with a strong emphasis on an expanded role for all stakeholders within a participatory management framework, especially the private sector. The Project will demonstrate in a replicable manner, integrated land and water management strategies.”*

The ProDoc was amended as follows:

Par. 35.: The riparian countries of the Volta River basin need to carry out the activities that will ultimately aim to an enhancement of countries’ ability to plan and manage the Volta

catchment areas within their territories and aquatic resources and ecosystems on a sustainable basis.

Par. 36.: To satisfy this complex and long-term goal, the integration of environmental concerns with present and future development of the basin is a key need for the project which addresses the transboundary major perceived problems and issues of the Volta Basin leading to the degradation of the environment as a result of human activities, by reducing those activities that lead to water scarcity land and water degradation (LWD).

Par. 51.: The broad development objectives of this project is to address the transboundary major perceived problems and issues of the Volta Basin leading to the degradation of the environment as a result of human activities, by reducing those activities that lead to water scarcity land and water degradation (LWD), and to integrate environmental concerns with present and future development of the basin.

Par. 54.: The three principal components offer the greatest potential project benefits in terms of the integration of the environmental protection with the present and future development of the basin from both national and transboundary perspectives over the interval of the next four years.

Broad Development Goal

The broad development objectives of this project is to address the transboundary major perceived problems and issues of the Volta Basin leading to the degradation of the environment as a result of human activities, by reducing those activities that lead to water scarcity land and water degradation (LWD), and to integrate environmental concerns with present and future development of the basin.

Global Environmental Objectives

The global environmental objective of this project is to enhance the capacity of the countries to plan and manage the Volta catchment areas within their territories and aquatic resources and ecosystem in a sustainable basis.

COMMENT:

The following issues may need to be further clarified:

Under the heading country drivenness there is no information at all as to whether the project is in fact driven by the countries themselves. The text just specifies that consultations were made and how well the project fits with various programmes at country level. The extent of consultations, adherence and co-ordination with national activities are matters very different from actual ownership, which is in fact the most important factor for determining the sustainability of the programme. Who are the actual initiators, owners and drivers of this project?

RESPONSE:

In 1998, recognizing the need to address priority transboundary concerns in the basin, Ghana and its respective authorities proposed an initiative on integrated ecosystem management of the Volta River basin, which resulted in the GEF PDF-A grant awarded in 1999. At the Accra Workshop, which was held in 1999 as a part of the PDF-A grant activities, a working group comprising the six riparian countries (Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo) focused on the identification of the perceived water-related environmental problems. This regional inter-ministerial meeting resulted in the Accra Declaration, which was a statement formally agreeing to

collaborate on the integrated management of the Volta basin and strongly recommended the preparation of a project document seeking funds from GEF for this purpose.

Preparation of the present project brief, together with the preliminary TDA and SAP, was facilitated through a Global Environment Project Development Facility Block-B (GEF PDF-B) grant.

Country drivenness is further highlighted in following paragraph of ProDoc:

Par. 82.: The project is owned by the six riparian countries. In each country, there is a lead agency representing the government. Other relevant agencies in the countries give their support to the project through inter-ministerial coordination meetings and actions.

COMMENT:

The document quotes vulnerability of the national economies to global events as the most likely sustainability risk. Judging by experience from other similar projects however, the likelihood of the existing institutional capacity of participating institutions and organisations being too limited in relation to the objectives set for the project would constitute an even bigger risk.

RESPONSE:

The project addresses capacity building as a part of its objectives for its long-term sustainability.

Text of ProDoc is amended as follows:

Par. 64.: It is recognized that the key risk to the project sustainability is the capacity of existing institutions and organizations. Thus, the project addresses capacity building as a part of its objectives for its long-term sustainability.

COMMENT:

Related project

The project objectives and activities are similar to those of an IUCN project (proposed for Sida-funding) with the objective of improving water governance in the Volta River Basin through a consensus on key water management principles and institutionalized co-ordination mechanisms. The project, which has a water management agenda rather than an environmental approach, focuses on two of the Riparian countries; Ghana and Burkina Faso. It should be further explored how the two projects could complement and support each other. It is our understanding that contacts have been taken between IUCN and UNEP/GEF in Nairobi on this issue.

RESPONSE: IUCN is co-financing the GEF project with total allocation of 1,6 million over three years through the "Improving Water Governance in the Volta River Basin" project

The Project has also a strong sub-component related to a coordination of on-going and/or planned activities in the region.

USA

General comments to all projects submissions:

The U.S. reviewed all the May 2003 GEF work program projects keeping in mind the GEF-3 replenishment agreement that *"all projects must include clear and monitorable indicators, plans for monitoring and supervision, and identification of risks and other factors designed to improve quality at entry and to maximize impact. There should be a transparent system for monitoring of these indicators and outcomes and for informing the Council on an annual basis."* From reviewing the project summaries, the following projects fell short of expectations:

General recommendations/requirements for all projects submissions:

In the future, we would ask that the Secretariat not include in the work program any projects that do not meet those standards, and work together with the implementing and executing agencies to ensure that they understand their responsibilities. Failing that, the U.S. reserves the right to call for a postponement of consideration until the following Council meeting any project that does not meet the replenishment agreement standard on results measurement, beginning with the November 2003 work program.

COMMENT:

VOLTA:

○ *Volta River Basin Addressing Transboundary Concerns:* First two outcome indicators are output indicators, they will not measure whether the long-term objective would be met. Outcome and output indicators are not quantified.

RESPONSE:

General:

To track the short and long-term impacts of this project, the project will develop process indicators (e.g., policy, legal, institutional, etc. reforms), stress reduction indicators (e.g., reduced pollutant loads, fishing pressure, etc.), and environmental status indicators (e.g., cleaner waters/sediments, restored habitats, sustainably managed fisheries, etc.). The development of these indicators is part of the SAP process.

The ProDoc revised as follows:

Par. 101.: Working in concert with appropriate scientific and technical institutions and government agencies in the region and in line with emerging GEF policies, the project will develop a set of "environmental quality indicators" to track the short and long-term impacts of this project. Key environmental indicators will include process indicators (e.g., policy, legal, institutional, etc. reforms), stress reduction indicators (e.g., reduced pollutant loads, fishing pressure, etc.), and environmental status indicators (e.g., cleaner waters/sediments, restored habitats, sustainably managed fisheries, etc.). The development of these indicators is part of the SAP process.

Specific:

Based on USA specific comments, outcome and output indicators for long-term objective were amended in LogFrame Matrix as follows:

Long-term Objectives

Enhance the ability of the riparian countries to plan and manage the Volta catchment areas within their territories and aquatic resources and ecosystems on a sustainable basis, by achieving sustainable capacity and regional institutional frameworks for effective management; developing national and regional priorities; and effective regulatory, legal and policy frameworks as a basis for action as well as initiating national and regional measures to achieve sustainable ecosystem management.

Outcomes:

- **Ensured sustainability of regional coordination mechanism.**
- **Reduced water scarcity**
- **Prevented land and water degradation.**
- **Conserved biological diversity.**

Objectively verifiable indicators:

- **Sustainability of regional coordination mechanism ensured beyond project termination by year 4.**
- **Regional water agreements in place by year 4 to achieve adequate freshwater and groundwater quantity by 2012.**
- **Rate of land degradation is going to be reduced by 20% by 2012 and rate of coastal erosion is going to be reduced by 25% by 2012.**
- **Regional biodiversity strategy document prepared by year 3.**

Outputs:

- **Regional coordination mechanism established and concept for sustainability of RCU developed.**
- **Convention/protocol for the sustainable management of the Volta River Basin developed and endorsed.**
- **System of stakeholders participation, training, education and monitoring programmes developed.**
- **6 countries incorporated transboundary environmental concerns into their own plans.**

Objectively verifiable indicators:

- **Regional Coordination Unit set-up by end of year 1;**
- **Effective national and regional frameworks in place by year 3.**
- **Improved national and regional capacities for effective environmental management of land and water degradation by year 4.**
- **National plans to be revised annually.**

GERMANY

COMMENTS:

The proposal should be supported, but certain changes should be made.

- (Component 1) An increased effort to develop a concept to achieve sustainability of the proposed Regional Coordination Unit for project management and coordination, in particular the development of a funding mechanism beyond project termination.
- (Component 3) To increase the number of proposed three demonstration projects to six. The latter will avoid possible conflicts concerning decision making between the six riparian countries.

Recommendation: It is recommended to take the above comments into account during further project planning and implementation.

RESPONSE to the comment on “component 1” :

To achieve a sustainability of mechanisms established during the project implementation is a crucial condition to measure a long-term impact of the project. Several detailed activities focus on this multiply condition.

The ProDoc is amended as follows:

Under par. 55 and 56, and further in relevant Annex II:

Establish the Project Management and Coordination mechanism through a Regional Coordination Unit to be hosted within the Ghana Environmental Protection Agency in Accra, and consisting of a Project Coordinator, a Scientific Officer and a bilingual Administrative Assistant/Secretary, and develop a concept to achieve sustainability of the RCU beyond project termination; ...

A focus on a development of concept to achieve sustainability of the project management and coordination mechanism in particular the development of a funding mechanism beyond project termination will significantly contribute to the stability of established overarching mechanisms and frameworks.

RESPONSE to the comment on “component 3” :

Participating countries has fully understood (and agreed during the final meeting on the Project Brief preparation) a transboundary nature of the Project. Therefore demonstration projects will be seen and implemented as transboundary actions. Each project may involve one or more countries. However, it is recognised there is a need to increase a project number in terms to develop further initiated national and regional measures to address transboundary environmental concerns. Co-financing partners will facilitate this process.

The ProDoc is amended as follows:

Under par. 57 and 58, and further in relevant Annex II:

Implement three **transboundary** demonstration projects in identified hotspots addressing the following: water conservation, sewage treatment, coastal erosion and sediment bypassing, or wetlands protection. Hotspots and sensitive areas identified through the African Process will be considered for demonstration project sites. Integrate the private sector into activities of this project, as appropriate, as sub-contractor, consultant, or co-sponsor of specific activities. **In addition, prepare concepts for six national demonstration project proposals.**

The project proposes 3 replicable **transboundary** demonstration projects ... **In addition to the implementation of three replicable transboundary demonstration projects, concepts for six national demonstration projects will be prepared for a support of co-financing partners.**

ANNEX XIX: DEMONSTRATION PROJECTS

I DEMONSTRATION PROJECT # DP1

Demonstration Project # DP1

GEF/UNEP Volta River Basin Project

Theme # 2: Improved flow releases from dams

A. Project title: Joint management of a flow release warning system in the Sourou river valley (tributary of Black Volta or Mouhoun) / *Gestion conjointe d'un système d'annonce de lâchers d'eau dans la vallée du Sourou (Affluent de la Volta Noire ou Mouhoun)*

B. Participating countries:

Country having submitted the project: Mali

Partner country: Burkina Faso

C. Executing Body: UNOPS and UCC-Water

D. Cost of Project:	USD 278 400
GEF Funding (specific to demo project DP2):	USD 85 000
Co-financing (from Mali & Burkina Faso):	USD 192 400

Besides the above the demo projects will be implemented with the assistance from and linkage with the other activities in the project, which is costed at US\$48,450

Abbreviations and acronyms

AMVS	Autorité de Mise en Valeur de la vallée du Sourou
CEB	Communauté Electrique du Bénin
CID-Eau	Centre d'Information et de Documentation sur l'Eau (BKF)
DEIE	Direction des Etudes et de l'Information sur l'Eau (MLI)
DGIRH	Direction Générale de l'Inventaire des Ressources Hydrauliques (BKF)
DNH	Direction Nationale de l'Hydraulique (MLI)
DRAHRH	Direction Régionale de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques (BKF)
DRHE	Direction Régionale de l'Hydraulique et de l'Energie (MLI)
ECOWAS	Economic Community of the West Africa States
EU	European Union
GCLME	Guinea Current Large Marine Ecosystem
GEF	Global Environment Facility
GIRE	French for IWRM (Gestion intégrée des ressources en eau)
GIWA	Global International Waters Assessment
IWRM	Integrated Water Resources Management
MAHRH	Ministère de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques (BKF)
NFP	National Focal Point
NPD	National Project Director
PAGIRE	Plan d'Action de Gestion Intégrée des ressources en Eau (BKF)
PAGTV-SG	Programme d'Appui a la Gestion des Terroirs Villageois du Sono Gondo (MLI)
PDF	Project Development Fund
SAP	Strategic Action Programme
SIDA	Swedish International Development Agency
SNIEau	Système National d'Information sur l'Eau (BKF)
TDA	Transboundary Diagnostic Analysis
UCC-Water	UNEP Collaborating Centre on Water and Environment
UCIEau	Unité de Collecte de l'Information sur l'Eau (BKF)
UNEP	United Nations Environment Programme
VRBP	UNEP/GEF Volta River Basin Project (overall project)
WARAP-IWRM	West Africa Regional Action Plan of Integrated Water Resources Management

E. Linkage to problems and hot spots identified in the Project Brief

As a part of activities in the project preparation phase supported by a GEF PDF-B grant, national reports were produced which provided information on the problems relating to the priority transboundary environmental concerns in the Volta Basin. The information contained in the national reports and the outputs from meetings of regional coordinators were put together and a Causal Chain Analysis, a preliminary TDA and a preliminary SAP were prepared. The preliminary TDA identified the following list of major perceived problems and issues. The main existing concerns identified in the basin are:

- Land degradation
- Water scarcity
- Loss of biodiversity
- Flooding
- Water-borne diseases
- Growth of aquatic weeds
- Coastal erosion
- Water quality degradation

In addition there are two emerging problems/issues:

- Urbanization
- Increase in industrial and mining activities

The relevance of the list of concerns given above was confirmed by further studies carried out in the framework of the GEF/UNEP GIWA Project (*Global International Waters Assessment*) where the sub region 42 is the GCLME (Guinea Current Large Marine Ecosystem) encompassing the marine part and its International tributaries, especially the Volta River Basin.

To address these concerns, three principal components and their associated objectives were developed for the project based on the areas of threats identified by the preliminary TDA and SAP:

Component 1: Build capacity and create a regional institutional framework for the effective management of the Volta Basin. Part of this component is now covered by the EU project supporting the establishment of a Volta River Basin Organisation. This project is financed by the EU Water Initiative and is executed by the ECOWAS Water Resources Coordination Unit. The project budget (USD 1,25 million) is considered as a cofinancing of the full GEF/UNEP Volta River Basin Project.

Component 2: Develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas.

Component 3: Initiate national and regional measures to combat transboundary environmental degradation in the Volta Basin. The objective is to address the most critical transboundary concerns (“hot spots”) through the implementation of demonstration projects and the creation of partnerships with the private sector and with other projects.

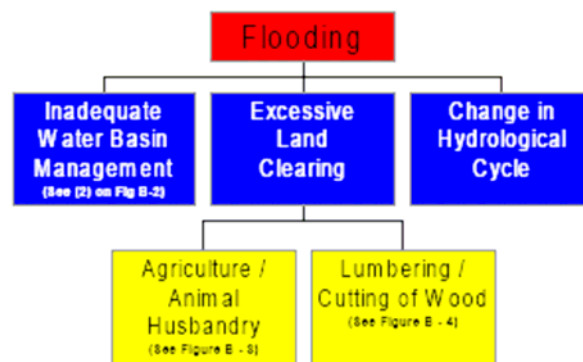
The Component 3, Activity 3.2 aims to “*Develop and implement three replicable demonstration projects*” under the main themes identified in the Preliminary TDA (the numbering of the themes is neither a ranking of importance, nor an order of priority):

1. Water efficiency and conservation
2. Improvement of flow releases from dams
3. Sanitation
4. Protection of ecosystems
5. Coastal erosion

The present demonstration project comply with the theme # 2 above. Demonstration project 1 was proposed by Mali and was elaborated jointly with Burkina Faso. It refers to the causal chain analysis of flooding, in which inadequate water basin management is quoted as one of the causes to flooding (figure 1).

**Figure 1. Flooding
Causal Chain Analysis**

Source: Preliminary Transboundary Diagnostic Analysis. Final Report, Dec. 2002. Annex B (Causal Chain Analysis). Figure B-12 (Flooding)



The insufficient exchange of information between riparian countries – and more generally the absence of management bodies dedicated to international issues – are two key issues of inadequate water basin management.

This demonstration project aims to establish a co-operation between Mali and Burkina Faso around the Sourou River Valley, which is currently impacted by water releases from the Lery dam. The project therefore comply well with the method and findings of the preparatory phase (PDF B) as they are presented in the Project Brief and its annexes.

F. Linkage to National/Regional Priorities and Programmes

In 1998, Burkina Faso and Mali committed themselves to develop national IWRM Action Plans as recommended at the international level. This strong political commitment was renewed in 2002 in Johannesburg and in 2003 in Ouagadougou, with the following outcomes:

- In Mali: the launching in 2001 of a diagnostic study of the water sector, validated in January 2002 by a national workshop ; the establishment of an IWRM Unit under the DNH in Bamako; the launching of a study aiming to define the IWRM Planning Process; various thematic studies in 2004. Moreover, it was decided that a National IWRM Action Plan will be available by the end of 2006. This Plan is supported by Canada (through GWP) and other donors.
- In Burkina Faso: the IWRM Planning Process (IWRM Programme) was launched in April 1999. The new Water Code (*Loi d’orientation relative à la gestion de l’eau*) was adopted in February 2001. The synthesis document « *Etat des lieux des ressources en eau du Burkina Faso et de leur cadre de gestion* » was published in May 2001. Finally, the National IWRM Action Plan (*Plan d’Action pour la Gestion Intégrée des Ressources en Eau, PAGIRE*) was adopted in March 2003; the full process was supported by Danida and other donors.

In 2000 Burkina Faso and Mali (with the other ECOWAS Countries plus Mauritania) adopted the West Africa Regional Action Plan of IWRM. The Programme of this plan is entitled “Creation or revitalisation of collaboration frameworks between riparian countries for the management of shared basins”. It includes the creation of new international agreements and management bodies for the river basins where they have been established (e.g. Volta River Basin and its international tributaries).

Demonstration project DP1 is in line with the implementation of the following programmes or projects:

- In Mali: the IWRM policy on knowledge, monitoring and evaluation of water resources;
- In Burkina Faso: the “National Water Information System”, SNIEau” which is one of the eight domains of action of the PAGIRE:
- At the regional level, the Programme of the WARAP-IWRM.
- Moreover, the demonstration project DP1 will pave the way for the two other components of the VRBP: Component 1 (Build capacity and create a regional institutional framework for the effective management of the Volta Basin) and Component 2 (Develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal area).

G. Selection process and approval of the demonstration projects

The project documents resulting from the preparatory phase of the project (PDF-B) have already been endorsed by the GEF National Focal Points and the governments of the six riparian countries as well as by UNEP. The following documents have been quoted:

- The Preliminary Transboundary Diagnostic Analysis (Preliminary TDA);
- The Preliminary Strategic Action Plan for Integrated Management of the Basin (Preliminary SAP);
- The UNEP/GEF Project Document (and its annexes) defining the full project.

The full project description was submitted to the GEF Council in May 2003 and approved with some reservations, one of these reservations was the necessity to identify and precisely describe the three to four demonstration projects foreseen in the project document. The elaboration of these demo projects was initially anticipated to take place before implementation of the full project imposing a problem for the project start since it was seen as an important part of the project. Therefore, the GEF has mobilized additional funds through UNEP to identify and formulate the three or four foreseen demonstration projects.

The selection and elaboration of the demonstration projects has been made through a transparent process started early March 2005 by a call to the countries to propose project ideas. The countries were also asked to propose CVs of National Consultants, qualified for the further development of the three to four demo projects, which would be selected.

The process of development of the demonstration projects involved:

- The Directors of the National Focal Points of the VRB Project;
- The Regional Coordinator and the National Coordinators of the VRB Project;
- The National Consultants proposed by the countries and appointed by UCC-Water;
- The experts of UCC-Water acting through a mandate of UNEP;
- The Programme Officer in charge of international waters in the UNEP/GEF Division.

