

EXPECTED OUTPUTS & MONITORING INDICATORS	PLANNED ACTIVITIES	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET		
		Q1	Q2	Q3	Q4		Source	Budget Description	Amount
	7.3. 2 Furniture					Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN			
	7.4 Produce and distribute technical pamphlet on the role of terracing and trees in environment protection					Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.			
Output 8: Youth trained in cooperative principles, techniques of soil conservation, agro forestry, forestry, land use and integrated approach.	8.1 Training them in cooperative principles	x	x			Youth, Youth Committees, Steering committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN..	ONE UN		6,000.00
	8.2 Sensitization and training on techniques of soil protection (terracing, a forestation, etc)	x	x			Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN	ONE UN		
	8.3 Sensitization and training on techniques to produce and maintenance agro forest trees	x	x			Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.	ONE UN		



M

EXPECTED OUTPUTS & MONITORING INDICATORS	PLANNED ACTIVITIES	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET (in US\$)		
		Q1	Q2	Q3	Q4		Source of Funds	Budget Description	Amount
	8.4. Training on production of forest plants, fruits and agro forest in nurseries and multiplication of soil nitrogen fixing shrubs					Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.	ONE UN		
	8.5 Training on extension of land use and integrated production system of agro forest, crops and livestock					Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.	ONE UN		23,457.3
Output 9 : The youth have been organized for waste management in Kigali and towns along Nyabarongo River System	9.1 Mobilization youth in cooperatives and association					Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.	ONE UN		0
	9.2 Construction of youth centre for administrative cooperative and cultural affairs					Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.	ONE UN		
	9.3 Equipping the youth centre (computer and accessories)					Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.			

EXPECTED OUTPUTS & MONITORING INDICATORS	PLANNED ACTIVITIES				TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Source of Funds	Budget Description	Amount
		x							Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.	ONE UN		11,000
									Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.			
Output 10: Youth have been trained in environment and waste management techniques	x	x							Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.	ONE UN		18,000.00
									Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.			
									Youth, Youth Committees, Steering Committee, Environment Conservation NGOs, PMU, REMA, UNDP, MINIRENA, MINALOC, Ministry of Youth, MINAGRI, MINECOFIN.			
Output 11 Project implementation Unit (PMU) in place	x	x							REMA, UNDP, MIFOTRA, MINECOFIN.	ONE UN		15,000 9000
									REMA, UNDP, MIFOTRA, MINECOFIN.			
									REMA, UNDP, MIFOTRA, MINECOFIN.			7200
									REMA, UNDP, MIFOTRA, MINECOFIN.			7200
									REMA, UNDP, MIFOTRA, MINECOFIN.			4,200.00

U

Handwritten signature or mark

EXPECTED OUTPUTS & MONITORING INDICATORS	PLANNED ACTIVITIES				RESPONSIBLE PARTY			PLANNED BUDGET		
	Q1	Q2	Q3	Q4	Source of Funds	Budget Description	Amount			
	x	x				REMA, UNDP, MIFOTRA, MINECOFIN.				
						REMA, UNDP, MIFOTRA, MINECOFIN.				
					GOV		114,401.47			
	x	x		x	UNDP		4,642			
<b>Total</b>										<b>1,162,548.6</b>

5

u

## 9.0. Monitoring and Evaluation, including AWP monitoring tool

Project monitoring and evaluation is important process for the successful implementation and performance of the project as it enables the management to get feedback on project implementation and performance and to take quick decision to solve problems and adjust project implementation priorities accordingly. Project monitoring and evaluation will be conducted in accordance with established UNDP procedures. Annex 5 is the Annual Work-plan Monitoring Tool (AWP) of the project. It shows project planned costs and physical results set against project outputs and activities. The Annual Work Plan (AWP) Monitoring Tool is important for monitoring and evaluation. It provides performance and impact indicators for project implementation. These will form the basis on which the project's Monitoring and Evaluation system and Action plan will be built.

The PMU will monitor activities to ensure that they are carried out appropriately and in a timely manner as per the work plan and budget. The Annual Work plan, with a detailed M&E Strategy, will be presented at the Inception/ Appraisal Workshop at project start-up, and the inception/ appraisal report prepared after the workshop but not later than 3 months after project start-up. The PMU will also ensure that planned evaluations are undertaken as scheduled. It is the responsibility of the project coordinator to do day to day monitoring of the project basing on the project's Annual Work Plan and its indicators. The Project coordinator will inform the PMU, REMA and UNDP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

### Monitoring responsibilities and events

The following are monitoring responsibilities and events which will need close follow-up from project management and development partners:

- Project Inception Phase: Project Inception/ Appraisal Workshop will be conducted with project team, relevant government counterparts and development partners. The objective of Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the project's Annual Work Plan (AWP) Monitoring Tool. The inception/Appraisal workshop is important to (i) introduce project staff with the UNDP, GOV *team* and other project stakeholders involved in the financing and implementation of the project. (ii) Detail the roles, support services and complementary responsibilities under the UNDP NEX procedures. This will be an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. (iii) provide a detailed overview of UNDP reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as

well as mid-term and final evaluations. (iv) provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephrasing.

