United Nations Environment Programme

Final Report	**Terminal Evaluation of the Project: "Reducing Vulnerability to Climate Change by Establishing Early warning and disaster preparedness systems and support for integrated watershed management in flood prone areas (Rwanda LDCF)"** **GEF Project ID: 3838**

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Evaluation Office of UNEP **September 2015**

Acknowledgements

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There are far too many people to mention by name – and hopefully everyone who contributed is included in the lists of names annexed to this report (Annex III - C and D) – but special mention must be made of the UNEP Evaluation office, UNEP and UNDP project teams and the Rwanda National Environment Management authority (REMA)'s Single Project Implementation Unit (SPIU) team, who gave unstintingly of their time to this evaluation. The UNEP Evaluation Office: Harriet Matsaert and Pauline Marima for the coordination, overall guidance, direction and quality assurance of the entire evaluation process; the UNEP Project team Lars Christiansen (the Project Task Manager) and Duncan Turere (the Fund Management Officer), for their technical inputs to the valuation process; the UNDP Rwanda Team led by Mr. Peter Kamau for their technical inputs; the Rwanda Project team and in particular Alphonse Mutabazi (the Project Manager) and Timoteo Caetano Ferreira (the Chief Technical Advisor) for their technical inputs and direction of the evaluation mission to Rwanda and also for providing a platform for full participation of the project stakeholders and beneficiaries. The availability of the Director General Rwanda Environment Management Authority (REMA) and members of the Project Steering Committee (PSC) to the evaluation team is highly appreciated. The views and information provided by project team, stakeholders and beneficiaries in Rwanda and the project sites in the Gishwati region are also highly appreciated.

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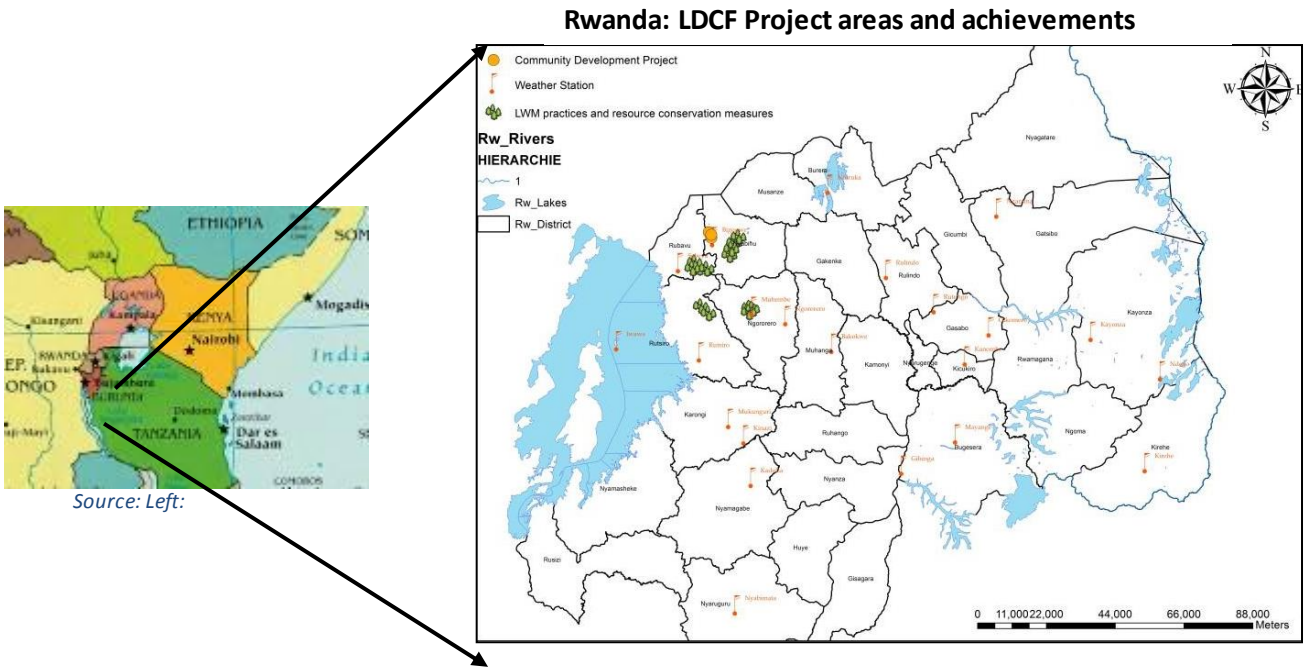
List of acronyms & abbreviations