According to the indications given by GEF/UNEP, the selection of the Demonstration Projects was guided by the following criteria:

- A. Global, regional, sub-regional and plurinational nature of projects
- B. Specificity / originality
- C. Participatory nature
- D. Gender approach
- E. Programmatic approach
- F. Sustainable Development Perspective
- G. Capacity Building
- H. Maximum utilisation of regional expertise
- I. High rate of replication
- J. Sustainability of activities
- K. Funding and Co-Financing
- L. Promotion of sharing of experiences and learning
- M. Performance criteria
- N. Thematic balance (among the themes recommended in the Project Brief)
- O. Geographical balance (between the six Volta River Basin Countries).
- P. No overlapping with other past, ongoing or future projects.

The above 16 criteria have neither the same weight, nor the same restrictive strength. Some of them are indicative, others are recommendations, while others again are more directive, in particular, the multi-national nature, the compliance with the themes identified by the TDA, etc.

A total of 19 ideas for demonstration projects were proposed by the six Volta River Basin countries. The 19 proposals received were scored, using for each criteria a numerical ranking adapted from the GIWA scoring. However, two criteria do not apply to each project considered individually, but must be seen as a general criteria to be respected during the final selection:

- The criteria of theme balance (N)
- The criteria of geographical balance (O).

Four demonstration project ideas were selected by a common agreement between UNEP/GEF, UCC-Water and the Regional Coordinator. The ideas selected were developed into demonstration project briefs by national consultants assisted by UCC-Water.

The four demonstration project briefs were presented and discussed at a regional validation workshop, held in Lomé, Togo (22-23 February 2006). Three demonstration projects (including this one) were selected at the Workshop to be forwarded to UNEP and GEF in order to complete the Project Brief and to close the preparatory phase leading to the implementation of the full project.. These demonstration projects are re-numbered as follows:

Demonstration Project DP1: **Joint management of a flow release warning system in the Sourou river valley (Mali – Burkina Faso)** (present project)

Demonstration Project DP2: **Installing and comparing technological models of waste water treatment in the Cities of Kara (Togo) and Natitingou (Benin)**

Demonstration Project DP3: **Restoring and protecting the river beds of the Black Volta and its tributaries through participative campaigns of reforestation (Côte d’Ivoire – Ghana)**

The fourth project (associating Ghana and Togo) is entitled “Fresh groundwater storage and movement between SE Ghana and SW Togo and agronomic practices to safeguard the shallow freshwater lenses from salinisation”. This project was considered as relevant by the Lomé Workshop and proposed for subsequent execution if the appropriate financing can be mobilised.

The present version of the demonstration project DP1 was finalised by UCC-Water, in collaboration with the National Coordinators and the National Consultants. Moreover, recommendations from the Lomé Workshop are taken into account in present project document.

H. Project rationale – Objectives, outputs and activities

H.1. Background

The Sourou catchment: presentation and hydro-agricultural development

The project area is the upper basin of the Black Volta (Mouhoun) and more precisely the Sourou catchment (shared by Mali and Burkina Faso), which is a sub-basin of the Black Volta.

The upper basin of Mouhoun is located in the same sandstone formations as Comoe River but it flows towards the North-East. At the level of the Sourou confluence, the Mouhoun basin (including its main tributaries : Plandi, Kou, Voun Hou) has a surface of 20 978 km² and provides an average flow of 25 m³/s.

The Sourou river drains the old Gondo lake plain with a catchment area of 15 392 km² in Mali. The basin is in the Sahel zone with low rainfall and limited water flow. The Sourou is a very special river being at the same time an affluent and a defluent of Mouhoun. During the low water season in the Mouhoun the river is fed by the Sourou, which acts then like a normal affluent. But during the high Mouhoun flow the opposite phenomenon is observed: the Mouhoun flows into the Sourou River, which acts then like a defluent.

Since 1984, Burkina Faso have tried to mobilise the necessary water resources for the development of arable land in the Sourou valley and the upper valley of Mouhoun. To achieve this aim, a work of diversion of the Mouhoun water into the Sourou was carried out upstream of the Sourou-Mouhoun confluence (at the village of Lery) allowing the stock of more than 250 million m³ of water in the valley of the Sourou.

The realisation of the Lery dam allowed the development of irrigated parcels in the Sourou valley in Burkina Faso as well as in Mali. The availability of water along the Sourou River led to a demographic increase in the area, which induced the diversification and the development of activities mainly focused on agriculture, cattle growing, fishery and forestry.

The increased human and animal pressures exerted on the environment in the area involved a strong hydro-ecological disturbance, intensified by the many periods of drought observed during the last forty years. It should be

noted that the environment in the Malian part of the area is characterized by a continuous degradation of the natural resources, thus involving a progressive and generalized deterioration of the living conditions of the local population.

After the construction of the diversion channel from Mouhoun to Sourou, flooding became more frequent in the area. The local population are now facing the problem of the arable grounds being flooded and, consequently, the loss of crops in the Sourou valley.

The gates of the Lery dam are operated by Burkina Faso, which can control the water level upstream of the Mouhoun-Sourou junction and thus the water level in the Malian part of the Sourou basin. Moreover, this hydraulic work makes it possible to control downstream released flows. It is thus a key regulation work in the water management system of the area.

Good dam management is essential to avoiding unexpected floodings in the areas along the Sourou River. First of all, this requires a better knowledge and monitoring of the water levels in the area and secondly, a better co-operation between the authorities in charge of water in the two countries. This is the aim of present demonstration project, whose principal objective is a sustainable hydro-ecological management of the Sourou catchment.

Present knowledge and monitoring situation of the water resources in the Sourou area

The density of the hydrometric network in Mali part of the Volta basin is very low. Only three stations were installed along the Sourou river by the PAGTV-SG. Unfortunately these stations were not followed regularly and there are no flow measurements. Moreover, only a few localised measurements of the water level are available. Thus, no quantitative evaluation of surface water in the basin is currently possible due to insufficient chronological hydrological data. It should be noted that the few limited surface water measurements carried out within the framework of specific projects were stopped due to the budget shortage of the body entrusted to manage the assets of these projects.

Concerning flood management, Mali has neither a monitoring, nor an early warning system for floods in the Sourou area. It is thus proposed, within the framework of this demonstration project, to complete and support the efforts already made by the Governments to rehabilitate the hydrometric stations and provide them with modern equipment making it possible to follow the water levels in real time in order to realise reliable forecasts within a suitable time.

H.2. Rationale for the demo project

The Authorities of Mali and Burkina Faso have to address three concerns in the Sourou catchment:

1. Equitable share of water resources;
2. Prevention of flood hazards; and
3. Prevention of pollution risks.

This demonstration project addresses only one of the concerns above (flooding) but the co-operation established through the demonstration project will allow the other concerns to be addressed as well. The outcomes of, and lessons learned from this demonstration project will be valuable and applicable in other areas of the Volta river basin, as well as outside the basin.

Share the water resources in an equitable manner. The water of the reservoir created by the Lery dam and the derivation channel will be soon insufficient to satisfy the increased demand of water along Mouhoun and Sourou (for food production, water supply, industry, etc.). In view of a balanced use of the available water resource, it is essential to organise a concerted management between the various stakeholders, both at the national level and the bilateral level.

Prevent flooding hazards It should be noted that during the years of “good” rainfall (like in 1989), the risks of flooding were high in the Sourou catchment. The lack of information and co-operation in the management of flows (in particular the operation of the gates of Lery dam) was the cause of the flooding of vast surfaces of crops. To prevent flooding, it is necessary to improve the current system by a better knowledge – in real time – of the water levels. This has to be applied not only to the Mouhoun river but also to the Sourou river. It is also necessary to improve the management of the gates of Lery dam.

Prevent risks of pollution. The Sourou catchment is an area of intense activities (agriculture, pastoral, aquaculture and forestry). The water quality problems of the basin are mainly caused by:

- Fertilisers and pesticides;
- Livestock farming; and
- Human activities (particularly the negative behaviours and practices of the local populations).

To assess the effect of pollution preventing regulations, it is necessary to set up a water quality monitoring network. This will not be made under the present project but the operation and the decision process will be facilitated by the cooperation bodies established as part of the demo project.

H.3. Objectives, outputs and activities

The overall objective is to prevent/mitigate the risks of flooding in the Sourou catchment through a joint management system operated by the two riparian countries, Mali and Burkina Faso. This general objective will be reached through three immediate objectives:

1. Immediate objective n° 1: To improve the monitoring and thereby the understanding of the surface water resources in the Sourou area (including flows and flood forecasting);
2. Immediate objective n° 2: To establish a joint management body to assess the hydrological data, design the of early warning system and to improve the safe management of the Lery dam gates;
3. Immediate objective n° 3: To replicate the demo project methodology and outcomes and disseminate the lessons learned.

The specific activities financed by the demo project are expected to:

- complement the current activities carried out by the two countries in the field of water resources monitoring under the regional coordination of ECOWAS;
- carry out the following activities planned in the overall VRBP project:
 - under component 1: i.a. development of a database and environmental monitoring system protocols, exchange of data and information, capacity building...
 - under component 2: i.a. elaboration of management plans for addressing priority transboundary issues, development of basin wide agreements for sharing water resources and for control of river flow regimes...
- contribute to strengthening the capacity of the national and local water resources managers.

It is assumed that the general execution and management costs are covered by the core project. This includes field missions for the Regional Coordinator and the two National Coordinators, an evaluation mission if deemed necessary, the dissemination of results, etc.

Results and activities under the immediate objective n° 1: To improve the monitoring and thereby the understanding of the surface water resources in the Sourou area (including flows and flood forecasting).

Expected result n° R1.1. The national and local administrations are strengthened and involved in the demo project

Activity n° A1.1.1. Development and signing of a convention of collaboration with DNH Mali, involving the local administration.

Activity n° A1.1.2. Development and signing of a convention of collaboration with DGIRH Burkina Faso, involving the local administration.

Expected result n° R1.2. A strengthened and optimized hydrological monitoring network (the activities under this result will be financed under component 1, Activity 1.5 of the overall VRB Project)

Activity n° A1.2.1. Establishment of a new hydrometric station at Laharisso/Tourouba

Activity n° A1.2.2. Rehabilitation of the station of Kouri along the Mouhoun

Activity n° A1.2.3. Upgrading of the stations of Samendeni, Nwokuy upstream and Nwokuy downstream with a system of data tele-transmission (GSM + readers of scales)

Expected result n° R1.3. The system for data collection, transmission, storage, treatment and publication is strengthened and made operational (the activities A1.3.1 and A1.3.2 will be financed by the countries as part of their mandate of water resources monitoring and evaluation, and under information exchange on water, e.g. the web site of Burkina Faso: <http://www.eauburkina.bf>).

Activity n° A1.3.1. Training of civil servants in the two countries

Activity n° A1.3.2. Design and implementation of annual water resources monitoring programmes

Activity n° A1.3.3. Development of a mathematical hydraulic model for the Mouhoun and Sourou rivers serving as a sub-model of the overall Volta River Basin model (this activity is financed under component 1 of the overall VRB Project).

Results and activities under the immediate objective n° 2: To establish a joint management body to assess the hydrological data, design the of early warning system and to improve the safe management of the Lery dam gates.

Expected result n° R2.1. Documentation and evaluation of impacts from floods

Activity n° A2.1.1. Elaboration of a draft baseline description of the Mali part of the Sourou catchment.

Activity n° A2.1.2. Elaboration of a draft baseline description of the Burkina Faso part of the Sourou catchment.

Expected result n° R2.2. A framework convention for the joint management of the Sourou basin is approved and implemented by the two countries.

Activity n° A2.2.1. Set up of a bilateral pilot Committee co-chaired by DNH and DGIRH to formulate the agreement between the two countries (including the institutionalisation of the bilateral Committee).

Activity n° A2.2.2. Approval of the agreement between the two countries by the Ministers in charge of water.

Activity n° A2.2.3. Organisation of bilateral Committee meetings.

Activity n° A2.2.4. Implementation of decisions taken by the bilateral Committee, including the following sub-activities:

- Sub-contract with local NGOs to inform the local populations about the early warning system for floods (operation and benefits);
- Training of the Lery dam operators in dam management;

Results and activities under the immediate objective n° 3: To replicate the demo project methodology and outcomes and disseminate the lessons learned.

This immediate objective and the associated results and activities are mentioned for the record only since these activities will not be completed within the life of the demonstration project. The corresponding activities will be carried out after the demo project and will be covered by the component n° 1 of the overall VRB Project or by other projects inside or outside the Volta basin.

Expected result n° R3.1. The initial design of the replication of the demo project completed.

Activity n° A3.1.1. Replication of the demo project at site n° 1 (e.g. Kompienga dam in the Volta basin).

Activity n° A3.1.2. Replication of the demo project at site n° 2 (e.g. Nangbeto).

I. Project Management Structure and Accountability

The management structure of the present demonstration project is in compliance with the management of the overall project, notwithstanding the necessary adjustments to the institutional arrangements as described in the project document to comply with the process of establishing a basin organization for the Volta river basin and to comply also with the responsibilities of the Executing agencies. The general organization chart of the demonstration projects is shown in figure 2 below.

Figure 2. General organisational flow chart of the overall project and the demonstration projects

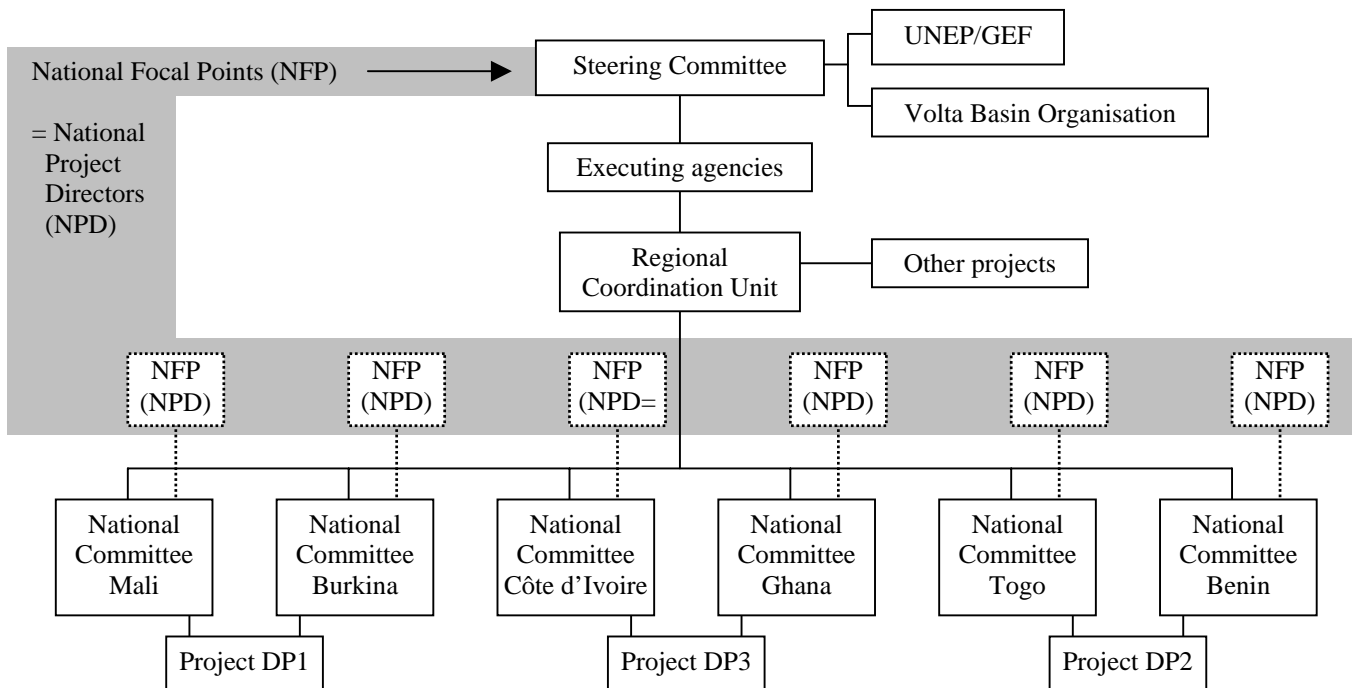
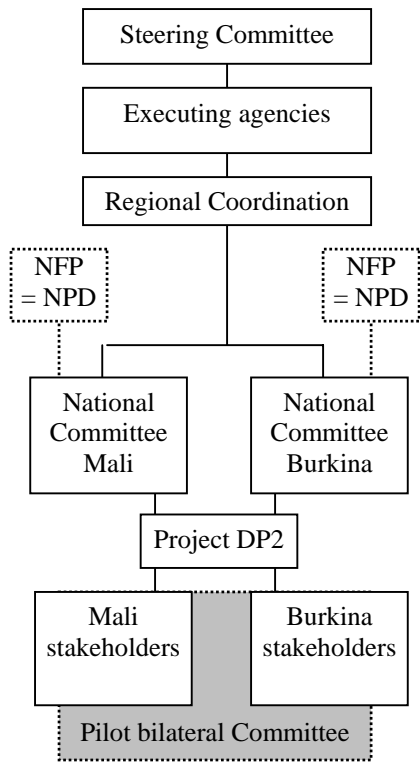


Figure 3. Organisation chart of the DP2

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The project management structure of DP1 includes:

- One Project Manager (part time) under the responsibility of the Mali Administration. To assure homogeneity with the two other demo projects, the Project Manager will be placed under the authority of the Regional Coordination when it comes to administration and finances. On other relevant aspects of the project (scientific, technical social, etc.), the Project Manager will collaborate with the National Coordinators.
- One Deputy Project Manager (part time) under the responsibility of the Burkina Faso Administration and working under the same conditions.
- The support staff will include an Accounting Secretary (part time) under the responsibility of the Mali Administration and drivers (as requested) under the responsibility of the two water administrations, respectively.
- National consultant(s) for establishment of the baseline situation and staff for register hydrometric scales.
- International consultant(s) for the development of a mathematical model covering the Mouhoun and Sourou area.
- Sub-contractors working under conventions of collaboration (water administrations, NGOs)
- A bilateral Committee with stakeholders from Mali and Burkina Faso (mainly from national and local institutions, the Sourou basin users, NGOs from the water and environment sectors). The secretariat of the bilateral Committee will be established by the Project Manager. The lessons learned from the bilateral Committee are expected to be applicable in other parts of the Volta River Basin, too.

In Mali, the project relevant institutions mainly include, but are not limited to:

- The Ministry of Water and Mines via the DNH in Bamako and the DRHE in Mopti;
- The Ministry of Environment via the “Department of Pollution and Nuisances”;
- The Ministry of Agriculture through its Regional Department in Mopti;
- The Ministry of Livestock and Fisheries via its Regional Department in Mopti; and
- The future “National Agency of the Volta River Basin”.

In Burkina Faso, the project relevant institutions mainly include, but are not limited to:

- The Ministry of Agriculture, Water and Fisheries (MAHRH) through the DGIRH at the national level and the DRAHRH at the regional level. The relevant services of DGIRH for the demo project are the “Direction des Etudes et d’Information sur l’Eau” and the “Système National Information sur l’Eau”;
- The Ministry of Environment and Health(MECV);
- The Sourou Valley Development Authority (AMVS);
- The future Management Committee of the Mouhoun River Basin;
- The future Mouhou River Basin Agency; and
- The Local Water Committee of Sourou.

J. Stakeholders and Beneficiaries

The relevant stakeholders of the DP1 project are identified as:

- The institutions quoted here above;
- The water users in the Sourou catchment: farmers, stock breeders, fishermen, NGOs and private operators in the area having activities in relation to water resources on both sides of the border;
- The riparian populations of the upper Mouhoun and Sourou valleys in Burkina Faso and in Mali.

The anticipated effects of the project are mainly a reduction of flood hazards, and the involvement of water users in the decision making process for a better water resources management.