- A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.
- Periodic monitoring of implementation progress will be undertaken by the UNDP and REMA through quarterly meetings or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.
- UNDP Country Offices and REMA will conduct yearly field visits, or more often based on an agreed upon schedule to be detailed in the project's Inception Report (Appraisal Meeting report) / Annual Work Plan to assess first hand project progress.
- Annual *Project Review* (APR) will be conducted under the auspices of CEPEX, a government semi-autonomous institution responsible for coordination project implementation, with all stakeholders directly involved in the implementation of a project. The Programme Coordinator will prepare an annual project report and submit it to UNDP at least two weeks prior to the APR for review and comments.
- Terminal Tripartite Review (TTR): The terminal tripartite review will be held on the last month of project operations. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation or formulation.
- Project Monitoring Reporting

The Project Coordinator will be responsible for the preparation and submission of the following reports that form part of the monitoring process: Inception/Appraisal report, annual project report, Implementation review report, quarterly progress reports, project terminal report and technical reports prepared by the project.

## 10.0. Final project Evaluation

The project will be subjected to at least two independent external evaluations as follows:

### Mid-term Evaluation

An independent Mid-Term Evaluation will be undertaken at the mid-point of implementation. The Mid-Term Evaluation will:

- Determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation;
- Highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management.
- Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by REMA and UNDP.

### Final Evaluation

An independent final evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by REMA and UNDP.

## 11.0. Legal Context

This project document shall be the instrument referred to as .....between the Government of Rwanda and the United Nations Development Programme (UNDP. The following types of revisions may be made to this project document with the signature of the UNDP Resident Representative only, provided he or she is assured that the other signatories of the project document have no objections to the proposed changes:

- (a) Revisions in, or addition of, any of the annexes of the project document (with the exception of the Standard Legal Text for non-SBAA countries which may not be altered and the agreement to which is a precondition for UNDP assistance).

(b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of a project, but are caused by rearrangement of inputs agreed to or by cost increases due to inflation; and

(c) Mandatory annual revisions, which rephrase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility.

## 12. Risk Analysis and Control Measures

The matrix below shows potential environmental risks, causes, impacts and risk control measures integrated in the project and government policy.. The project will coordinate with the MINITERE, local leaders and communities to sensitize them and deal with likely project environmental social impact and how to mitigate and manage those impacts. In particular, the project will support implementation of soil conservation measures and good best practices to mitigate against risks. Farmers and youth will be trained and mobilized to create awareness to support efforts to protect the environment and develop the catchments of River Nyabarongo and to carry out waste management in Kigali city and Towns along River Nyabarongo system.

Risk	Cause	Impact	Control Measures
1. Soil erosion	<ul style="list-style-type: none"> <li>• Land limited due overpopulation</li> <li>• Existing few non-agricultural opportunities for income generation</li> <li>• Land fragmentation and cultivation of steep hill slopes</li> <li>• Non-recuperation of soil fertility</li> </ul>	<ul style="list-style-type: none"> <li>• Deterioration of soil structure and decline of soil fertility and productivity</li> <li>• Cultivation of marginal lands</li> </ul>	<ul style="list-style-type: none"> <li>• The project is putting up soil conservation measures</li> <li>• Development and management of river Nyabarongo catchments for agricultural production and soil erosion control measures e.g afforestation ,terracing and use of composite manure</li> <li>• Land policy and law under implementation will prevent land fragmentation and promote investment in soil</li> </ul>



			conservation measures
2. Pollution of rivers, wetlands and City/ Towns	<ul style="list-style-type: none"> <li>• Soil from erosion</li> <li>• Wastes from Kigali City and towns along Nyabarongo river</li> </ul>	<ul style="list-style-type: none"> <li>• Decrease of river water levels</li> <li>• Loss of cultivable land in wetlands and decrease of productivity</li> <li>• Loss of biodiversity</li> <li>• Diseases</li> </ul>	<ul style="list-style-type: none"> <li>• Project promotes waste management in Kigali city and towns</li> <li>• Terracing hillsides for soil control and agricultural development</li> </ul>
3. River bank erosion	<ul style="list-style-type: none"> <li>• Cultivation of river banks</li> <li>• Un controlled rainfall run-off water</li> </ul>	<ul style="list-style-type: none"> <li>• River water pollution</li> <li>• Decrease of water levels of rivers and wetlands</li> <li>• Menace of floods</li> </ul>	<ul style="list-style-type: none"> <li>• Project manages the 50 meters from river banks through agro forestation. Grass/shrub planting</li> </ul>
4. Lack of land for youth to cultivate	<ul style="list-style-type: none"> <li>• Limited land available</li> <li>• Existing land for cultivation owned by farmers</li> </ul>	<ul style="list-style-type: none"> <li>• Youth may be not motivated to participate in the project</li> </ul>	<ul style="list-style-type: none"> <li>• Farmers use and pay use for the services carried out to implement soil conservation measures</li> <li>• Youth to own products cultivated on a part of the 50meters from the river banks</li> </ul>
5. limited knowledge on agricultural and soil conservation measures	<ul style="list-style-type: none"> <li>• Youth and farmers not trained in soil conservation measures</li> <li>• Limited extension services at farmer level</li> </ul>	<ul style="list-style-type: none"> <li>• Decrease of agricultural productivity</li> <li>• Continued soil erosion due to badly implemented soil conservation measures</li> </ul>	<ul style="list-style-type: none"> <li>• Project will provide training in related areas</li> </ul>