Acronym/Abbreviation	Meaning
AAP	Africa Adaptation Programme
AF	Adaptation Fund
AfDB	African Development Bank
AWS	Automatic Weather Station
COP	Conference of the Parties
CTA	Chief Technical Advisor
DEPI	UNEP's Division of Environmental Policy Implementation
DG	Director General
DDPs	District Development Plans
DEFs	District Environmental Facilitators
DNA	Designated National Authority
EA	Expected Accomplishments
EA	Executing Agency
EAC	East African Community
EDPRS	Economic Development and Poverty Reduction Strategy
EO	Evaluation Office
EWS	Early Warning Systems
EWS TT	Early Warning Systems Task Team
FAO	Food and Agricultural Organisation
FNC	First National Communication
FONERWA	National Fund for Environment and Climate Change
FSP	Full Sized Project
GCF	Green Climate Fund
GCMs	General Circulation Models
GEF	Global Environmental Facility
GIS	Geographical Information Systems
GOR	Government of Rwanda
HDI	Human Development Index
HRBA	Human Rights Based Approach
IA	Implementing Agency
ICAO	International Civil Aviation Organization
IFAD	International Fund for Agricultural Development
INC	Initial National Communication
IWRM	Integrated Water Resource Management
LDCF	Least Developed Countries Fund
M&E	Monitoring and Evaluation
Meteo Rwanda	Rwanda Meteorology Agency
MDGs	Millennium Development Goals
MIDIMAR	Ministry of Disaster Management and Refugee Affairs
MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Finance and Economic Planning
MININFRA	Ministry of Infrastructure
MINISANTE	Ministry of Health
MINIRENA	Ministry of Natural Resources

Acronym/Abbreviation	Meaning
MoU	Memorandum of Understanding
NAPA	National Adaptation Programme of Action
NCOFOC	Nyirabashoni Cooperative of Farming Chicken
NEX	National Execution
NCCC	National Climate Change Committee
NMS	National Meteorological Services
NLC	The National Land Centre
PMU	Project Management Unit
ProDoc	Project Document
PSC	Project Steering Committee
PTC	Project Technical Committee
RAB	Rwanda Agriculture Board
REMA	Rwanda Environment Management Authority
RMS	Rwanda Meteorological Services
ROtI	Review of Outcomes to Impacts
RWF	Rwandan Franc
SNC	Second National Communication
SPIU	Single Project Implementation Unit
TE	Terminal Evaluation
TOC	Theory of Change
TORs	Terms of Reference
UNDAF	United Nations Development Assistance Framework
UNDAP	United Nations Development Assistance Plan
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VRA	Vulnerability Assessment
WMO	World Meteorological Organisation

Figure 1: Location of the Rwanda



Source: Left:

https://www.google.com/search?q=rwanda&biw=1525&bih=708&tbm=isch&tbo=u&source=univ&sa=X&ei=c6xmVeSaJMe5UbDIgNgE&ved=0CEcQsAQ&dpr=0.9#imgrc=hBjUYVhmi7GCrM%253A%3Bb5I8jUM7pgy3KM%3Bhttp%253A%252F%252Fintoreexpeditions.com%252Fwp-content%252Fuploads%252F2013%252F01%252Frwanda-map2.jpg%3Bhttp%253A%252F%252Fintoreexpeditions.com%252Frwanda-resources%252Fbasic-facts-about-rwanda%252F%3B1203%3B894

Source: Right: Francois-Xavier and Naramabuye, 2015. Development of a baseline and impact of the LDCF project on biophysical and chemical indicators and socio-economic situation of the project area, Draft Report. REMA

Table 1: Project Identification Table

UNEP PIMS ID:	PIMS 4109	**IMIS number:**	LDL-2328-2724-4B52
Sub-programme:		**Expected Accomplishment(s):**	
UNEP approval date:	September 2010	**PoW Output(s):**	
GEF project ID:	3838	**Project Type:**	FSP
GEF OP #:	n/a	**Focal Area(s):**	Climate Change Adaptation
GEF approval date:	23 March 2010	**GEF Strategic Priority/Objective:**	Climate Change Adaptation
Expected Start Date:	June 2010	**Actual start date:**	October 2010
Planned completion date:	June 2014	**Actual completion date:**	December 2014*
Planned project budget at approval:	USD 15,913,000**	**Total expenditures reported as of June 2015:**	USD 14,530,255.40
GEF Allocation:	USD 3,486,000	**GEF grant expenditures reported as of June 2015**	USD 3,421,001.40[1]
PDF GEF cost:		**PDF co-financing:**	
Expected FSP co-financing:	USD 12,427,000	**Secured MSP/FSP co-financing as at June 2015**	USD 11,109,254
First Disbursement:	October 2010	**Date of financial closure (expected):**	June 2015
No. of revisions (budget):	3	**Date of last revision:**	May 2014
Date of last Steering Committee meeting:	November 2014		
Mid-term review/ evaluation (planned date):	June 2012	**Mid-term review/ evaluation (actual date):**	June - September 2012
Terminal Evaluation (actual date):	March - June 2015		