K. Long-term Sustainability Strategy

The long term strategy for sustainability is based on the following considerations:

- The population of the Sourou area is expecting a long term solution to their flooding problems. Their involvement in the bilateral Committee is a guarantee of sustainability of actors, working methods and outcomes of the demo project.
- The project will be supported by political commitment at all levels: country level, basin level, and regional level. The IWRM planning process is ongoing at the national, basin as well as regional levels.
- Compliance with the other components of the VRB overall project ensuring sustainability.
- Cooperation between the two countries, through the establishment of a small bilateral Committee, which, in the future, will become a sub-Committee of the overall basin management Committee.
- The outcomes of the project are expected to be applicable in three important fields.
 - Monitoring and assessment of the quantity and quality of water resources in the overall Volta River Basin (a long term activity);
 - Elaboration of the Volta River Basin Convention (including exchange of data between riparian countries), which will pave the way for a long term joint management of the basin;
 - Replication of the project outcomes in other parts of the Volta River Basin as well as in other areas.

L. Replicability

The possibility of applying the methods and outputs of the demo projects in other relevant cases is a very important aspect. However, the replication of the demo projects is not part of the project itself but will take place after the completion of the demo project and will be financed by other budgets.

As part of the demo project DP1 a bilateral Committee dealing with the specific problems of flooding and early warning will be established. In the long term the bilateral Committee may be mandated to cover other aspects of water resources management and can become a sub-body under the overall Volta basin organisation.

Two suitable cases for replication have already been identified: one in the Volta River Basin, the other one in another international river basin of the sub-region:

- Joint management of the Komienga dam by Burkina Faso and Togo. In the present situation, the water releases from Komienga dam cause sudden flows which impact the Togo territory downstream;
- Joint management of the Nangbeto dam by Togo and Bénin. The Nangbeto dam is situated on the Mono river in Togo. The water releases have already resulted in impacts from flooding in the Bénin territory downstream. The Nangbeto dam is operated by the “Communauté Electrique du Bénin” (CEB), which is an international body established a long time ago by Togo and Bénin. But the mandate of CEB is limited to hydropower production and should be mandated to cover water resources management.

Other sites for replication can easily be found within or without the Volta River Basin.

M. Monitoring and Evaluation Process

Monitoring and evaluation will be made in the form of reporting, visual inspection, and results from workshops and seminars. The details are provided in the project matrix below.

M.1. Project monitoring

The day to day monitoring of the project will be made by the executing agencies of the overall VRB Project, through the Regional Coordination and through the National Coordinators of Mali and Burkina Faso. The monitoring will be based on periodic reports elaborated under the responsibility of the Project Manager in collaboration with other people involved in the project (Deputy Manager, Regional Coordinator, national Coordinators, etc.):

- Progress report (quarterly);
- Financial report (idem);
- Proceedings from meetings of the bilateral Committee;
- Mission reports and field visit reports (upon necessity and opportunity).

To ensure a uniform reporting the Project Coordinating Unit will develop a standard format.

M.2. Project evaluation

The project evaluation will be discussed during the inception phase of the overall VRB Project. A structured evaluation strategy is normally not necessary for a small scale demonstration project like this one. However, a provision is made in the budget to ensure the evaluation of the project, if deemed necessary. The cost of the evaluation will be charged on the Core budget.

N. Co-Funding

Co-funding is provided by the country counterparts.

Some ongoing actions under the IWRM Action Planning process in Burkina Faso (PAGIRE) and Mali (notably the establishment of National water Information Systems) are significant contributions to the demo project and are considered as such in the budget. However, they are not regarded as critical contributions and if they should fail to be implemented during the implementation of the demo project, this will not be an obstacle to fulfil the objectives.

Part of the activities will be implemented within the framework of the overall VRB Project (Core project). They are referenced as “Core project” in the budget annexed.

Tables and figures

- Logical Matrix Framework
- Detailed budget
- Summary budget by component output
- Work Plan
- Map of the Sourou sub-basin
- Map of the Mouhoun (Black Volta) river basin

Logical framework

	Narrative description	Objectively Verifiable Indicators	Means of verification	Assumptions and risks
Overall objective	To prevent/mitigate the risks of flooding in the Sourou catchment through a joint management system operated by the two riparian countries, Mali and Burkina Faso	Frequency of flooding reduced ¹ Importance of damages understood and acknowledged	Operational management system reports	It is assumed that the political commitment and co-financing is present
Immediate objective n° 1	To improve the monitoring and thereby the understanding of the surface water resources in the Sourou area (including flows and flood forecasting)	Hydrometric stations are operational Data collection and storage is made regularly	Site inspections Reports of the data collection and storage Databases	
Immediate objective n° 2	To establish a joint management body to assess the hydrological data, design the of early warning system and to improve the safe management of the Lery dam gates	An international agreement is signed by the two countries The management body is operational and its decisions are applied A hydraulic model established and personnel trained	Agreement protocol Proceedings And Reports of the steering group meetings	
Immediate objective n° 3	To replicate the demo project methodology and outcomes and disseminate the lessons learned	At least two suitable cases identified Similar activities are designed on these sites, taking into consideration lessons learnt	Reports Agreements to carry out the replication Proceedings	
Results corresponding to immediate objective n° 1				
R11	The national and local administrations are strengthened and involved in the demo project	Additional equipment Around 50 staff trained	Conventions of collaboration Reports	Appropriately skilled personnel available
R12	A strengthened and optimized hydrological monitoring network	Hydrometric stations are installed, retrofitted or equipped for tele-transmission of data	Stations rehabilitated or established Reports Data collected	Appropriately skilled personnel available
R13	The system for data collection, transmission, storage, treatment and publication is strengthened and made operational	Personnel is trained Annual programmes are designed and implemented A mathematical model is developed	Reports Programmes Model outputs	Appropriately skilled personnel available
Results corresponding to immediate objective n° 2				
R21	Documentation and evaluation of impacts from floods	Baseline appraisals made by national consultants	Reports	Skilled consultants available
R22	A framework convention for the joint management of the Sourou basin is approved and implemented by the two countries.	Convention signed Bilateral Committee operational	Convention Proceedings Reports	Commitment and agreement between the two countries on modalities for flood management
Results corresponding to immediate objective n° 3t				
R31	Replication of the demo project at site n° 1 (e.g. Kompienga dam in the Volta basin).	Replication is designed on site 1	Reports of the design	For record only. This objective of replication will be fulfilled by the overall project and/or other
R32	The demo project is replicated on site 2	Replication is designed on site 2	Reports of the design	

¹ The baseline and monitoring activities for this indicator should be established and agreed upon under the component 2.1, particularly at the initial stage of the demo project implementation.

AOB	AOB	AOB	AOB	projects.
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Activities

Activities corresponding to Result R.1.1: The national and local administrations are strengthened and involved in the demo project	
A.1.1.1	Development and signing of a convention of collaboration with DNH Mali, involving the local administration.
A.1.1.2	Development and signing of a convention of collaboration with DGIRH Burkina Faso, involving the local administration.
Activities corresponding to Result R.1.2: A strengthened and optimized hydrological monitoring network	
A.1.2.1	Establishment of a new hydrometric station at Laharisso/Tourouba
A.1.2.2	Rehabilitation of the station of Kouri along the Mouhoun
A.1.2.3	Upgrading of the stations of Samendeni, Nwokuy upstream and Nwokuy downstream with a system of data tele-transmission (GSM + readers of scales)
Activities corresponding to Result R.1.3: The system for data collection, transmission, storage, treatment and publication is strengthened and made operational	
A.1.3.1	Training of civil servants in the two countries
A.1.3.2	Design and implementation of annual water resources monitoring programmes
A.1.3.3	Development of a mathematical hydraulic model for the Mouhoun and Sourou rivers serving as a sub-model of the overall Volta River Basin model (this activity is financed under component 1 of the overall VRB Project).
Activities corresponding to Result R.2.1: Documentation and evaluation of impacts from floods	
A.2.1.1	Elaboration of a draft baseline description of the Mali part of the Sourou catchment.
A.2.1.2	Elaboration of a draft baseline description of the Burkina Faso part of the Sourou catchment.
Activities corresponding to Result R.2.2: A framework convention for the joint management of the Sourou basin is approved and implemented by the two countries.	
A.2.2.1	Set up of a bilateral pilot Committee co-chaired by DNH and DGIRH to formulate the agreement between the two countries (including the institutionalisation of the bilateral Committee).
A.2.2.2	Approval of the agreement between the two countries by the Ministers in charge of water.
A.2.2.3	Organisation of bilateral Committee meetings.
A.2.2.4	Implementation of decisions taken by the bilateral Committee, including the following sub-activities: A.2.2.4.a Sub-contract with local NGOs to inform the local populations about the early warning system for floods (operation and benefits) A.2.2.4.b Training of the Lery dam operators in dam management; A.2.2.4.c AOB (upon request depending on additional co-financing mobilised during the demo project implementation)
Activities corresponding to Result R.3.1: The demo project is replicated	
A.3.1.1	Replication is carried out in site 1 (e.g. Kompienga)
A.3.1.2	Replication of the demo project at site n° 2. (e.g. Nangbeto)
A.3.1.3	AOB

Detailed budget (USD 1,00 = CF 535)
Summary budget by component output

Expected outcomes		GEF Financing		Counterparts		Total
		Specific DP1	Core project	In funds	In kind	
R0	The demo project is operational		18 000,00		72 400,00	90 400,00
R11	The national and local administrations are strengthened and involved in the project	40 000,00			40 000,00	80 000,00
R12	The hydrological monitoring network is strengthened and optimized		15 450,00			15 450,00
R13	The system of data storage, treatment and publication is strengthened and operational		15 000,00	10 000,00	50 000,00	75 000,00
R21	The issues and damages of floods are documented and evaluated	6 000,00				6 000,00
R22	A framework convention for the joint management of the Sourou basin is approved and implemented by the two countries	39 000,00			20 000,00	59 000,00
R31	The demo project is replicated on site 1	–	For record	To be defined with the Authorities of the countries where are situated the sites for replication		–
R32	The demo project is replicated on site 2	–	For record			–
R3n	Etc.	–	Etc.			–
	Total	85 000,00	48 450,00	10 000,00	182 400,00	325 850,00

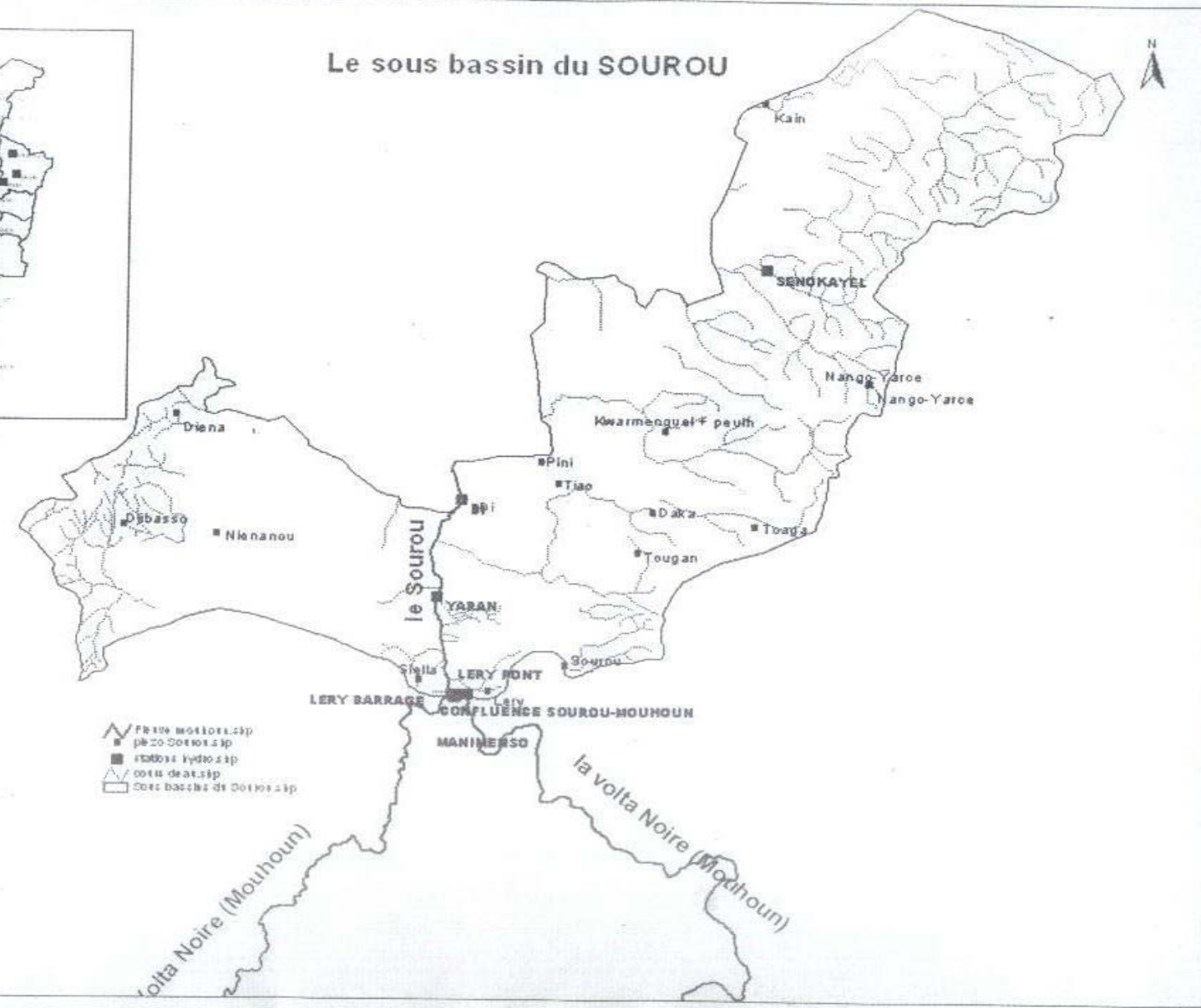
Work plan

ACTIVITIES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
R11	A.1.1.1	Convention of collaboration with DNH Mali	■	■	■																				
	A.1.1.2	Convention of collaboration with DGIRH Burkina Faso	■	■	■																				
R12	A.1.2.1	New hydrometric station at Laharisso/Tourouba		■	■																				
	A.1.2.2	Retrofit the station of Kouri along the Mouhoun		■	■																				
	A.1.2.3	Equip 3 stations at Samendeni and Nwokuy 1 and 2		■	■																				
R13	A.1.3.1	Train the civil servants of the two countries			■	■	■																		
	A.1.3.2	Design/implement annual water monitoring programmes			■	■	■																		
	A.1.3.3	Develop a mathematical model of the Mouhoun and Sourou			■	■	■																		
R21	A.2.1.1	Baseline appraisal of the Mali part of the Sourou area	■																						
	A.2.1.2	Baseline appraisal of the BKF part of the Sourou area	■																						
R22	A.2.2.1	Set up a pilot bilateral Committee			■	■																			
	A.2.2.2	Make approve the agreement between the two countries					■																		
	A.2.2.3	Hold meetings of the bilateral Committee					■					■							■						■
	A.2.2.4	Apply decisions of the bilateral Committee:							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	A.2.2.4.a	Inform the populations on the early warning system										■	■	■	■	■	■	■	■	■	■	■	■	■	■
	A.2.2.4.b	Train the operators of Lery dam gates										■	■	■											
	A.2.2.4.c	Etc. (upon request)																							
R31	A.3.1.1	Replication is carried out on site 1 (e.g. Kompienga)																							
	A.3.1.2	Replication is carried out on site 2 (e.g. Nangbeto)																							
	A.3.1.n	Etc.																							

Post demo-project activities



Le sous bassin du SOUROU



- ▲ Poste motrice.sip
- poste de pompage.sip
- station hydro.sip
- poste de at.sip
- poste bacches de pompage.sip

II DEMONSTRATION PROJECT # DP2

GEF/UNEP Volta River Basin Project

Addressing transboundary concerns in the Volta river basin and its downstream coastal area

Theme #1: Water efficiency and conservation

Theme 3: Sanitation

A. Project title: Installing and comparing technological models of wastewater treatment in the towns of Kara (Togo) and Natitingou (Benin) / Mise en place et comparaison de modèles de technologie pour la gestion des eaux résiduaires dans les villes de Kara (Togo) et Natitingou (Bénin)

B. Participating countries:

Country having submitted the project: Togo

Partner country: Benin

C. Executing body: UNOPS and UCC-Water

D. Cost of Project:

USD 373 000

GEF Funding (specific to demonstration project DP2): USD 250 000

Co-financing (from Benin and Togo): USD 123 000

Besides the above, the other activities in the project would contribute to the implementation of the demo project, which are costed at USD 18 000 (budgeted in main Project)

Abbreviations and acronyms

ABE	Agence Béninoise de l'Environnement
AP	Approches Participatives
BOAD	Banque Ouest Africaine pour le Développement
CDQ	Comité de Développement de Quartier
Citafric	"Cités d'Afrique" Agence de Développement Urbain et Municipal
CREPA	Centre Régional pour l'Eau Potable et l'Assainissement à faible coût
CVD	Comité Villageois de Développement
EIE	Etude d'Impact sur l'Environnement
EMO	Equipe de Mise en Œuvre du Projet
EU	European Union
GEF	Global Environment Facility
MDGs	Millennium Development Goals
NGOs	Non Governmental Organisations
PNAE	Plan National d'Action pour l'Environnement
PNHA	Politique Nationale d'Hygiène et d'Assainissement
PNS	Politique Nationale de Santé
PPO	Planification des Projets par Objectifs
SIAAP	Syndicat Inter Départemental pour l'Assainissement de l'Agglomération Parisienne
SONEB	Société Nationale des Eaux du Bénin
TdE	Société Togolaise des Eaux
UCC-Water	UNEP Collaborating Centre on Water and Environment
UNEP	United Nations Environment Programme
VRBP	Volta River Basin Project

E. Linkage to problems and hot spots identified in the Project Brief

As part of the activities in the project preparation phase supported by a GEF PDF-B grant, national reports were produced providing information on the problems relating to the priority transboundary environmental concerns in the Volta Basin. The information contained in the national reports and the outputs of the meetings of regional coordinators were put together and a Causal Chain Analysis, a preliminary TDA and a preliminary SAP were prepared. The preliminary TDA identified the following list of major perceived problems and issues. The main existing concerns identified in the basin are:

- Land degradation
- Water scarcity
- Loss of biodiversity
- Flooding
- Water-borne diseases
- Growth of aquatic weeds
- Coastal erosion
- Water quality degradation

In addition there are two emerging problems/issues:

- Urbanization
- Increase in Industrial and Mining Activities

The relevance of the list of concerns given above was confirmed by further studies carried out in the framework of the GEF/UNEP GIWA Project (*Global International Waters Assessment*), where sub region 42 is the GCLME (Guinea Current Large Marine Ecosystem) encompassing the marine part and its International tributaries, especially the Volta River Basin.

To address these concerns, three principal components and their associated objectives were developed for the project based on the areas of threats identified by the preliminary TDA and SAP:

Component 1: Build capacity and create a regional institutional framework for the effective management of the Volta Basin. This component is now handled by the EU project supporting the establishment of a Volta River Basin Organisation. The project is being financed within the frame of the EU Water Initiative and is executed by the ECOWAS Water Resources Coordination Unit. Its budget (USD 1.25 million) is considered as a co-financing of the full GEF/UNEP Volta River Basin Project.

Component 2: Develop regional policy and legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas.

Component 3: Initiate national and regional measures to combat transboundary environmental degradation in the Volta Basin. The objective is to address the most critical transboundary concerns (“hot spots”) through the implementation of demonstration projects and the creation of partnerships with the private sector and with other projects.

The Component 3, Activity 3.2 consists of “*Developing and implementing three replicable demonstration projects*” under the main themes identified in the Preliminary TDA (the numbering of the themes is neither a ranking of importance, nor an order of priority):

1. Water efficiency and conservation
2. Improve of flow releases from dams
3. Sanitation
4. Protection of ecosystems
5. Coastal erosion

This demonstration project fits with the themes #1 and 3 here above. It was proposed by Togo and was elaborated jointly with Benin. It refers to the causal chain analysis of water quality degradation featuring in the annexes to the Project Brief. One of the causes of water degradation is the absence of sewage systems (figure 1). Water quality degradation is one of the causes of water-born diseases, as shown by figure 2. It is also a source of nutrients which *inter alia* facilitate the invasion of aquatic weeds.