<p>6. Farmers and Youth unable to adopt soil conservation measures continuously</p>	<ul style="list-style-type: none"> <li>• Expensive soil conservation techniques</li> <li>• Low incomes and poverty</li> </ul>	<ul style="list-style-type: none"> <li>• Project not well implemented</li> </ul>	<ul style="list-style-type: none"> <li>• The project will provide micro-grants to farmers and youth managing wastes</li> <li>• Mobilisation of farmers and youth</li> <li>• Youth will be paid for services carried out</li> </ul>
---	---	--	--

↳

4

## ANNEXES

### Annex 1: Profitability of Fertilizer and Briquettes Made from Solid Wastes (in US\$)

(a) A budget for Fertilizer(1ton)	US\$	b) A budget for Briquettes (1ton)	US\$
<b>1.Revenue</b>	<b>73.13</b>	<b>1. Revenue</b>	<b>146.3</b>
2. Less production costs		2.Less production costs	
2.1 Collection solid waste materials	4.6	2.1 Collection solid waste materials	4.6
2.2 Sorting and cleaning	4.6	2.2 Sorting and cleaning	4.6
2.3 processing fertilizer	18.2	2.3 Processing briquettes	13.3
2.4 Marketing fertilize	5.48	2.5 Marketing fertilize and briquettes	4.5
<b>Total production costs</b>	<b>32.88</b>	<b>Total production costs</b>	<b>27</b>
<b>Net benefit before tax</b>	<b>40.25</b>	<b>Net benefit before tax</b>	<b>119.3</b>
Income tax (30%)	12.075	Income tax (30%)	35.79
<b>Net benefit after tax</b>	<b>28.175</b>	<b>Net benefit after tax</b>	<b>83.51</b>

**Annex 2: General project benefits from interventions for farmers in the project area**

**Annex 2 (i) Smallholder farmers cultivating high level hillsides**

**1. Radical terracing (above slope of 25 degrees)**

Major land use	Source of income from the Project intervention	Area cultivated in ha	Production n/ha	Estimated % increase from interventions	Unit price in US\$	Value in increases of yield
Annual and perennial crops	1. Yield increment from annual crops.	1,974	3tons	50	200	592,200
Grasses/ pasture/ legumes	2. Yield increment from perennial crops.	1,974	10 tons	50	150	1,480,500
	3. Planting trees/ shrubs along the lower side supporting the bund.	1,661	2.3m3	50	10	19,101.5
	4. Tree planting (afforestation/rehabilitation).	483	2.2 m3	50	10	5,554.5

**2. Progressive Terracing (cultivating lower sides of the catchment areas)**

	1. Yield incremental from annual crops.	3,410.18	3tons	50	200	1,023,053.28
	2. Yield incremental from perennial crops.	3,410.18	10 tons	50	150	2,557,633.19
	3. Planting trees/ shrubs along the lower side supporting the bund.	937.37	2.3m3	50	10	10,779.81
	4. Tree planting (afforestation/rehabilitation).	835.25	2.3 m3	50	10	9,605.33
<b>NETBENEFIT</b>						<b>5,698,427.62</b>



Annex 2(ii) : Benefits for youth in rural areas from the project (managing the river banks and water hyacinth)									
Major land use	Source of income from the Project intervention	area cultivated/forested/ha	Production/ha	man-day/ha	No. of Man days/tons/baskets	Estimated % increase from interventions	Unit price in US\$	Value in increases of yield	
Annual and perennial crops Grasses/ pasture/ legumes	1. Planting trees/shrubs along the 10m supporting the bund.	200	2.3m3			50	10	230,000.00	
	2. Income from terracing.	6,611.58		136.00	901502	-	1.83	1,649,748.66	
	3. Income from a forestation	9,884.57		50	494,229	-	1.83	904,439.07	
	4. Yield increment from annual crops from 24 m bund with progressive terraces (area cultivated).	240	3 tons	-	-	50	200	72,000	
	5. Yield increment from perennial crops (fruits).	240	10tons	-	-	50	150	180,000.00	
	6. Income from sales of fertilizer from water hyacinth (assumption make average of 300 tons annually(tons).	-	-	-	-	300 tons	1	73.13	21,939.00