** The legal and financial closure of the Project Cooperation Agreement (PCA) between EA and UNEP was revised from December 2014 to June 2015, with technical completion at December. 2014. In practice, however, some activities and financial closing have spilled into 2015. Full closure is expected by 30 June, 2015.*

***Funding including UNEP and UNDP contributions, UNDP track and co-financing*

[1] UNDP: 100% disbursement, UNEP: balance of USD 56,057

Executive summary

Introduction

The project "Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in flood prone areas (Rwanda LDCF)" was implemented by the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP in collaboration with the with the Government of Rwanda's (GOR) Rwanda Environment Management Authority (REMA), as the project's Executing Agency (EA). The project was implemented from 1 October 2010 to 31 December 2014, and received a no cost extension up to 30 June 2015 enable the completion of a few ongoing activities.

The need for the project arose from the climate change impacts assessments conducted under the Initial National Communication (INC) and National Adaptation Programmes of Action (NAPA). The assessments concluded that Rwanda, and the Gishwati region in particular, is highly vulnerable to climate change impacts and that some of the ways of reducing the vulnerability is through implementing: (i) climate risk assessment and forecasting, (ii) climate adaptation planning and response strategies, (iii) demonstration of adaptation practices, and (iv) knowledge management, public awareness and dissemination lessons.

The goal of the project was "to contribute to climate change risk and flood disaster preparedness in Rwanda". The major objective of the project was "to reduce the vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change ". The project had four components (1) Climate risk assessment and forecasting; (2) Climate change adaptation planning and response strategy; (3) Reduction in the adverse effects of floods and droughts; and (4) Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot. UNEP implemented Components 1, 2 and 4, while UNDP implemented Component 3.

The major objective of the terminal evaluation was to assess project performance (in terms of relevance, effectiveness and efficiency), determine its outcomes and impacts as well as their sustainability, and to identify valuable lessons learnt.

Evaluation methodology

The findings of the evaluations were based on a desk review of project documents, key informant interviews, group discussions and field visits to pilot sites in Rwanda (Gishwati region in particular) as well as evaluation of the technical aspects of the projects that have been implemented. Country-specific documents related to climate change adaptation, development and environment were also reviewed prior to and after the field mission. UNEP, UNDP and GEF documents related to strategies, policies and programming, and evaluation were also reviewed.

Progress made towards achievement of project objectives and impacts was examined using a reconstructed Theory of Change (TOC) and Review of Outcomes to Impacts (ROtI) analysis. The reconstructed TOC is based on the premise that, putting in place functional early warning and disaster preparedness systems and reducing adverse effects of floods and droughts, would reduce vulnerability of the population and communities in the Gishwati ecosystem to the impacts of climate change.

Summary of the main evaluation findings

For purposes of the evaluation, the original project outcomes were re-formulated to better reflect the project's intended outcomes. To that end, the main outcome was reformulated to read "reduced vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased flood risks and droughts due to climate change" and used in the TOC analysis. The following re-formulated immediate outcomes were used

in the Theory of Change (TOC) analysis: (i) Improved Early Warning System for climate change risks in Gishwati Ecosystem; (ii) Climate proofed district development planning in Nyabihu District; (iii) enhanced preparedness of communities and government to respond to climate risks and vulnerabilities, and; (iv) improvement in the knowledge of good practices to reduce vulnerability to climate change based on Gishwati pilot. In terms of ROtI analysis and the TOC, the project objectives and implementation remained relevant in the context of the issues it intended to address.

A. Strategic relevance:

The Project's objectives and implementation were aligned to Rwanda's development and environmental strategies, programmes, needs and priorities documented in the Rwanda Vision 2020 and the Economic Development and Poverty Reduction Strategy (EDPRS). The project addressed the top adaptation priorities identified in the NAPA. The project was also relevant and aligned to the GEF policies and strategies on climate change, and was also aligned to Rwanda's UNDAF and the One UN agenda. For UNEP the project was aligned to the programmatic objectives and expected accomplishments on climate change adaptation in the UNEP Mid Term Strategy (MTS) 2010–2013, and the Bali Strategic Plan for Technology Support and Capacity-building.