Figure 1. Water quality degradation – Causal Chain Analysis

Source: Preliminary Transboundary Diagnostic Analysis. Final Report, Dec. 2002. Annex B (Causal Chain Analysis). Figure B-16

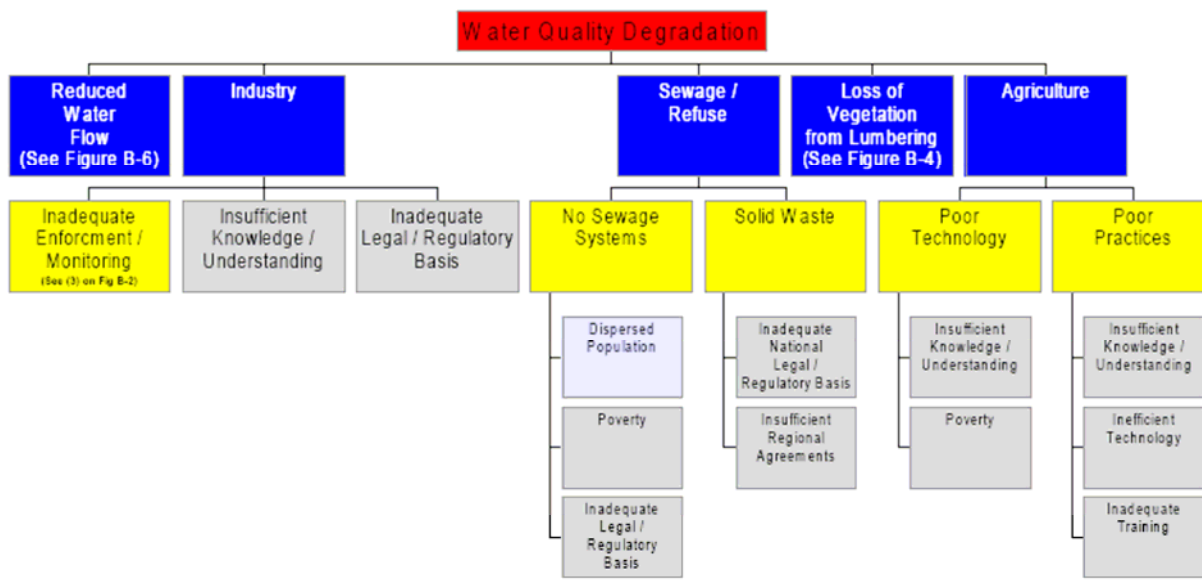
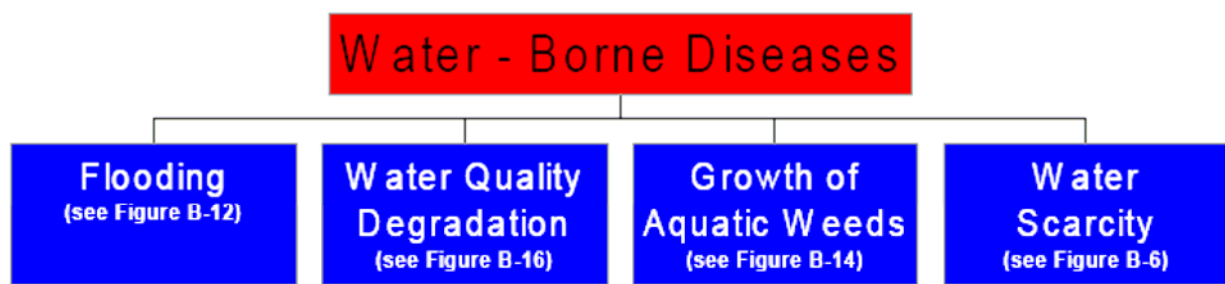


Figure 2. Water borne diseases – Causal Chain Analysis

Source: Preliminary Transboundary Diagnostic Analysis. Final Report, Dec. 2002. Annex B (Causal Chain Analysis). Figure B-13



F. Linkage to National Priorities and Programmes

F.1. General

As regards the environment, the national policies of Togo and Benin have the same general objectives: a rational management of the environment to improve the living conditions of the populations, in the perspective of a sustainable development. Togo and Benin are signatories of the main agreements on global environment.

In 1998, Togo and Benin committed themselves to develop national IWRM processes such as it is recommended at the international level, while adapting it to their realities. This strong political commitment was renewed in 2002 in Johannesburg and in 2003 in Ouagadougou.

In 2000 Togo and Benin (together with the other ECOWAS Countries plus Mauritania) adopted the West Africa Regional Action Plan of IWRM. The Programme n° 5 of this plan is entitled “Creation or revitalisation of collaboration frameworks between riparian countries for the management of shared basins”. It includes the creation of new international agreements and management bodies for the river basins not yet organised (e.g. Volta River Basin and its international tributaries).

The two countries subscribed to the Millennium Development Goals (MDGs), whose objective n° 9 is: (i) to halve the proportion of people not having access to safe drinking water and (ii) to integrate sanitation into the strategies of water resources management.

Togo and Benin are Member States of the Regional Center for Drinking Water and Sanitation at low cost (CREPA²), whose principal concern is the development, capitalization, and sensitization of technologies and operational strategies of drinking water supply, basic hygiene, and sanitation. CREPA is recognized at the international level for its competences and its experience with demonstration projects in the field of water supply, hygiene, and basic sanitation.

As regards the environmental protection, the two States are developing laws and policies: the Environment Code for Togo and the Framework Law on Environment for Benin, the Codes of Public Health, the Water Codes, and policy documents like the National Environmental Action Plan (NEAP) for Togo, the National Health Policies, the National Policies of Hygiene and Sanitation, the National Policy of Urban Mobility for Benin, etc.

Concerning the transfer of power to cities, the law on decentralisation is already operational in Benin. In Togo the process of adoption of the law on decentralisation and local liberty is ongoing.

Many programs are engaged, including the development of master plans of sanitation, the master plans of city planning, urbanism, housing, decentralisation, etc., strategic action plans for cities (taking account of the decentralization policy), etc. At the end of 2005, Togo created a "Ministry for the City" responsible for the urban development in the country.

This whole process – linking together environment, water and sanitation, living conditions, health and principle of subsidiarity – aims to: (i) mitigate the environmental degradation and alleviate its socio-economic costs; (ii) improve the living conditions of populations and make them participate in the decision-making process within the frame of the general objective of poverty reduction.

F.2. Sanitation

In Togo, funds from the West Africa Development Bank (BOAD) made it possible to undertake a technico-economic study of the rehabilitation of roads, hydraulic works of storm water drainage, installation of latrines, as well as an environmental study in seven medium size cities, including Kara. This study is coordinated by Citafric (national agency for urban and municipal development). The final wastewater treatment component is not really addressed by this study. Therefore, this demonstration project will only partly meet the expectations as regards the final treatment of wastewater.

Within the framework of the decentralised co-operation, a discussion is ongoing between the Town councillors of Kara and the Inter-departmental syndicate for sanitation of Paris and its suburbs (SIAAP) to initiate studies aiming at working out a project of sewage system. In addition, attention is turned towards an increase in septic tank coverage in the municipalities (which is no more than 25 %) allowing consequently the installation of a sewage network leading, if possible, to a modern wastewater treatment plant. The present tendencies show the possibility of micro-projects adapted specifically to some residential zones.

In Natitingou, some limited actions are ongoing in accordance with the master plans of urban planning (updated in 2004) and sanitation. In the same way, the development of the master plan of regional planning in the forthcoming months will provide the city of Natitingou with a framework of reference, which can be used as "spinal column" to solve its problems of sanitation. Nevertheless, nothing is yet engaged in the wastewater treatment.

G. Selection process and endorsement of the demonstration projects

The documents resulting from the preparatory phase of the overall project (PDF-B) are already endorsed by the GEF National Focal Points and the governments of the six riparian countries as well as by UNEP. These are the following documents:

- The Preliminary Transboundary Diagnostic Analysis (Preliminary TDA);
- The Preliminary Strategic Action Plan for Integrated Management of the Basin (Preliminary SAP);
- The UNEP/GEF Project Document (and its annexes) defining the full project.

²The CREPA member countries are: Benin, Burundi, Burkina Faso, Chad, Côte d'Ivoire, Cameroon, Central African Republic, Congo, Gabon, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Rwanda, Senegal, Togo.

The full project has been submitted to the GEF Council in May 2003 and approved with some reservations, among which the necessity to identify and precisely describe the three to four demonstration projects foreseen in the project document. The elaboration of these demonstration projects was initially anticipated to take place at the stage of implementation of the full project, imposing a problem for the project start since it was seen as an important part of the project which was not yet defined. Therefore, the GEF has mobilized additional funds through UNEP to identify and formulate the three or four foreseen demonstration projects.

The selection and elaboration of the demonstration projects was made through a transparent process started early March 2005 by a call to the countries to propose project ideas. The countries were also asked to propose CVs of National Consultants, qualified for the further development of the three to four demonstration projects, which would be selected.

The process of development of the demonstration projects involved:

- The Directors of the National Focal Points of the VRB Project;
- The Regional Coordinator and the National Coordinators of the VRB Project;
- The National Consultants proposed by the countries and appointed by UCC-Water;
- The experts of UCC-Water acting through a mandate of UNEP;
- The Programme Officer in charge of International Waters in the UNEP/GEF Division.

According to the indications given by UNEP/GEF, the selection of the Demonstration Projects was guided by the following criteria:

1. Global, regional, sub-regional, and plurinational nature of projects
2. Specificity / originality
3. Participatory nature
4. Gender approach
5. Programmatic approach
6. Sustainable Development Perspective
7. Capacity Building
8. Maximum utilisation of regional expertise
9. High rate of replication
10. Sustainability of activities
11. Funding and Co-Financing
12. Promotion of sharing of experiences and learning
13. Performance criteria
14. Thematic balance (among the themes recommended in the Project Brief)
15. Geographical balance (between the six Volta River Basin Countries).
16. No overlapping with other past, ongoing, or future projects

As one can see, the 16 criteria above have neither all the same weight, nor the same restrictive strength. Some of them are indicative, others are recommendations, others again are more directive, in particular, the plurinational nature, the compliance with the themes identified by the TDA, etc.

19 ideas of demonstration projects were proposed by the six countries of the Volta River Basin. The 19 proposals received were scored, using, for each criteria, a numerical ranking adapted from the GIWA scoring. However, two criteria do not apply to each project considered individually, but must be seen as general criteria that the final selection, as a whole, has to respect:

- The criteria of theme balance (N)
- The criteria of geographical balance (O).

Four demonstration project ideas were selected by common agreement between UNEP/GEF, UCC-Water, and the Regional Coordinator. The ideas selected were developed into demonstration Project Briefs by national consultants assisted by UCC-Water.

The four demonstration project briefs were presented and discussed at a regional validation workshop, held in Lomé, Togo (22-23 February 2006). Three demonstration projects were selected at the Lomé Workshop, to be forwarded to UNEP and GEF in order to complete the Project Brief and to close the preparatory phase leading to the start of the full project. They are re-numbered as follows:

Demonstration Project DP1: **Joint management of a flow release warning system in the Sourou river valley (Mali – Burkina Faso)**

Demonstration Project DP2: **Installing and comparing technological models of waste water treatment in the towns of Kara, Togo and Natitingou, Benin (the present project)**

Demonstration Project DP3: **Restoring and protecting the river beds of the Black Volta and its tributaries through participative campaigns of reforestation (Côte d'Ivoire – Ghana)**

The fourth project (associating Ghana and Togo) is entitled “Fresh groundwater storage and movement between SE Ghana and SW Togo and agronomic practices to safeguard the shallow freshwater lenses from salinisation”. This project was considered as relevant by the Lomé Workshop and proposed for subsequent execution, if the appropriate financing can be mobilised.

The present version of the demonstration project DP2 (April 2006) was finalised by UCC-Water in collaboration with the National Coordinators and the National Consultants. It takes into account the recommendations of the Lomé Workshop.

H. Project rationale – Objectives, outputs and activities

H.1. Background

The Kara town (~ 50 000 inhabitants) and the Natitingou town (~ 40 000 inhabitants) are located in North-East Togo and in North-West Benin respectively, on both sides of the border between the two countries. In the region, the annual rainfall ranges from 1000 to 1200 mm.

Sanitation issues are not specific to these towns. The VRB Project Brief stresses that they are generalised to all medium size towns in the Volta River Basin. However, the two towns selected for this demonstration project represent a typical case because the problems observed in the two towns show a high level of diversity and severity:

- No collective sewage system;
- Very few houses equipped with individual sewage systems (their design does not respect the basic rules and presents risks of groundwater pollution);
- No treatment of wastewater and other liquid effluents (from various sources: domestic, craft activities, industries, agriculture, etc.);
- Incomplete and poorly maintained storm water drainage system (moreover, the system - when it exists - is used for the discharge of domestic wastewater or as solid wastes dumping sites); and
- Direct discharge into the Volta river tributaries of substances resulting from the cleaning of latrines and septic tanks.

The consequence of all these problems is the degradation of the environment, particularly the water quality, with multiple negative effects:

- Degradation of the life conditions of the population (hygiene, etc)
- Proliferation of vectors causing water borne diseases like malaria, diarrhoea, cholera, bilharziasis, etc.;
- Endemism of some diseases like cholera and typhoid fever (in 2003 Kara reported one third of the 103 severe cases registered in Togo); and
- Urban erosion and transport of nutrients to rivers, facilitating the proliferation of invasive aquatic weeds.

Faced with the propagation of water borne diseases like typhoid fever, the Authorities of Kara planned to immediately find a safe final destination for various wastes (solid and liquids) in order to avoid exposition of inhabitants to medical hazards. For the moment, the municipal authorities could only identify one site, which has not been installed with equipments for the discharge of wastewater resulting from emptying of septic tanks. On the other hand, an enclosed dumping system was created for the domestic solid wastes.

In Natitingou, the Town councillors, and even the State technical administrations – although conscious of the extent of the difficulties related to the absence of systems for sewage and storm water drainage – struggle to find adequate solutions. Even if the technical solutions exist and are well known by the State technical administrations, the mobilization of necessary financial resources remains to be an issue. Moreover, populations have difficulties in understanding and accepting the concepts of basic sanitation (latrines, septic tanks, etc.). The situation does not differ in Kara.

The financial restrictions do not make it possible in the immediate future to consider the realization of the water drainage work. It is rather possible, according to municipal Authorities, to address, as soon as possible, the effluents, which are currently discharged in an uncoordinated way at non suitable places. The sludge resulting from the emptying of latrines and septic tanks is currently poured at the periphery of the cities and leaching of such wastewater also leads to increased pollution of soils and water. As a result, there is an increased frequency of water borne diseases due to consumption of contaminated food and/or water. These diseases can be extended to the zones downstream of the sites of discharge.

Huge storms are frequent in the zones of Kara and Natitingou resulting in streaming, soil degradation by erosion, and transport of sediments and pollutants to the rivers crossing the two cities (Kara, Perma, Sinaissiré, Yapao). The consequence is siltation in rivers and reservoirs and modification of their hydraulic regime with risks of flooding and loss of capacity. It is a typical transboundary problem since the sediments from Natitingou are carried out towards Togo.

Faced with these challenges and difficulties, the municipal authorities of Kara initiated and carried out a number of joint actions with the population. Development Village Committees (CVD) and District Development Committees (CDQ) were established in liaison with the Chiefs of districts and the Heads of the city technical services. Several visits in the field and working sessions were also organised. It is within this framework that the SIAAP is carrying out work with the Town Councillors of Kara in order to improve the coverage of septic tanks and also to create or reinforce the wastewater and storm water collecting system. Concerning storm water and latrines, the studies undertaken by Citafric are ongoing, with the financing by the West African Bank of Development (BOAD) to quantify works to be made in this direction.

In Kara, the Consultative Group, which may set up to manage the crisis of epidemic typhoid fever, identified some sites for the discharge of effluents from the emptying of septic tanks. These sites are subject to discussion and investigation in view of the construction of the treatment plant. Unfortunately, for financial reasons, no installation has been made so far. The consequence is transfer of pollutants: cleaning of the septic tanks leads to contamination of soils and waters.

The choice of the sites of discharge already indicates the will of the local Authorities to start appropriate actions as soon as possible in favour of the protection of the environment and population. The pre-selection of sites made in Kara was guided by the following considerations:

- Location at less than 15 km from the City centre but away from residential areas;
- Not to be located on the banks or at immediate proximity of the rivers draining the City;
- Make it possible to extend the plant at short, medium or long terms ;
- Appropriate topography and geology; and
- Climatic conditions.

In Natitingou, the network of storm water drainage is very limited (approximately 10 000 meters linear of gutters) and there is a great lack of infrastructures for sanitation. This situation gives way to the pollution of the rivers located near the city (Perma, Sinaissiré and Yapao) along which a hydropower plant is installed. These problems contribute to the deterioration of the living conditions of the populations of the city itself but also of the villages downstream.

This project demonstrating the installation of a low cost technology of wastewater treatment is thus a priority compared to the various problems referred to above. It aims at meeting a major need: to equip the towns of Kara and Natitingou with an adequate treatment system for domestic wastewater and sludge resulting from the emptying of the septic tanks and latrines.

Appropriate technology

Any complete wastewater treatment process includes the following steps:

- Preliminary treatment;
- Primary treatment;
- Secondary treatment; and
- Complementary or tertiary treatment.

The secondary treatment calls for appropriate technologies like biological filter, activated sludge, biological disks, lagooning.

The systems using activated sludge or biological disks make it possible to deal with large quantity of effluents but require a great technological control and induce high operating costs. Biological filter (bacterial bed) requires much care to avoid repeated sealing of slag, even more for communities where technicians are not yet trained to this type of installations.

It is therefore recommended to forecast a technology which will not give troubles to beneficiaries at the implementation stage.

Taking account of these considerations, the choice should be made based on the most appropriate technology, i.e. lagooning. The discussion remains open on the type of lagooning: simple, microphytes, macrophytes. At the stage of the demo project development, it is impossible to decide and the final selection will be made on the basis of bio-chemical analyses of the effluents to treat. Whatever the type of lagooning, the effluents will be provided by cesspool emptiers.

Whatever the system it will also be necessary to involve the beneficiaries in the process. The participation of stakeholders will fit with the promotion of income generating activities and will increase the use of emptying services by the population. Nowadays, less than 20 % of the population uses emptying services by cesspools. The objective is to increase this ratio.

H.2. Objectives, expected results and activities

General objective

Restore the water quality and improve the living and health conditions of the populations of Kara (Togo) and Natitingou (Benin) through the adoption of appropriate technology of wastewater treatment

Immediate objectives

1. Immediate objective n° 1: Develop integrated programmes associated with sanitation, reduction of water borne diseases and poverty alleviation, in collaboration with the Town Councillors and with the involvement of populations through the local NGOs;
2. Immediate objective n° 2: Equip the towns of Kara and Natitingou with appropriate systems of collecting and treatment for wastewater and other effluents and develop their capacities in these matters;
3. Immediate objective n° 3: Monitoring of the effects (on water environment and population) of a better sanitation system.

Post project objective

4. Post-project objective n° 4: Replication of the project in other towns having the same concerns.

It is assumed that the activities entering the general execution and implementation of the core projects are covered by the core budget (component 1). This includes the missions to the field of the Regional Coordinator and the two National Coordinators, the evaluation mission, if deemed necessary, and the dissemination of results, etc.

Results and activities under the immediate objective n° 1: Develop integrated programmes associated with sanitation, reduction of water borne diseases and poverty alleviation, in collaboration with the Town Councillors and with the involvement of populations through the local NGOs

- | | |
|---------------------------------|--|
| Expected result n° R1.1. | The demonstration project management bodies are established and function |
| Activity n° A1.1.1. | Negotiate, sign and implement a convention of collaboration with the Cites of Kara and Natitingou, with the approval of the Togo and Benin Governments |
| Activity n° A1.1.2. | Negotiate, sign and implement a convention of collaboration with local NGOs exerting respectively in the regions of Kara and Natitingou |

Activity n° A1.1.3. Negotiate, sign and implement a convention of collaboration with national water quality laboratories

Activity n° A1.1.4. Define, order and install the complementary equipment in the two Cities

Activity n° A1.1.5. Monitoring of the demonstration project by the Officials of the overall project

The conventions will stipulate the roles of the various operators in the demonstration project and the detailed budgets. They will also stipulate: (i) the composition of the Bilateral Project Committee and (ii) the staff involved in the demonstration project and the conditions of their interventions.