	7. Income from sales of handicrafts (1% of employed youth will be employed in hyacinth collection, making fertilizer and handicrafts; this is equivalent to 13,956 youth and each making 4 baskets per month.	-	-	-	55,824	1	10	558,240.00
	<b>BENEFIT</b>							<b>3,616,366.73</b>
	<b>TOTAL BENEFIT FOR FARMERS AND YOUTH IN RURAL AREAS</b>							<b>9,314,794.35</b>



2

**Annex 3: Soil conservation techniques which can be used in terracing (Adapted from SMS-MSP capacity building project.)**

- **Contouring:** Carrying out ploughing, planting and cultivation on the contour can reduce soil loss from slopping land compared with cultivation up-and down the slope.
- **Contour bunds:** Contour bunds are earth banks 1.5 to 2 m wide thrown across the slope to act as a barrier to run off, to form a water storage area on their up slopes sides and to break – up a slope into segments shorter in length than is required to generate over land flow.
- **Terraces:** Terraces are earth embankments constructed across the slope to intercept surface run-off and convey this rain run-off into a stable outlet at non-erosive velocity, and to shorten slope length. Thus terraces perform similar functions to contour bunds. They differ from bunds in that they are much larger and designed to more stringent specifications, decisions are required on the spacing and length of the terraces, the location of terrace outlets, the gradient and dimensions of the terrace channel and the layout of the terrace system.
- **Bench terraces (radical terracing)** consist of a series of alternating shelves and risers are employed. Where steep slopes, up to 30 degrees, need to be cultivated, the riser is more vulnerable to erosion, and is protected by more vegetation cover and sometimes faced with stones and concretes. There is no channel as such, but a water storage area is created by sloping the shelves into the hill side. Bench terraces can to be reasonably satisfactory as a conservation measure over a wide range of conditions, provided sufficient labor is available for construction and maintenance. But their construction can expose the relatively in-fertile sub-soil, and they require a high a labor input for construction and maintenance, and they can hold back so much water on the hill side that the soils became saturated and land sliding can be induced. As an alternative conservation measure, “fanya-juu” terraces were recommended. Various modifications to permit inward-sloping shelves for grater water storage or protection of very steep slopes or to allow cultivation of tree crops and market garden crops are used.
- **Fanya-juu Terraces** consists of narrow shelves constructed by digging the contour and throwing the soil up slope to form embankments which is later stabilized by planting grass. During cultivation, vegetation and crops residues are spreads over the shelves. Over time, redistribution of soil within the inner inter-terraces causes the inter-terrace slope to decline in angel and bench like features to develop.
- **Retention Terraces:** These are level terraces; used where water must be conserved by storage on the hillside.

ANNEX 4 : ANNUAL WORK PLAN COSTS BY QUARTERS 2008-2011

Year	2008				2009				2010				2011				
	Quarters	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Total
1. Radical Terracing																	
1.1 Digging and removing the top fertile to soil				69,702		104,553.9	139,405.1	34,851.3	348,512.84	65,174.7	97,762.1	130,349.4	32,587.4	325,873.62	83,090.1	124,635.2	207,725.3
1.2 Establishing and reinforcement of embankment (contour ridges) to hold soil and separate terraces				45,235.2		67,852.7	90,470.3	22,617.6	226,175.80	35,266.4	52,899.5	70,532.7	17,633.2	176,331.80	66,832.3	100,248.5	167,080.8
1.3 Restoring and leveling to fertile soil high river catchment areas				35,775.6		53,663.4	71,551.2	17,887.8	178,878.1	29,549.9	44,324.9	59,099.8	14,775.0	147,749.62	38,339.5	57,509.2	95,848.69
1.4 Planting trees/ agro forestry				8,352.4		12,528.6	16,704.8	4,176.2	41,762.0	11,292.7	16,939.1	22,585.4	5,646.4	56,463.60	15,942.7	23,914.1	39,856.80
1.5 Plant pasture(Cameroon fresh) on radical terraced hills(pieces)				5,305.0		7,957.5	10,610.0	2,652.5	26,525.00	4,244.0	6,366.0	8,488.0	2,122.0	21,220.00	2,122.0	3,183.0	5,305
1.6 Production of composite organic/green fertilizer for nurseries and pasture and income generating agro activities				5,253.2		7,879.8	10,506.4	2,626.6	26,266.00	4,071.0	6,106.5	8,142.0	2,035.5	20,355.00	2,035.6	3,053.4	5,089.00