Expected result n° R1.2. The practices and behaviours favourable to the protection of water quality and the promotion of human health and are supported and promoted

Activity n° A1.2.1. Assessment of the situation in Kara and Natitingou at the beginning of the demonstration project

Activity n° A1.2.2. Training and capacity building:

- Training of the Technical staff of the two Cities
- On site training of the operators of the sanitation plants
- Workshop on micro-treatment plants

Activity n° A1.2.3. Workshop on public participation

Activity n° A1.2.4. Sensitisation campaigns with the support of local NGOs

Results and activities under the immediate objective n° 2: Equip the cities of Kara and Natitingou with appropriate systems of collect and treatment plants for wastewater and other effluents and develop their capacities in these matters

Expected result n° R2.1. The Cities of Kara and Natitingou are both equipped with pilot microphytes lagoons for the sanitation of wastewater

Activity n° A2.1.1. Site investigation

Activity n° A2.1.2. Construction of the two sanitation plants by the two Cities

Expected result n° R2.2. At least 50% of wastewater (from domestic and commercial sources) are collected and treated in the sanitation plants

Activity n° A2.2.1. Operation of the treatment plants (including the definition of the long term operation procedures by the City Councillors)

Results and activities under the immediate objective n° 3: Monitoring of the effects (on water environment and persons) of a better sanitation system

Expected result n° R3.1. The demonstration project is monitored (will be followed up on the long term by the two Cities during the post project phase)

Activity n° A3.1.1. Monitoring (this activity will be followed up on the long term by the two Cities after the completion of the demonstration project)

Results and activities under the post-project objective n° 4:Replication of the demonstration project

(For record only) This objective will be fulfilled either by the overall projects (if it is possible during the implementation phase) or in the frame of other projects after completion of the overall project.

Expected result n° R4.1. The demonstration project is replicated on site 1

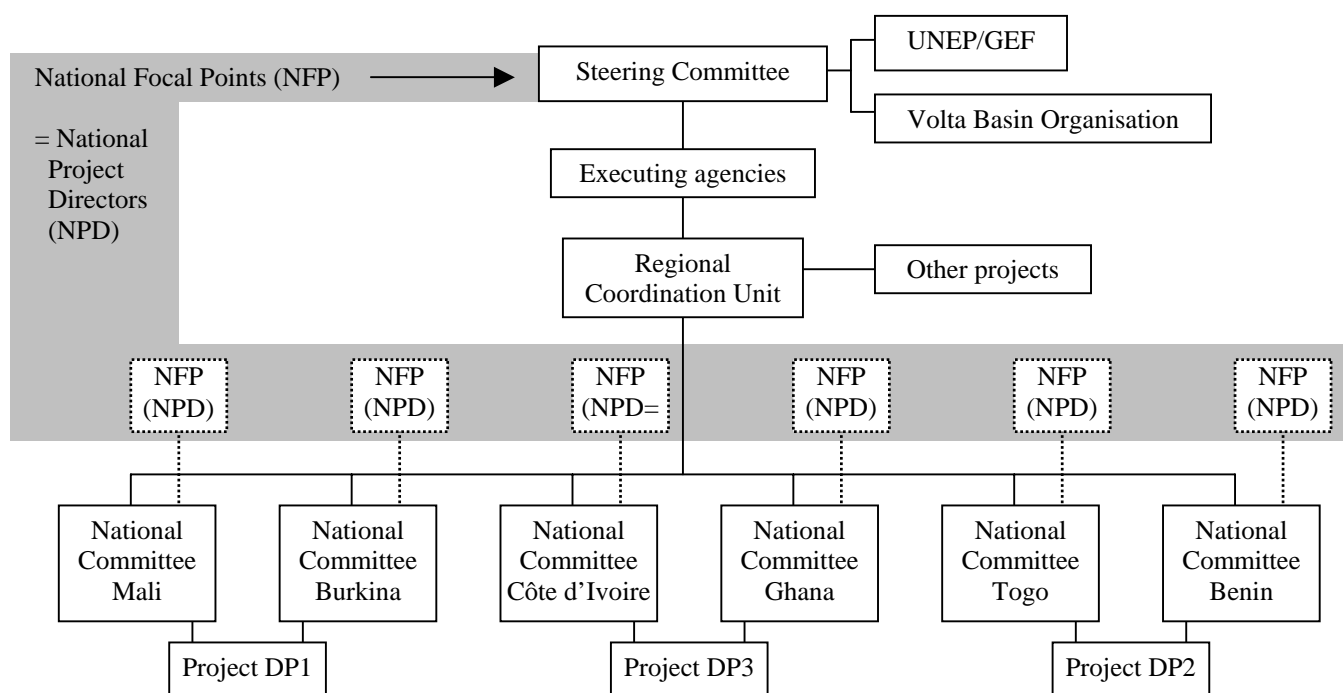
Expected result n° R4.2. The demonstration project is replicated on site 2

I. Project Management Structure

According to the decentralization acts wastewater management is now under the domain of the local communities in Togo as well as in Benin. Thus the Mayor's Office of Kara and that of Natitingou have the responsibility of all wastewater disposal operations on their respective territories, and they must play a leading role in this demonstration project.

The management structure of the demonstration projects is in conformity with the management structure of the overall project, notwithstanding the necessary adjustments to the institutional arrangements as described in the project document, to comply with the process of establishing a basin organization for the Volta river basin, and to comply also with the responsibilities of the Executing agencies. The general organization chart of the demonstration projects is shown by figure 2 below.

Figure 2. General organisational flow chart of the overall project and the demonstration projects



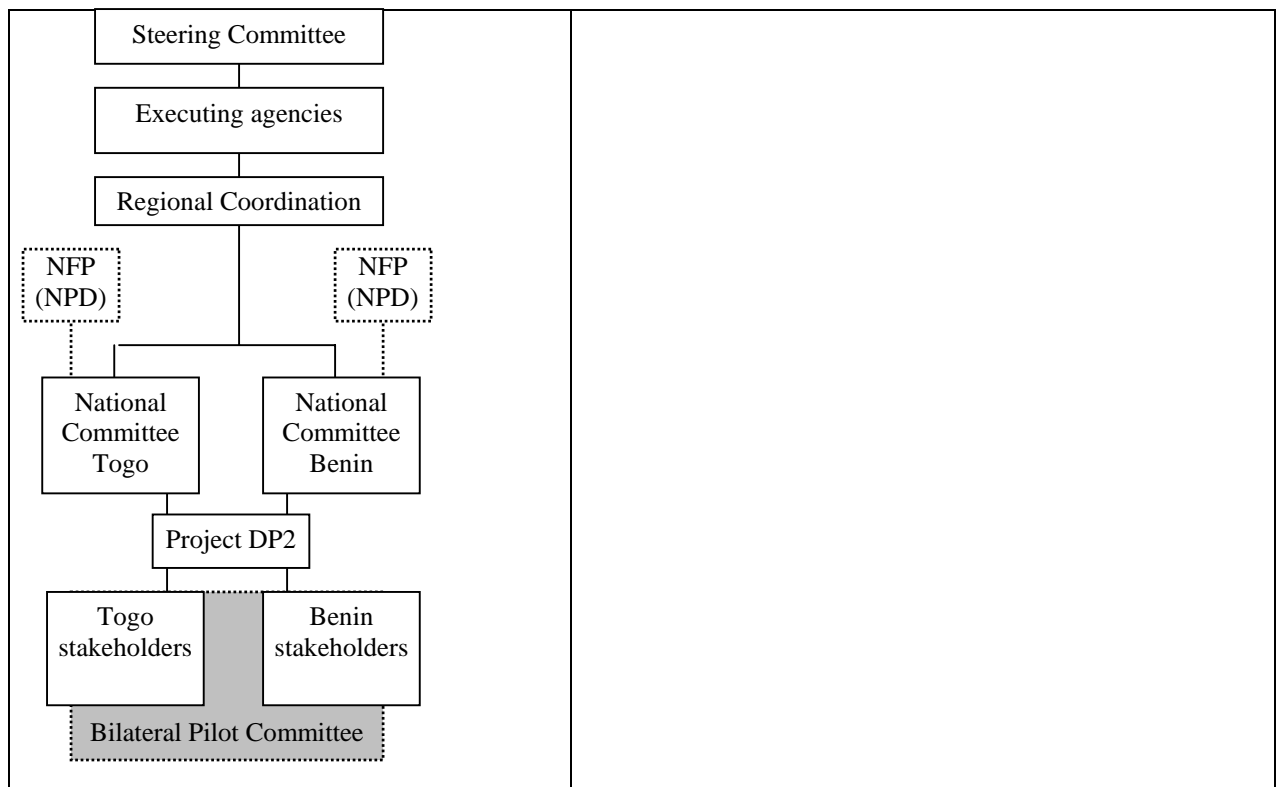
Taking into account that demonstration project DP2 is a small demonstration project, the project management structure will include:

- One Project Manager (part time) proposed and taken in charge by the City of Kara or by the Togo Government (if the City of kara has not the requested human resources). For reasons of homogeneity with the two other demonstration projects, the Project Manager will be placed under the hierarchical authority of the Regional Coordination for all aspects dealing with administration and finances, and will work with the National Coordinators for all substantial aspects of the project (scientific, technical social, etc.).
- One Deputy Project Manager (part time) proposed and charged by the City of Natitingou or by the Benin Government, in the same conditions as above.
- The support staff will include an Accounting Secretary (part time, taken in charge by the City of Kara).
- National consultants for the baseline appraisal (in French « Etat des lieux ») and for site investigations.
- International consultant(s) for the development of a mathematical model of the area of confluence of Mouhoun and Sourou.
- Sub-contractors working under conventions of collaboration (NGOs)
- A Bilateral Pilot Committee composed of representatives of Togo and Benin stakeholders. Those are mainly the national and local institutions, the populations of the two Cities, the local NGOs of water and environment sectors. Its composition could be the following (it would be specified more precisely in the inception report):
 - In Togo:
 - the Mayor of Kara or his representative (Chairman of the Committee);

- the National Coordinator of the Overall Project;
- a representative of the inhabitants of Kara;
- * representatives of the decentralized organs of the concerned technical administrations:
 - the regional Environment Directorate (Direction Régionale de l'Environnement);
 - the regional Service of Hygiene and Sanitation (Service régional de l'Hygiène et de l'Assainissement);
 - the Regional Directorate for Urbanism and Habitation (Direction Régionale de l'Urbanisme et du Logement);
 - the Regional Directorate of Mines, Water and Energy (Direction Régionale des Mines, Eaux et Energie); and
 - the Regional Directorate of the Togolese Water Supply company (Direction Régionale de la Société Togolaise des Eaux (TdE)).
- In Benin:
 - the Mayor of Natitingou or his representative (Vice Chairman of the Committee)
 - the National Coordinator of the Overall Project;
 - a representative of the inhabitants of Natitingou;
 - * representatives of the concerned technical administrations:
 - the Directorate of Urbanism and Sanitation (Direction de l'Urbanisme et de l'Assainissement);
 - the Environment Directorate (Direction de l'Environnement) or ABE ;
 - the Directorate of Hygiene and basic Sanitation (Direction de l'Hygiène et de l'Assainissement de Base);
 - the Regional Service of Water (Service Régional de l'Hydraulique); and
 - SONEB.

The frequency of meetings of the Bilateral Pilot Committee will be specified in the inception report (in principle on a quarterly basis). The secretariat of the bilateral Committee will be assumed by the Project Manager. The lessons learned will be discussed at the Bilateral Pilot Committee and will be disseminated to the other parts of the Volta River Basin.

<p>Figure 3. Organisation of the demonstration project DP2</p> <p>NFP = National Focal Point (the national institution entrusted by the Government to fulfil the national direction of the overall project)</p> <p>NPD = National Project Director</p>	
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J. Stakeholders and beneficiaries of the Project

The stakeholders and/or the beneficiaries of the project are the following:

- the two municipalities, which are the principal beneficiaries of the project. They are to be supported by the organs of the demonstration project and by other state-based structures engaged in the management of urban salubrity, waste water and environment, and their capacity of intervention will therefore be reinforced with the realization of the project;
- the contractors, the NGOs and the consultants, which equally contribute to the implementation of the project by their provision of services;
- the populations of the project intervention zone, who eventually will experience an improvement of their standard of living. They are thus the greatest beneficiaries of the project;
- the technical administrations of the two countries, in charge of environment, water, sanitation, etc.
- the populations of other towns within the Volta Basin where replication of the results is appropriate.

K. Sustainability of the project

The development of the wastewater treatment system is first and foremost a project for the two communities, namely the municipalities of Kara and Natitingou, as their authorities have noted. However, the lack of input has hindered the implementation of the strategic plans that include the development of the wastewater treatment facility.

In order to secure the long term sustainability of the project a mechanism of sustaining the acquired project results shall be defined through the elaboration of a strategy during and after the project. It is essentially a question of reinforcing the capabilities of the Town Councils and the local NGOs:

- to manage the equipments and structures of wastewater treatment system developed during the project, then in terms of improved intervention in matters related to wastewater management, especially in the zones not covered by the project,
- to make the population aware of the problems related to wastewater management and the infrastructures implemented to this purpose in the two towns;

- to evoke the interest of the population for the sludge collection and emptying of pits by the proposed campaigns of awareness raising aiming at the development of responsibility of the population;
- to increase the coverage of latrines and other sanitary works in the towns, by depending on the proper input and contribution from the stakeholders and other partners,
- to implement the sludge removal activities of the municipal services and/or the NGOs against a price that is supportable for the population according to a contract defined by each town council.

L. Replicability of the project

The resolution of the cross-border problems connected with transport of pollutants, solid wastes and vector-borne diseases via the watercourses should be connected with action in all the communities of the basin.

Addressing the pollution problems in the streams and rivers (tributaries to the Oti) at the towns of Kara and Natitingou, makes it possible to protect their respective environment and population from all the negative consequences mentioned in the context section (§ H.1.). All the towns in the basin are confronted with the same problems. In this respect, the methods and the results of the project are easily applicable firstly to all the parts of the two towns of the project, and secondly to other towns in the basin.

This is so much more justified, since actually only around 20% of the population benefits from collection services, namely around 1000 m³ (for Kara) and 800 m³ (for Natitingou) of raw untreated sludge being released here and there in the environment.

Beyond the Volta River Basin the waste treatment problems in the medium-sized African towns almost always present similar problems: climatic conditions, public health problems, environmental problems, insufficiency of the technical capacities. The financial resources of the community councils need to lead to the fulfillment of the responsibility by the decentralization acts (general tendency in West Africa and in the rest of the continent).

It is also expected that this demonstration project should be easily reproduced at other sites, of which the sanitation problems are detrimental, not solely for the health and the living conditions of the inhabitants, but equally for the environmental condition downstream of the urbanized sites.

This project will certainly lead to exchanges of experiences and very positive transfers of technology for the member states of the basin and, possibly for other countries.

M. Monitoring and Evaluation Process

Monitoring and evaluation will be in form of reporting, visual inspection, field sampling, workshops and seminar results.

The details of indicators are provided in the project logical framework below.

M.1. Project monitoring

The day to day monitoring of the project will be made by the executing agencies of the overall VRB Project, through the Regional Coordination, and through the National Coordinators of Mali and Burkina Faso. The monitoring will be based on periodic reports elaborated under the responsibility of the Project Manager, in collaboration with other people involved in the project (Deputy Manager, Regional Coordinator, National Coordinators, etc.):

- Progress report (quarterly);
- Financial report (idem);
- Proceedings of the meetings of the bilateral Committee (same periodicity as the meetings); and
- Mission reports and field visit reports (upon necessity and opportunity).

The Project Coordinating Unit will develop a standard reporting format.

M.2. Project evaluation

The need forevaluation of the demo project will be assessed during the inception phase of the overall VRB Project. Budgetary provision for the evaluation is made in the overall budget.

N. Co-financing

The co-financing is constituted by:

- the contributions of the two municipalities (premises, staff and acceptance of certain facilities) ;
- the contributions of the two national administrations consisting of allocation of technical staff to the decentralized services;
- the contributions of the CREPA in form of documentation, technical advice, etc.; and
- the contributions of the local NGOs (in work time of their members).

Tables and figures

- Logical Framework Table;
- Detailed budget;
- Summary budget by component outputs;
- Work plan; and
- Location of the towns of Kara (north Togo) and Natitingou (north Benin) in the Volta River Basin.

Logical framework table

	Narrative description	Objectively Verifiable Indicators	Means of verification	Assumptions and risks
Overall objective	Restore the water quality and improve the living and health conditions of the populations of Kara (Togo) and Natitingou (Benin) through the implementation of appropriate technology of wastewater treatment	The quality of effluent (N, P, BOD and pathogens, etc.) improved; 50% reduction in untreated sludge (from 1,800 m ³); Increase in coverage of sewage collection (from 20% to at least 50%) ³		
Immediate objective 1	Develop integrated programmes associating sanitation, reduction of water borne diseases and poverty alleviation, in collaboration with the Town Councillors and with the involvement of populations through the local NGOs	Programmes Training sessions Activities of NGOs People trained	Conventions of collaboration Work plans, Quarterly reports, Minutes of meetings Reports of workshops People trained	Commitment of local & central authorities – Awareness and ownership of populations – Experience and skills of local NGOs
Immediate objective 2	Equip the towns of Kara and Natitingou with appropriate systems of collect and treatment plants for wastewater and other effluents and develop their capacities in these matters	The two treatment plants exist and are functional The wastewaters are collected and treated	Plans – Reports of meetings during the construction – Operation reports	Know-how in microphytes lagoons construction and operation
Immediate objective 3	Monitoring of the effects (on water environment and persons) of a better sanitation system	Reports on water quality monitoring Statistics on water borne diseases	Water quality analyses – Registers of Health Centres	Human resources Data accessibility
Objective 4	Replication of the project in other towns having the same concerns	(For record only) The replication will be made after the completion of the demonstration project		
Results corresponding to immediate objective n° 1				
R11	The demonstration project management bodies are established and function	Project activities under implementation	Minutes of meetings, Progress reports	Local political commitment and involvement
R12	The practices and behaviours favourable to the protection of water quality and the promotion of human health and are supported and promoted	Awareness raised, collection procedures followed	Progress reports	Successful communication strategy, public interest
Results corresponding to immediate objective n° 2				
R21	The Towns of Kara and Natitingou are both equipped with pilot microphytes lagoons for the sanitation of wastewater	Infrastructure in place and operated	Site inspections, operation and progress reports	Appropriately skilled personnel available for establishment and operation of the plants
R22	At least 50% of wastewater (from domestic and commercial sources) are collected and treated in the sanitation plants	Amount of wastes collected and disposed in the treatment plants	Operation statistics and administrative reports	Appropriately skilled personnel available for operation of the plants
Results corresponding to objective n° 3				
	The demonstration project is monitored	Evaluations of implementation	Progress reports	
Results corresponding to objective n° 4: (For record only) The replication will be made after the completion of the demonstration project				

³ The baseline and indicators are preliminary and should be clearly established and agreed upon through the component 3.

Detailed Budget (USD 1.00 = 535 Francs CFA)

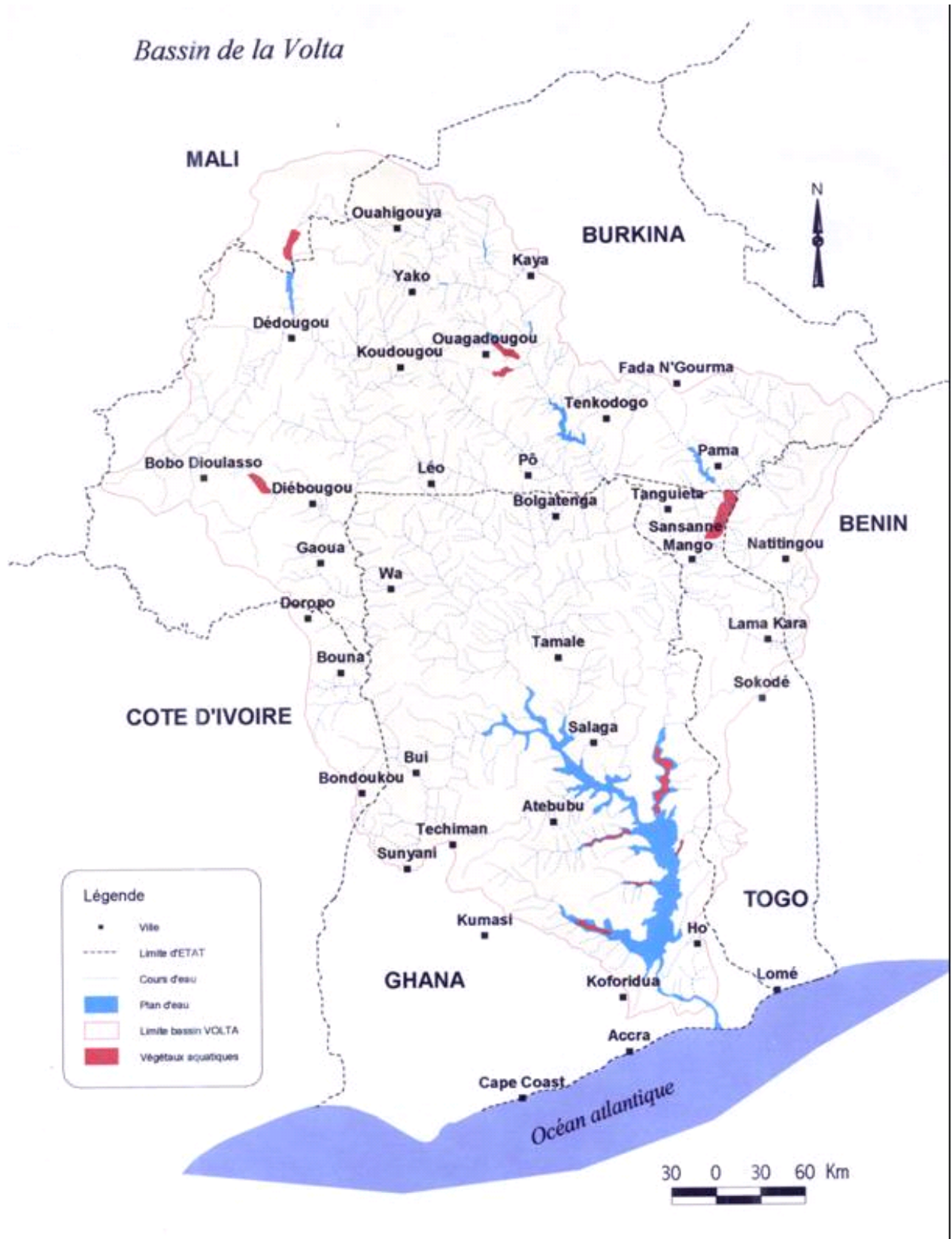
	GEF	In Kind Contribution			TOTAL
		Cash	In-kind	Source	
10 STAFF					
11.00 Project Staff					
11.01 Project Manager Kara (per diem)	12,000.00		6,000.00	Gvt / Mayor	18,000.00
11.02 Deputy Project Manager Natitingou (per diem)	9 600.00		6,000.00	Gvt / Mayor	15 600.00
12.00 Consultants					
12.01 Inventory Kara	5,000.00		5,000.00	Gvt / Mayor	10,000.00
12.02 Inventory Natitingou	5,000.00		5,000.00	Gvt / Mayor	10,000.00
13.00 Support Staff					
13.01 Secretary accountant	8 400.00		4 200.00	Gvt / Mayor	12 600.00
16 OFFICIAL VOYAGES					
16.01 Mission national coordinators	3 800.00				3 800.00
16.02 Planning, follow-up, supervision by l'EMO	5,000.00				5,000.00
16.03 Coordination Meetings	6,000.00				6,000.00
16.04 Final Evaluation	0.00	0.00	0.00		0.00
20 SUB-CONTRACTING					
22.01 Support consciousness raising	3,000.00		1 600.00	NGOs	4 600.00
22.02 Geotechnical site study and EIA	7,000.00		5,000.00	Gvt	12,000.00
22.03 Construction of purification basins	40,000.00	8,000.00	12,000.00	Gvt / Mayors	60,000.00
22.04 Supervision Construction of basins	5,000.00		2,000.00	Mayors	7,000.00
22.05 Management, care, maintenance of basins	18,000.00				18,000.00
22.06 Awareness building Campaign NGOs	15,000.00		10,000.00	NGOs	25,000.00
22.07 Water Quality Control Labo Nat. Bénin	5 200.00		5,000.00	Gvt	10 200.00
22.08 Water Quality Control Labo Nat. Togo	5 200.00		5,000.00	Gvt	10 200.00
22.09 Kits rapid water quality control	6,000.00				6,000.00
22.10 Spots, medias, posters	2,000.00		4,000.00	Gvt	6,000.00
30 TRAINING					
32.00 Group training					
32.01 Training technicians of 2 Mayor's offices	6,000.00	1 500.00	1,000.00	Mayors	8 500.00
32.02 On job training technicians/workers	8,000.00	4,000.00	4,000.00	Mayors	16,000.00
32.03 Training NGOs for awareness campaigns	6,000.00	3,000.00	5,000.00	NGOs/Mayor	14,000.00
33.00 Reunions, conferences, work shops					
33.01 Workshop "Options of micro plants"	1 200.00				1 200.00
33.02 Workshop "Public participation "	4,000.00				4,000.00
33.03 Meetings between agents of the two towns	30,000.00	6,000.00	12,000.00	Gvt/Mayors	48,000.00
33.04 Inauguration ceremonies		1,000.00		Mayors	1,000.00
40 EQUIPMENT AND PREMISES					
41.00 Consumable equipment					
41.01 Office Consumables	10,000.00				10,000.00
41.02 Operation and maintenance motorcycles	6,000.00		4,000.00	Mayors	10,000.00
42.00 Non consumable equipment					
42.01 Office and information equipment	8,000.00				8,000.00
42.02 All terrain Motorcycles (2)	6,000.00				6,000.00
42.05 Water Pumps (+ spare parts.)	3,000.00		7,000.00	Gvt / Mayors	10,000.00
43.00 Premises					
40.01 Project office			6,000.00	Mayors	6,000.00
50.01 Water, electricity, telephone, internet	600.00	8,000.00		Mayors	8 600.00
99 GRAND TOTAL	250,000.00	31,500.00	109,800.00		391,300.00

Summary budget by component outputs (in USD)

Note: The project operation costs (staff, equipment and operation) are distributed over the essential results on a pro rata basis of their value.

RESULTS	GEF	COUNTERPARTS	TOTAL
1.1. The demonstration project management bodies are established and function	70 600	34 200	104 800
1.2. The practices and behaviours favourable to the protection of water quality and the promotion of human health and are supported and promoted	26 000	23 600	49 600
2.1. The Towns of Kara and Natitingou are both equipped with pilot microphytes lagoons for the sanitation of wastewater	57 000	36 000	93 000
2.2. At least 50% of wastewater (from domestic and commercial sources) are collected and treated in the sanitation plants	74 000	29 500	103 500
3.2. The impacts and the progress control of the purification plants are implemented	22 400	18 000	40 400
TOTAL	250 000	141 300	391 300

Location of the cities of Kara (northern Togo) and Natitingou (northern Bénin) in the Volta basin



Demonstration Project # DP3

UNEP/GEF Volta River Basin Project

Theme # 1: Water efficiency and conservation

Theme # 4: Protection of ecosystems

A. Project title: Restoring and protecting the river beds of the Black Volta and its tributaries through participative campaigns of reforestation / *Restauration et protection des lits de la Volta Noire et de ses affluents par des campagnes participatives de reforestation*

B. Participating countries:

Country having submitted the project: Côte d'Ivoire

Partner country: Ghana

C. Executing Body: UNOPS and UCC-Water

D. Cost of Project:	USD 377 000
GEF Funding (specific to demonstration project DP3):	USD 200 000
Co-financing (from Côte d'Ivoire and Ghana):	USD 177 000

Besides the above funding, the demo project is supported through the other activities of the overall VRB project, which is costed at US\$18,000.

Abbreviations and acronyms

CIV	Côte d'Ivoire
DR	Direction régionale
DREF	Direction Régionale des Eaux et Forêts
DSRP	Document de stratégie de réduction de la pauvreté
ECOWAS	Economic Community of the West Africa States
EPA	Environmental Protection Agency (of Ghana)
EU	European Union
GCLME	Guinea Current Large Marine Ecosystem
GEF	Global Environment Facility
GHA	Ghana
GIWA	Global International Waters Assessment
NEPAD	New Partnership for Africa Development
NFP	National Focal Point
NPD	National Project Director
PDF	Plan directeur forestier de Côte d'Ivoire
PDF-B	Project Development Fund, level B
PEF	Périmètre d'exploitation forestière
PSF	Projet sectoriel forestier de Côte d'Ivoire
RD	Regional Direction
SAP	Strategic Action Programme
SODEFOR	Société pour le développement des exploitations forestières
TDA	Transboundary Diagnostic Analysis
UCC-Water	UNEP Collaborating Centre on Water and Environment
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
VRBP	UNEP/GEF Volta River Basin Project (overall project or "core project")

E. Linkage to problems and hot spots identified in the Project Brief

As a part of activities in the project preparation phase supported by a GEF PDF-B grant, national reports were produced which provided information on the problems relating to the priority transboundary environmental concerns in the Volta Basin. The information contained in the national reports and the outputs from meetings of regional coordinators were put together and a Causal Chain Analysis, a preliminary TDA and a preliminary SAP were prepared. The preliminary TDA identified the following list of major perceived problems and issues. The main existing concerns identified in the basin are:

- Land degradation
- Water scarcity
- Loss of biodiversity
- Flooding
- Water-borne diseases
- Growth of aquatic weeds
- Coastal erosion
- Water quality degradation

In addition there are two emerging problems/issues:

- Urbanization
- Increase in industrial and mining activities

The relevance of the list of concerns given above was confirmed by further studies carried out in the framework of the GEF/UNEP GIWA Project (*Global International Waters Assessment*) where the sub region 42 is the GCLME (Guinea Current Large Marine Ecosystem) encompassing the marine part and its International tributaries, especially the Volta River Basin.

To address these concerns, three principal components and their associated objectives were developed for the project based on the areas of threats identified by the preliminary TDA and SAP:

Component 1: Build capacity and create a regional institutional framework for the effective management of the Volta Basin. Part of this component is now covered by the EU project supporting the establishment of a Volta River Basin Organisation. This project is financed by the EU Water Initiative and is executed by the ECOWAS Water Resources Coordination Unit. The project budget (USD 1,25 million) is considered as a cofinancing of the full GEF/UNEP Volta River Basin Project.

Component 2: Develop regional policy, legal and regulatory frameworks for addressing transboundary concerns in the Volta Basin and its downstream coastal areas.

Component 3: Initiate national and regional measures to combat transboundary environmental degradation in the Volta Basin. The objective is to address the most critical transboundary concerns (“hot spots”) through the implementation of demonstration projects and the creation of partnerships with the private sector and with other projects.

The Component 3, Activity 3.2 aims to “*Develop and implement three replicable demonstration projects*” under the main themes identified in the Preliminary TDA (the numbering of the themes is neither a ranking of importance, nor an order of priority):

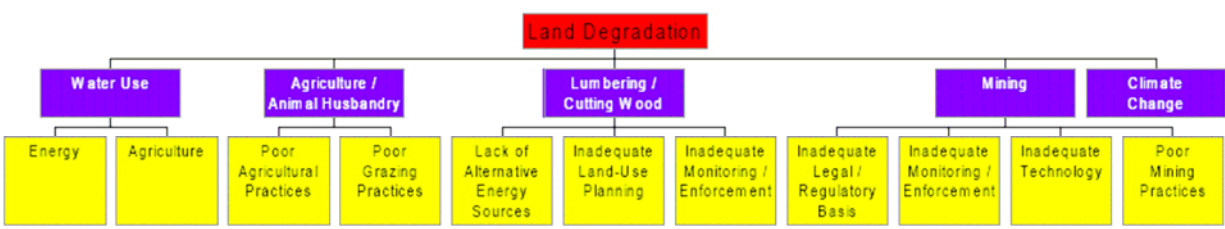
1. Water efficiency and conservation
2. Improvement of flow releases from dams
3. Sanitation
4. Protection of ecosystems
5. Coastal erosion

The present demonstration project complies with themes # 1 and 4 here above. It was proposed by Côte d’Ivoire and was elaborated jointly with Ghana. It refers to the causal chain analysis of land degradation, in which lumbering and cutting woods are quoted as one of the root causes (figures 1 and 2).

The lack of information exchange between the riparian countries – and more generally the absence of management bodies dedicated to international issues – are two key issues of inadequate water basin management.

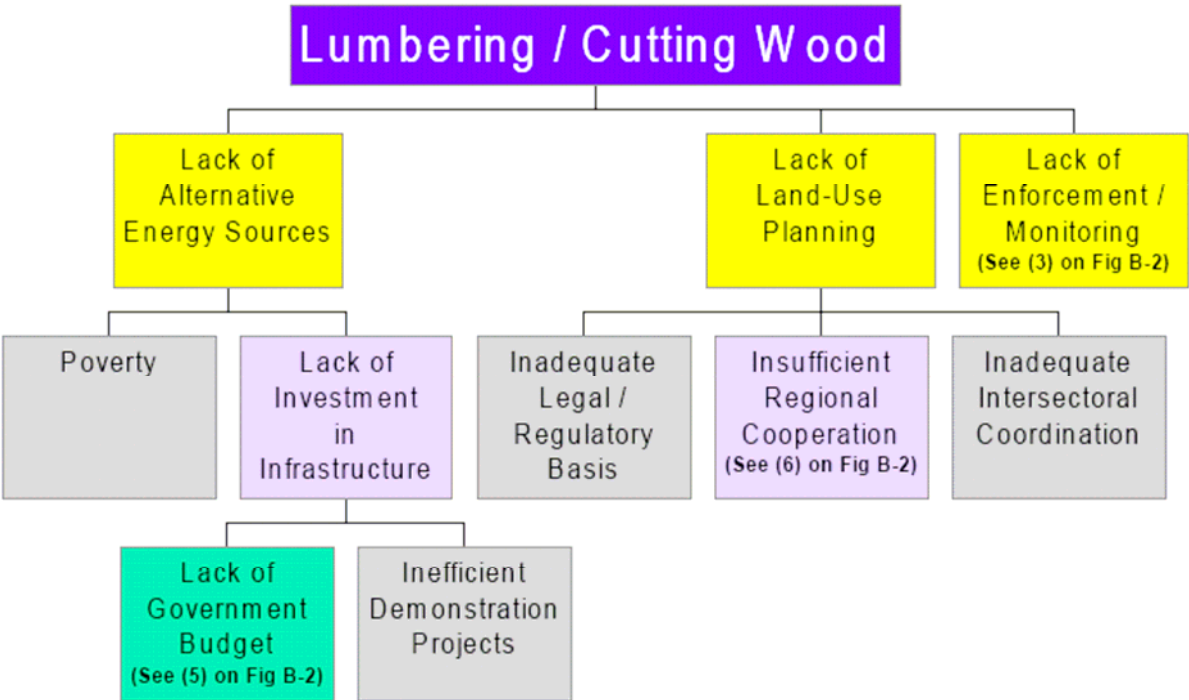
This demonstration project aims to establish a co-operation between Côte d'Ivoire and Ghana around the Black Volta River which forms the border between the two countries. The Black Volta and its tributaries are currently impacted by land degradation and its consequences on water resources: erosion, turbidity, sedimentation on the river beds and in the reservoirs, etc. Therefore, the present demonstration project is in line with the method and findings of the preparatory phase (PDF-B) as they are presented in the Project Brief and its annexes.

Figure 1. Land degradation - Causal Chain Analysis



Source: Preliminary Transboundary Diagnostic Analysis. Final Report, Dec. 2002. Annex B (Causal Chain Analysis). Figure B-1

Figure 2. Detail of land degradation - Causal Chain Analysis of Lumbering / Cutting Wood



Source: Preliminary Transboundary Diagnostic Analysis. Final Report, Dec. 2002. Annex B (Causal Chain Analysis). Figure B-4

The two maps (in annex) show the zones of soil and forest degradation in the Volta Basin⁴. The correspondence between the two maps confirms that:

"Degradation of the forest cover ⇒ Degradation of water resources"

It may be understood that the degraded zones seem only to be located in Côte d'Ivoire. However, experts from the two countries have confirmed that the degradation takes place at both sides of the border.

⁴ Source: Project Brief, Annex III. Demonstration Projects, scope, selection criteria's and location

These hot spots correspond to those identified by the communities living in these parts of the basin, i.e the Upper and Northern Region in Ghana and the North-Zanzan and the South-Zanzan in Côte d'Ivoire.

The problems as described in the Project Brief can be summarized as follows:

1. The degradation of forest and aquatic ecosystems by repeated slash and burn agriculture, bush fires, and excessive use of pesticides contributes to the loss of biodiversity in the basin;
2. Provision of wood energy (fire wood and charcoal, first source of domestic energy for growing urban and rural populations) is another important cause of degradation. Moreover, wood becomes more and more rare and the difficulties in fetching it is a constraint to the development of the village communities; and
3. The increasing coefficient of runoff results in less recharge of groundwater and a high erosion of soils results in loss of fertility and sedimentation in water courses and reservoirs.

Within the framework of the demonstration project it is appropriate to choose the Bondoukou department in Côte d'Ivoire as the target area. The Bouna department in the North is currently not accessible for effective project monitoring. The basin area in this region covers approximately 4.000 km² with a high concentration of population in the zones that are watered for the most part by the tributaries of the Black Volta.

In Ghana it has been decided to choose the "Northern region" of the basin.

The table below shows the identified hot spot areas in Côte d'Ivoire and Ghana and the ecological considerations related to each of them.

Problems with management of the natural resources in relation to the hot spots

Problems	Hot spots		Main causes
	Côte d'Ivoire	Ghana	
<ul style="list-style-type: none"> • Degradation of the forest • Increase of the run-off from rain water • Reduction of the seepage • Silting-up of water courses • Loss of soil fertility • Reduction of the yields of the agricultural activities • Degradation of the water quality • Degradation of ecological habitats (in particular hippopotamus) and loss of biodiversity • Reduction of surface water and groundwater • High demand for wood energy and strenuous supply. 	<p>Zanzan Region, District of Bondoukou</p> <p>Sorobango, Sangabilé, Yérékaya, Poukoubé, Bandoli, Débango</p>	<p>Northern region</p> <p>Chache, Nteresso, Kalba, Saru</p> <p>Brong Ahafo</p> <p>Koas, Kogyi, Soko, Buko</p>	<ul style="list-style-type: none"> • Clearance of forests to bring them under cultivation • Increase in the illegal forestry for timber production purposes, even in the forbidden zones • Pollution of the river and its tributaries by pesticides • Destruction of the plant cover by forest fires • Destruction of habitats along the water courses of the basin • Increased evaporation and drying-out of the soil • Poverty of the riparian populations

F. Linkage to National/Regional Priorities and Programmes

F.1. Côte d'Ivoire

The Ivory Coast forest, estimated to cover 16 million hectares in the fifties, covers only 3 million hectares nowadays. This degradation, caused primarily by the agricultural development (in average 200.000 hectares being cleared every year) and by an exploitation of the forest for mining purposes, seriously affects the wood field which is still one of the mainstays of the Ivory Coast economy.

In view of this situation the State of Ivory Coast has taken a number of measures trying, on one hand, to reassure the industries having invested in enterprises within the wood field to take into consideration the conservation of the forest ecosystems and, on the other hand, to implement a sustainable management of the heritage of residual forests in general and the forest ecosystems in the side basins in particular.

That is why the Forest Guidelines (PDF) were adopted in 1988 covering the period of 1988-2015. This plan defines an extensive programme for rehabilitation, development and sustainable management of the forest sector, which resulted in the Sectoral Forest Project (PSF) in 1990. The PSF only applies to the classified forests, of which management was handed over to the Company for Development of Forests (SODEFOR) in 1992.

Concurrently, in 2000 guidelines for integrated management of water resources has been elaborated with a substantial part being associated with forest ecosystems within the framework of the management plans for the river basins.

In 1994, the decree no. 94-368 of July 1st introduced the reform of forestry in rural areas resulting in:

- allocation of forestry areas (PEF) of at least 25.000 hectares;
- introduction of a contribution to local development for the benefit of the riparian population of the PEFs; and
- introduction of the obligation for recipients of PEF to reforest.

This reform represented a real revolution in a field that had been governed since 1974 by temporary exploitation permits of 2.500 hectares and a complete lack of consideration of the local population's interests. From 1997 to 2004 the reform resulted in an average reforestation of 6.000 to 7.000 hectares per year carried out by the PEF concessionaires in collaboration with the land owners and the local populations (association of women and young persons), i.e. 60.000 hectares since the advent of the reform, of which one third are in the classified forests and two thirds in the rural area.

With a view to efficiently ensuring the protection of these reforestation against the bush fires⁵ the Minister of water and forests has established an independent department under the Minister's Cabinet. The priority of this independent department called "*National Committee for Protection of Forests and Fight against Bush Fires*" is to pursue increased awareness of the populations in general and of the rural population in particular concerning the various impacts of fires. These campaigns are based on a network of local NGOs of whom the leaders are situated in the regions of Moyon Comoé and Zanzan. This last region is a hot spot for the implementation of the demonstration project.

Finally, in order to channel all these rehabilitation actions for the ecosystems of the forests in Côte d'Ivoire, a national reforestation programme is currently being elaborated by the Ministry of Environment, Water and Forests. One of the important aspects of the programme is the implementation of a common reforestation process across the Côte d'Ivoire territory in accordance with the broad outline of the Strategy Document for Poverty Reduction (DSRP).

F.2. Ghana

Since 2001 the government of Ghana has been implementing a national planting programme covering approximately 20.000 hectares per year. The purpose of this project is to ensure that within a five- year period 10% of the land is covered by forests. This would consequently make up for the lack of timbers in the wood industry, ensure the protection of water, guarantee the supply of food and ensure the protection of the environment.

The statistics in 2003 regarding this project showed that plantation of around 35.000 hectares had been carried out in the degraded pre-forest zones.

After the severe drought in 1982 the bush fires have become a recurrent phenomenon in Ghana. They affect all types of ecosystems in the country regardless of the intensity of the dry season. The bush fires are therefore considered to be the most important factor responsible for the loss of fertility of the soils and soil input to the water bodies as well as for the destruction of the biological diversity.

In order to remedy this, the Ghana Forest Commission has initiated a monitoring project for bush fires in the transition zones. This project aims to promote the participation of the communities in the sustainable management of natural resources. It has among other things been used to test the programme for poverty reduction implemented by the Ghanaian government during the period from 2003 to 2005.

⁵ Bush fires are recurrent both in savannahs, pre-forest and forest areas. Their degradation contributes to the appearance of a very flammable grassy vegetation, generally composed by *Chromolaena odorata* on dry lands and *Panicum maximum* in the depressions.

At the same occasion, the evaluation document for the environmental strategy of the programme for poverty reduction in Ghana has been prepared in order to assess the environmental impact (risks and opportunities) of these different projects and to identify reliable means of environmental management. This programme is also part of the global initiatives such as the NEPAD, which is a product of a long term vision for eradication of poverty and for a sustainable development in the African countries.

G. Development and endorsement of the demonstration projects

The project documents resulting from the preparatory phase of the project (PDF-B) have already been endorsed by the GEF National Focal Points and the governments of the six riparian countries as well as by UNEP. The following documents have been quoted:

- The Preliminary Transboundary Diagnostic Analysis (Preliminary TDA);
- The Preliminary Strategic Action Plan for Integrated Management of the Basin (Preliminary SAP);
- The UNEP/GEF Project Document (and its annexes) defining the full project.

The full project description was submitted to the GEF Council in May 2003 and approved with some reservations, one of these reservations was the necessity to identify and precisely describe the three to four demonstration projects foreseen in the project document. The elaboration of these demo projects was initially anticipated to take place before implementation of the full project imposing a problem for the project start since it was seen as an important part of the project. Therefore, the GEF has mobilized additional funds through UNEP to identify and formulate the three or four foreseen demonstration projects.

The selection and elaboration of the demonstration projects has been made through a transparent process started early March 2005 by a call to the countries to propose project ideas. The countries were also asked to propose CVs of National Consultants, qualified for the further development of the three to four demo projects, which would be selected.

The process of development of the demonstration projects involved:

- The Directors of the National Focal Points of the VRB Project;
- The Regional Coordinator and the National Coordinators of the VRB Project;
- The National Consultants proposed by the countries and appointed by UCC-Water;
- The experts of UCC-Water acting through a mandate of UNEP;
- The Programme Officer in charge of international waters in the UNEP/GEF Division.

According to the indications given by GEF/UNEP, the selection of the Demonstration Projects was guided by the following criteria:

- Q. Global, regional, sub-regional and plurinational nature of projects
- R. Specificity / originality
- S. Participatory nature
- T. Gender approach
- U. Programmatic approach
- V. Sustainable Development Perspective
- W. Capacity Building
- X. Maximum utilisation of regional expertise
- Y. High rate of replication
- Z. Sustainability of activities
- AA. Funding and Co-Financing
- BB. Promotion of sharing of experiences and learning
- CC. Performance criteria
- DD. Thematic balance (among the themes recommended in the Project Brief)
- EE. Geographical balance (between the six Volta River Basin Countries).
- FF.No overlapping with other past, ongoing or future projects.

The above 16 criteria have neither the same weight, nor the same restrictive strength. Some of them are indicative, others are recommendations, while others again are more directive, in particular, the multi-national nature, the compliance with the themes identified by the TDA, etc.

A total of 19 ideas for demonstration projects were proposed by the six Volta River Basin countries. The 19 proposals received were scored, using for each criteria a numerical ranking adapted from the GIWA scoring. However, two criteria do not apply to each project considered individually, but must be seen as a general criteria to be respected during the final selection:

- The criteria of theme balance (N)
- The criteria of geographical balance (O).

Four demonstration project ideas were selected by a common agreement between UNEP/GEF, UCC-Water and the Regional Coordinator. The ideas selected were developed into demonstration project briefs by national consultants assisted by UCC-Water.

The four demonstration project briefs were presented and discussed at a regional validation workshop, held in Lomé, Togo (22-23 February 2006). Three demonstration projects (including this one) were selected at the Workshop, to be forwarded to UNEP and GEF in order to complete the Project Brief and to close the preparatory phase leading to the implementation of the full project.. These demonstration projects are re-numbered as follows:

Demonstration Project DP1: **Joint management of a flow release warning system in the Sourou river valley (Mali – Burkina Faso)**

Demonstration Project DP2: **Installing and comparing technological models of wastewater treatment in the Cities of Kara (Togo) and Natitingou (Benin)**

Demonstration Project DP3: **Restoring and protecting the river beds of the Black Volta and its tributaries through participative campaigns of reforestation (Côte d'Ivoire – Ghana)**
(present project)

The fourth project (associating Ghana and Togo) is entitled “Fresh groundwater storage and movement between SE Ghana and SW Togo and agronomic practices to safeguard the shallow freshwater lenses from salinisation”. This project was considered as relevant by the Lomé Workshop and proposed for subsequent execution if the appropriate financing can be mobilised.

The present version of the demonstration project DP3 was finalised by UCC-Water, in collaboration with the National Coordinators and the National Consultants. Moreover, recommendations from the Lomé Workshop are taken into account in present project document.

H. Project rationale – Objectives, outputs and activities

H.1. Background

The downstream part of the Black Volta basin (its upstream part in Burkina Faso being called the Mouhoun) is shared by Ghana and Côte d'Ivoire. The part, which is shared by the two countries, covers an area of 45.200 km², of which 12.000 km² belong to Côte d'Ivoire and 33.300 km² to Ghana. The average annual rainfall is 1200 mm in Ghana and 900 mm in Côte d'Ivoire.

In Côte d'Ivoire as well as in Ghana the major part of the basin area is used for agriculture. There are no protected areas, nor any state-owned zones intended for forests. At the Ghanaian side of the basin, in the Lawla district, the degradation of the forest-covered land is so severe that the soil is no longer suitable for agriculture. This is due to the combined impact of pastoralism, itinerant agriculture on burned land and bush fires. In Ghana, the south-east part of the basin is also characterised by a serious degradation accompanied by a strong erosion of the banks of the Black Volta.

By analysing satellite images the Ghanaian aEPA has revealed that the north-west part of the basin, particularly near the banks of the Black Volta in Côte d'Ivoire as well as in Ghana, suffers from an advanced degradation of the forest-covered area, resulting in a major risk of vulnerability to desertification and climatic changes.

This degradation has led to the drying up of waters followed by a loss of biodiversity, a modification and destruction of habitats, a loss of fertility of the soils, resulting in a reduced yield from the agricultural investments, a decrease or even rarefaction of the fishery resources, and a reduction of the recharge of groundwater leading to the migration of the local populations towards more clement areas.

H.3. Objectives, outputs and activities

The general objective is the sustainability of water resources in the Black Volta River basin through participative campaigns of reforestation on both sides of the border between Côte d'Ivoire and Ghana.

The general objective will be reached through three immediate objectives:

1. Immediate objective n° 1: Capacity building of the stakeholders, particularly the riparian populations
2. Immediate objective n° 2: Restoration / protection of pilot plots of land through experimental and demonstrative actions
3. Immediate objective n° 3: Replicate the demonstration project methodology and outcomes and disseminate the lessons learned

The activities corresponding to objective n° 3 (and associated results) will not be carried out in the framework of the demonstration project. They will be carried out under other projects inside or outside the Volta basin (with the support of the overall VRB Project under its component n° 1).

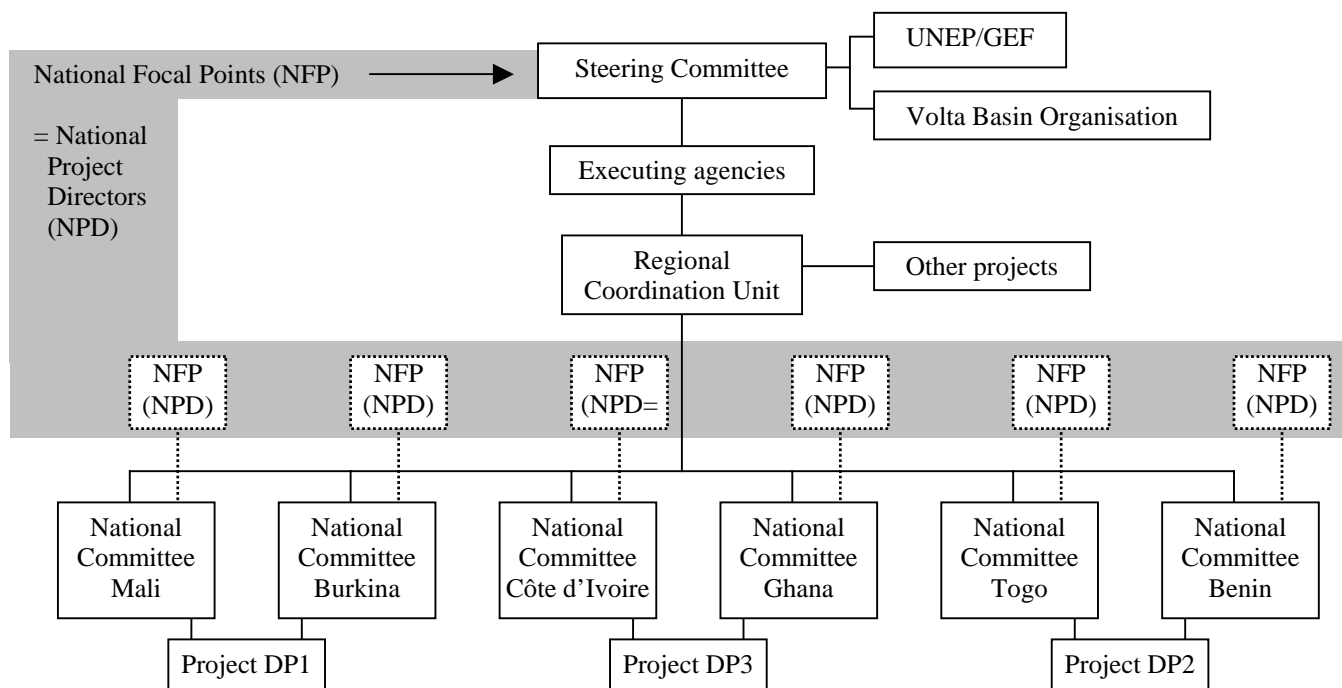
The objectives, outputs and activities are summarised in the logical framework presented hereafter.

I. Project Management Structure and Accountability

I.1. General

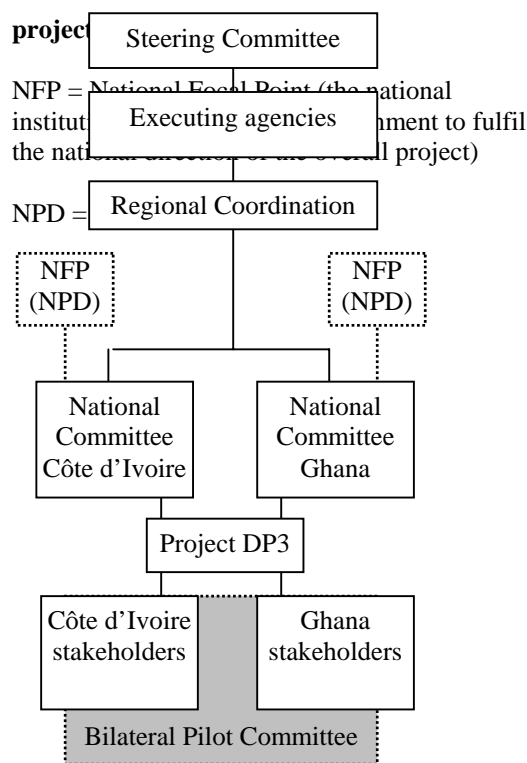
The management structure of the demonstration projects is in conformity with the management structure of the overall project, notwithstanding the necessary adjustments to the institutional arrangements as described in the project document, to comply with the (ongoing) process of establishing a basin organization for the Volta river basin, and to comply also with the responsibilities of the Executing agencies. The general organization chart of the three demonstration projects is shown by figure 3 below.

Figure 3. General organisational flow chart of the overall project and the demonstration projects



The specific organisational chart of the demonstration project DP3 is similar to those of DP1 and DP2. It is shown by figure 4 below.

Figure 4. Organisation of the demonstration



1.2. Project Implementation Team

A project Implementation Team will be established. It will be constituted as follows:

- A Project Manager appointed by the Côte d'Ivoire Administration;
- An assisting Project Manager appointed by the Ghanaian Administration;
- A part-time bilingual secretary-accountant (placed next to the Project Manager), responsible for all administrative and financial questions related to the regional coordination of the overall project;
- Two part-time drivers made available by the national administrations.

The Project Implementation Team shall work under the hierarchic authority of the executing agencies for the overall project. The Project Manager is responsible for his management to the Regional Project Coordinator, who again is responsible to the Executing Agencies (UNOPS and UCC-Water).

The Black Volta basin is situated far away from the two capitals of the beneficiary countries. The Project Manager from Côte d'Ivoire will be based at the Regional Department of Water and Forests of Zanzan in Bondoukou. The assisting Project Manager will work at full-time from the Ghanaian side of the basin in close collaboration with the Project Manager.

The Team Leader based in Bondoukou will be supported (and supervised in technical matters) by the Regional Department of Water and Forests of Bondoukou regarding coordination with the other environmental sectors, the local NGOs, and the riparian communities of the Black Volta basin. From the Ghanaian side the support will be given through decentralized departments of the Environmental Protection Agency (EPA), representing the local institutional support to the Ghanaian expert of the project.

The Project Manager and his assistant will work in close collaboration with all the state-controlled technical structures for the project, namely : the faculties of natural science of their respective countries (division of botany), the Ministry of Agriculture and the land managing division of EPA for Ghana, and the Ministry of Agriculture and the National Coordination of the plan for rural land for Côte d'Ivoire. From time to time and according to the execution chronogram of the project, the Project Team will make use of services from consultants as well as NGOs working as subcontractors.

1.3. Bilateral Pilot Committee

This committee, consisting of partners from the public sector, the private sector and the associate sector (NGO) working in the field of management of natural resources, is responsible for oversight and follow-up of the

demonstration project activities. The regional managers of water and forests in Côte d’Ivoire and of the environment in Ghana (EPA) jointly chair this committee and supervise at the technical level the activities carried out within the framework of the project.

J. Stakeholders and Beneficiaries

J.1. Stakeholders

The decentralised administrations of the ministries involved in the implementation of the different operations of the project will be stakeholders as well as the decentralised authorities, the professional agricultural organisations and the non-governmental organisations, selected in transparency and according to pre-established criteria. The decentralised authorities should be leaders of the stakeholders in order to sensitise the project and ensure the well fare of the population in a restored forest landscape.

J. 2. Beneficiaries

The beneficiaries are the rural communities in Côte d’Ivoire and Ghana living in the areas of the different hot spots, which have been selected for implementing the demonstration project.

The native populations (land-owners) as well as the non-indigenous populations should profit from the effects of the project. The project is going to work with these communities, which should organise themselves in association with women and young people executing specific tasks: the associations of women will be mostly involved in the production of plant material while the men will be exclusively employed by preparing the land for reforestation, by river dredging, by silvicultural works, etc. Certain work will be done by mixed teams. The selection of direct beneficiaries should be done according to the impartial criteria guaranteeing a complete participation of the populations directly concerned about the project. From the Ghanaian side approximately 200 agricultural families spread over the targeted “hot spots” – with at least 30% having a woman as head of the family – participate directly in the implementation of the project. From Côte d’Ivoire the targeted beneficiaries have already been regrouped in active organisations in the field:

- Local authorities, town councils;
- Associations of women;
- Associations of young people;
- Land-owners, farmers;
- Regional committees for the fight against bush fires;
- Professional agricultural organisations (OPA).

The table below describes the stakeholders, who have been identified during the project preparation, their activities and the effect of these activities in the field.

Operators CIV / GHA	Activities	Impacts
EPA / DR Eaux et Forêts - DRCF	Environmental education programme Training courses for authorities Project coordination National and regional radio and TV programmes	Restored forest landscapes Waters and other habitats restored in order to maintain the biodiversity Reduction of bush fires
Riparian populations	Establishment of tree breeding Detection and fight against the bush fires Agro-forested activities and dredging of river beds	Poverty reduction Environmental management capacity building Restoration of the environment
RD MofA / DRCF-DREF Bondoukou-	Course on agro-forest practices Course on the impacts of fires on the soil in cultivated areas	Restoration of the soil fertility, reduction of the erosion

CNRA-ANADER	Course on the concept of agriculture without land-burning/fires	Reduction of fires and their impact on the soil
RD Waters & Forest GH / DR EF CI-DRCF-SODEFOR	Supply of grains and plants Assistance to the establishment of breeding-grounds Assistance to the reforestation and the silviculture work	Forest landscapes of the restored basin Protection of soils, wild faun habitats and water resources
ONG-OPA	Mobilisation and awareness raising of the communities Course in protection of water against pesticides and communal forests	Forest landscapes of the restored basin Communities with awareness of environmental programmes
District Assemblies (DAS) in GHA / Local Collectivities in CIV	Passing of a law on protection of the basins Evaluations Consideration of environmental projects in the action programmes of the local communities	Restored forest landscapes The communities appropriate the practices of environmental protection
GHA Bush fire Office / National Ivorian Committee of Forest protection and control of bush fires	Establishment of committees combating fires using new techniques Introduction of a national radio and TV programme for awareness raising and fight against the bush fires	Reduction of bush fires Success of the “no fire” concept

K. Long-term Sustainability Strategy

The natural resources targeted by the project (waters and forests) are vital for the riparian populations, who are therefore motivated to watch over the sustainability of the project. They will have the capacity of doing so based on adequate capacity building programme for each key stage of the demonstration project.

The applied technologies are adapted to the local context and therefore easy to pursue once the demonstration project is terminated.

The forest species used for the reforestation (acacia, teak, gmelina and eucalyptus) have the advantage of being easily regenerated by shoots or by buried sowing.

The reforestation does not mean a loss of soil for other cultures. On the contrary it allows the development of the agro-forests. The populations can grow subsistence crops after the first cut of acacias since the regeneration of the soils is ensured. Other agro-forest associations such as hedges, edible forest fruit trees or trees for other purposes (shea, néré, faidherbia) with intercalary cultures ensure the sustainability of the project results.

The involved institutions will be strengthened and will be more capable of overseeing the sustainability of the project.

Finally, different environmental micro-projects – i.e. within the framework of the UNDP/GEF Small Grant projects – could be included in the annual working programmes of the decentralised communities (villages, general councils

for Côte d'Ivoire and the district assemblies for Ghana) and the governmental agencies in order to complete and strengthen the sustainability of the project.

L. Replicability

The silting-up of the water courses and the progressing desertification are acute trans-national problems for the whole Volta basin.

The project is easily transferable to the other zones or the other countries of the basin, or even to the other basins in the region (North Comoé, Niger, etc.), since the applied technologies and materials are local and appropriate for a certain bio-geographic context. The project is based on the local and traditional knowledge of the population as well as on the national expertise in terms of prevention and combat against the desertification, of reforestation and wood technology. The technologies proposed by the project are easily assimilated by the local populations.

Thus, many sites suitable for replication can easily be identified in the Volta River Basin.

Furthermore, the demonstration project DP3 shows a way to establish a bilateral Committee dealing on the short term with the specific problems of land degradation, especially deforestation. In the long term the bilateral Committee might have its mandate enlarged to other aspects of water resources management, and it can become a sub-body under the overall Volta basin organisation.

M. Monitoring and Evaluation Process

Monitoring and evaluation will be in form of reporting, visual inspection, workshops and seminar results. The details of indicators are provided in the project logical framework below.

M.1. Project monitoring

The day to day monitoring of the project will be made by the executing agencies of the overall VRB Project, through the Regional Coordination, and through the National Coordinators of Côte d'Ivoire and Ghana. The monitoring will be based on periodic reports elaborated under the responsibility of the Project Manager, in collaboration with other people involved in the project (Deputy Manager, Regional Coordinator, National Coordinators, etc.).

The table below gives the list of the various reports to be produced by the demonstration project.

Reports	Drafted by	Periodicity	Addressees
Quarterly work plan	Head of project	3 months	National Coordinators, Regional Coordinator, Bilateral Pilot Committee.
Minutes and reports of meetings	Head of project (as Secretary of Bilateral Pilot Committee)	3 months	National Coordinators, Regional Coordinator, Executing Agencies Ivorian and Ghanaian Authorities
Quarterly activity report	Head of project	3 months	National Coordinators, Regional Coordinator, Executing Agencies
Yearly activity report	Head of project	1 year	National Coordinators, Regional Coordinator, Executing Agencies
Financial report	Head of project	1 year	National Coordinators, Regional Coordinator, Executing Agencies
Technical reports	Project operators	When deemed necessary	All people concerned
End of project report	Head of project		National Coordinators, Regional Coordinator, Executing Agencies

The Project Coordinating Unit will develop standard reporting formats for each of these reports.

M.2. Project evaluation

The need for evaluation will be assessed during the inception phase of the overall VRB Project. Nevertheless, a provision is made in the budget for evaluation. In all cases, the cost of evaluation will be charged on the Core budget.

N. Co-Funding

The co-funding is constituted by:

- the stakeholders of the two national administrations consisting of support of technical staff from the decentralised departments ;
- the wood manufacturers ; and
- the contributions of the local NGOs (as working time of their members).

The majority of the co-funding from the countries comes from the reforestation. In fact, out of the 200 hectares of planned reforestation, 100 hectares will be entirely financed by the wood manufacturers for the benefit of the local populations in the project area, under the supervision of the project and in respect of the objectives of the project as required by the forestry reform in Côte d'Ivoire.

GEF is only financing 100 hectares equitably distributed between Ghana and Côte d'Ivoire.

Part of activities will be implemented in the framework of the overall VRB Project (Core project). They are referenced as "Core project" in the budget below.

Tables and figures

- Logical Framework Table
- Detailed budget
- Summary budget by component output
- Work Plan
- Map of High Forest and land Degradation in the Volta River Basin
- Map of the Volta River Basin showing water shortage areas

Logical framework table

	Narrative description	Objectively Verifiable Indicators	Means of verification	Assumptions and risks
Overall objective	Sustainability of water resources in the Black Volta River basin through participative campaigns of reforestation	Increased water retention in the forest areas ⁶ Increased forested areas by 200 hectares Reduced soil input into the river system by 20%	The formula for assessing the water retention and soil input will be developed at the initial stage of the demo project.	
Immediate objective n° 1	Capacity building of the stakeholders, particularly the riparian populations	Institutions reinforced Populations sensitised and trained	Reports of capacity building activities List of equipments	Participation of populations Motivation of civil servants
Immediate objective n° 2	Restoration / protection of pilot plots of land through experimental and demonstrative actions	200 hectares of plots of lands reforested: 100 ha financed by Ivorian Forest Companies and 100 ha financed by GEF: approx. 50 ha in each Country.	Reports of the activity and filed survey	Commitment of Forest Companies – Involvement of riparian populations – no civil unrest on Ivorian side.
Immediate objective n° 3	Replication of the demonstration project	Other suitable sites identified Similar activities are carried out on these sites	Reports of other projects	Other suitable hot spots are identified and means of intervention are mobilised
Results corresponding to immediate objective n° 1				
R11	The capacities of stakeholders involved in forest and water resources are reinforced	Populations sensitized and trained Additional equipment of local administrations Personnel trained	Reports Delivery documents	Participation of populations Motivation of civil servants
Results corresponding to immediate objective n° 2				
R21	A basic development and preservation plan of the project area is elaborated	Development plan	Reports Maps	Availability of data and satellite scenes
R22	A limited number of hot spots of river beds addressed	Quantity of sediments removed Number of people assisting to works and trained on site	Reports Field visits	Awareness and participation of population
R23	The forest landscapes of the pilot plots targeted by the project are restored / protected	Number of hectares restored / protected Number of groups of local populations involved in the works	Reports Field visits Satellite scenes	Participation of forest industrialists Awareness and participation of populations
R24	The surfaces burned by bush fires are reduced	Number of km of firewalls realized Number of hectares burned compared to previous years	Reports Field visits Satellite scenes	Awareness and participation of population
Results corresponding to immediate objective n° 3				
R31	Demonstration project replicated on site 1	Replication is carried out on site 1	Reports	Fore record only. This objective will be fulfilled under other projects.
Etc.	Etc.	Etc.	Etc.	

⁶ More concrete indicators will be developed during the initial stage of the demo project implementation and baseline study will be carried out based on the definition of the more concretely indicators.

Activities

Activities corresponding to Result R.1.1: The capacities of stakeholders involved in forest and water resources are reinforced	
A.1.1.1	Equip the local administrations
A.1.1.2	Train the civil servants of the two countries
A.1.1.2	Train the local populations (in reforestation, defence and restoration of soils, protection of river banks, dredging of water beds, management of community forests, energy saving of fuel woods, prevention/control of bush fires etc.)
Activities corresponding to Result R.2.1: A basic development and preservation plan of the project area is elaborated	
A.2.1.1	Map land use in the project area
A.2.1.2	Collect ethno-socio-economic data on local populations
A.2.1.3	Identify the hot spots which will be targeted by the demonstration project
A.2.1.4	Draft the basic development plan identifying the details of activities to be carried out in each hot spot targeted by the project
Activities corresponding to Result R.2.2: A limited number of hot spots of river beds (the most critical) are dredged	
A.2.2.1	Identify and make aware/sensitise the local groups to be involved in river beds protection
A.2.2.2	Address the hot spots identified
Activities corresponding to Result R.2.3: The forest landscapes of the plot of yards targeted by the project are restored / protected	
A.2.3.1	Draft and sign a convention with industrials exploiting wood in the project area
A.2.3.2	Identify and aware / sensitise the local groups to be involved in reforestation works
A.2.3.3	Install tree nurseries with the support of wood industrials and with the participation of local populations
A.2.3.4	Reforest 200 hectares usable for fuel wood, construction: 100 ha financed by wood industrials and 100 hectares financed by the project with local populations
A.2.3.5	Maintain and exploit the new parcels of forest
Activities corresponding to Result R.2.4: The surfaces burned by bush fires are reduced	
A.2.4.1	Sensitise / involve the local committees of bush fire control
A.2.4.2	Make 50 km of firewalls around the plot of yards reforested and around gallery forests
A.2.4.3	Propose incentive measures to national administrations
Activities corresponding to Result R.3.1: The demonstration project is replicated	
A.3.1.1	Replication is carried out on site 1
A.3.1.2	Replication is carried out on site 2
A.3.1...	Etc.

Detailed budget (USD 1,00 = XOF 535)

	GEF		Counterparts			TOTAL
	Demo proj.	Core proj.	Funds	In kind	Source	
10 PROJECT PERSONNEL COMPONENT						
11.00 Project personnel						
11.01 Project Manager (CIV)	12 000,00			6 000,00	Gvt	18 000,00
11.02 Deputy Manager (GHA)	12 000,00			6 000,00	Gvt	18 000,00
12.00 Consultants						
12.01 Situation appraisal CIV	4 500,00			2 250,00	Gvt	6 750,00
12.02 Situation appraisal GHA	4 500,00			2 250,00	Gvt	6 750,00
12.03 Mapping, hydrological data	5 000,00			3 000,00	Gvts	8 000,00
12.04 Socio-economic & misc.	5 000,00			3 000,00	Gvts	8 000,00
13.00 Support staff						
13.01 Accounting Secretary (CIV)	4 200,00			2 100,00	Gvt	6 300,00
13.02 Driver (CIV)	2 100,00			1 050,00	Gvt	3 150,00
13.03 Driver (GHA)	2 100,00			1 050,00	Gvt	3 150,00
16 OFFICIAL TRAVELS						
16.01 CIV Officials to GHA	5 400,00					5 400,00
16.02 GHA Officials to CIV	5 400,00					5 400,00
16.03 CIV Nat. Coord. to the field	(1)	4 000,00				4 000,00
16.04 GHA Nat. Coord. to the field	(1)	4 000,00				4 000,00
16.05 Missions of drivers	1 200,00					1 200,00
16.06 Final evaluation	(1)	10 000,00				10 000,00
20 SUB-CONTRACT						
22.01 Mechanical showel (2 weeks)	10 000,00		5 000,00		Gvts	15 000,00
22.02 Production of young plants	9 000,00		9 000,00	4 500,00	Ind./Pop.	22 500,00
22.03 Preparation of plots of yard	18 000,00		18 000,00	9 000,00	Ind./Pop.	45 000,00
22.04 Maintenance of plantations	15 000,00		15 000,00	7 500,00	Ind./Pop.	37 500,00
22.05 Conventions with NGOs (CIV)	6 000,00			3 000,00	NGO	9 000,00
22.06 Conventions with NGOs (GHA)	6 000,00			3 000,00	NGO	9 000,00
22.07 Realisation of fire breaks	10 000,00		10 000,00	5 000,00	Gvt/Pop.	25 000,00
30 TRAINING COMPONENT						
32.00 Group training						
32.01 Capacity building	4 000,00			2 000,00	Operat.	6 000,00
32.02 On site training	8 000,00			4 000,00	Operat.	12 000,00
33.00 Meetings						
33.01 Bilateral Pilot Committee	15 000,00		6 000,00	6 000,00	Gvts	27 000,00
33.02 Particip. to core project meetings	(1)	For record				For record
33.03 Local workshops	8 000,00			4 500,00	SH	12 500,00
40 EQUIPMENT AND OFFICES						
41.00 Expandable equipment						
41.01 Stationery & other office costs	6 000,00			6 000,00	Gvts	12 000,00
41.02 Vehicles operation/maintenance	10 000,00			10 000,00	Gvts	20 000,00
42.00 Non expandable equipment						
42.01 Computers	10 000,00					10 000,00
42.02 Topographic equipment & GPS	1 600,00					1 600,00
43.00 Offices						
43.01 Project offices (CIV & GHA)				10 800,00	Gvts	10 800,00
43.02 Phone, e-mails, power, water, etc.				12 000,00	Gvts	12 000,00
50 MISCELLANEOUS COMPONENT						
99 GRAND TOTAL	200 000,00	18 000,00	63 000,00	114 000,00		395 000,00

Notes:

(1) Charged on Component 1, Activity 1.1 of the overall project "Establish the Project Management and Coordination Mechanism"

(2) Gvt stands for government; Ind. stands for wood industrials; Pop. Stands for local populations; SH stands for stakeholders

Summary budget by component output

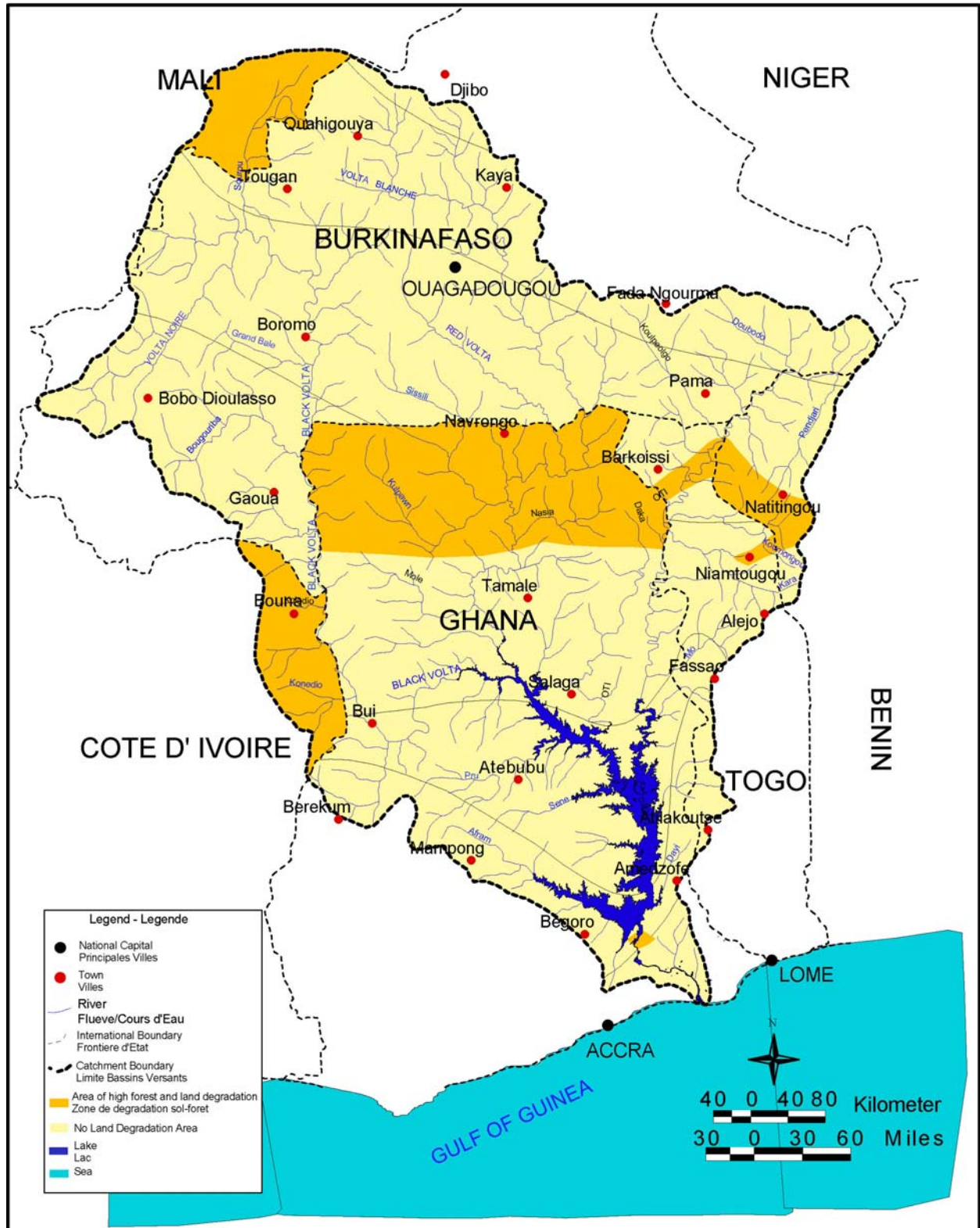
Expected outcomes		GEF Financing		Counterparts		Total
		Specific DP3	Core project	In funds	In kind	
R0	The demonstration project DP3 is operational	54 400,00	18 000,00		55 000,00	127 400,00
R11	The capacities of stakeholders involved in forest and water resources are reinforced	64 600,00		6 000,00	22 500,00	93 100,00
R21	A basic development plan of the project area is elaborated	19 000,00			10 500,00	29 500,00
R22	A limited number of hot spots of river beds (the most critical) are dredged	10 000,00		5 000,00		15 000,00
R23	The forest landscapes of the plot of yards targeted by the project are restored / protected	42 000,00		42 000,00	21 000,00	105 000,00
R24	The surfaces burned by bush fires are reduced	10 000,00		10 000,00	5 000,00	25 000,00
R31	The demonstration project is replicated on site 1	–	For record	To be defined with the stakeholders of the areas where are situated the sites for replication		–
R3n	Etc.	–	d°			–
Total		200 000,00	18 000,00	63 000,00	114 000,00	395 000,00

Work plan

ACTIVITIES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
R11	A.1.1.1 Equip the local administrations	■	■	■																					
	A.1.1.2 Train the civil servants of the two countries		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	A.1.1.3 Train the local populations	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
R21	A.2.1.1 Map land use in the project area	■	■	■																					
	A.2.1.2 Collect ethno-socio-economic data on local populations	■	■	■																					
	A.2.1.3 Identify the hot spots to be targeted by the demo project		■	■																					
	A.2.1.4 Draft the basic development plan			■																					
R22	A.2.2.1 Identify and aware / sensitise the local groups to be involved in river beds protection	■	■	■																					
	A.2.2.2 Address the hot spots identified				■	■	■	■	■	■															
R23	A.2.3.1 Draft and sign a convention with industrials exploiting wood in the project area		■	■																					
	A.2.3.2 Identify and aware / sensitise the local groups to be involved in reforestation works		■	■	■	■	■																		
	A.2.3.3 Install tree nurseries with the support of wood industrials and with the participation of local populations				■	■	■																		
	A.2.3.4 Reforest 200 hectares (100 ha financed by wood industrials and 100 hectares financed by the project with the involvement of local populations)								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	A.2.3.5 Maintain / exploit the new forest parcels													■	■	■	■	■	■	■	■	■	■	■	■
R24	A.2.4.1 Sensitise / involve the local committees of bush fire control							■	■	■	■	■	■	■	■	■	■	■	■	■					
	A.2.4.2 Make 50 km of firewalls around the plot of yards reforested and around gallery forests										■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	A.2.4.3 Propose incentive measures to national administrations																					■	■	■	
R31	A.3.1.1 Replication is carried out on site 1																								
	A.3.1.2 Replication is carried out on site 2																								
	A.3.1.n Etc.																								

Post demo-project activities

Map of High Forest and Land Degradation in the Volta Basin
 Zone de Degradation Sol-Foret du Bassin du Fleuve Volta



Map of the Volta Basin Showing Water Shortage Areas
Carte du Bassin du Fleuve Volta Indiquant Zone de Diminution de Ressources en Eau