B. Achievement of outputs:

The project satisfactorily delivered outputs within the planned budget and time frame. Achievement against project outputs under all the four components was highly satisfactory. Under component 1, a modern and fully functional EWS was put in place and is already delivering climate information and early warnings. In addition the human (training) and institutional (Meteo Rwanda) capacity was strengthened to effectively utilise the hydro-meteorological network and to conduct climate risk assessment and forecasting. Under component 2 climate sensitive landuse plans were developed and District Development Plans (DDPs) of the four pilot districts (Nyabihu, Ngororero, Rubavu and Rustiro districts) were climate proofed. All the 30 districts in Rwanda had climate change adaptation activities integrated in their DDPs. The developed landuse plan was partly implemented through land rehabilitation under component 3. Climate change mainstreaming guidelines were produced for four sectors - agriculture, energy and infrastructure, environment and natural resources, and health sectors.

Under component 3, climate resilient land use practices were implemented in Gishwati region. A total of 1,373 hectares of degraded land was rehabilitated through tree planting, agro-forestry and establishment of graded and radical terraces. Land rehabilitation was also extended to river banks protection (Nyamukongoro and Sebeya rivers) and watershed upstream of Karago Lake. The project put in place and demonstrated alternative livelihood projects, including, mushroom production, bee keeping, poultry and piggery implemented through community cooperatives.

Under component 4, village leaders, disaster management committees, communities and farmers were trained in climate resilient practices. Training materials and manuals on climate resilient adaptation were developed and produced in Kinyarwanda and the summary produced in English. 5000 copies of the materials were printed and distributed. A climate change website/portal was developed[2] and is live and regularly updated. The portal contains a package of climate change information and serves as platform for sharing information on ongoing climate change activities and lessons learned. A study to establish the climate change vulnerability index after project implementation was successfully completed. The methodology deployed in the study has inspired Rwanda Environment Management Authority (REMA) to develop a study on the national baseline of Climate Change Vulnerability assessment. The project was successful in developing documentary film that documents project achievements for up-scaling and replication.

[2] http://www.rema.gov.rw/climateportal

C. Effectiveness (attainment of project objectives and results)

The achievement of direct (immediate) outcomes, as defined in the reconstructed TOC, for all four components is rated as 'A', indicating that the project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding. The achievement of outputs, summarized in Section A above, has contributed greatly to the success of the project in (i) reducing the average climate change household vulnerability index by 35.1% from 28.2 to 18.3, (ii) reducing the sensitivity index was from 8 to 6.56 (18%), and (iii) increasing the adaptive capacity index from 3.7 to 4.71 (28.4%), which is a significant progress towards intermediate state and impacts.

Considering the high level of ownership of the project results at national and district levels, the partnerships built, and the institutionalisation of the project's achievements, it is highly likely that the project outcomes can progress into impact.

D. Sustainability and replication:

The project's prospects of sustainability are likely across all four dimensions (financial, socio-political, institutional and environmental) of sustainability of project outcomes. However a follow-up project or phase would further enhance the financial sustainability of the project and drive up scaling and replication. Ongoing and planned initiatives in climate change adaptation supported by both the GOR, and bilateral and multi-lateral donors provide excellent opportunities for sustaining project outcomes. The socio-political situation and institutional frameworks are currently very conducive to sustaining project outcomes. The Rwanda's National Fund for Environment and Climate Change Environment (FONERWA) as well as self-financing through the sale of climate information by Meteo Rwanda could enhance financial sustainability. Ownership and enthusiasm at community (among the farmers' cooperatives) and at national level will increase the sustainability of the project achievements. A follow-up phase or project(s) could further enhance the suitability of the project along all the four dimensions of sustainability.

Catalytic role and replication:

The project has been catalytic in changing community practice in regard to EWS and adaptation practices which could trigger replication and scale-up, further triggering integrated government policy and securing donor funding. The rating of progress towards the Intermediate States and impact is rated "B" meaning it is "Likely" to achieve the expected Impact. However, long term impacts regarding adaptation and building resilience will more likely accrue if the established EWS and piloted climate resilient landuse practices form part of a wider framework for integrating adaptation into planning and socio-economic development at the national, district, and community levels (programmes and projects). The early successes of the pilots showcase the project's concrete, on-the ground achievements, which will be instrumental in promoting further stakeholder buy-in and acceptance of climate information and scaling up of adaptation actions by households and communities.

E. Efficiency:

The project set realistic and measurable targets in terms of capacity building and vulnerability reduction. Project implementation was generally cost-effective and timely, achieving project targets within the planned budget and timeframe. The cost-effectiveness was achieved through establishing strategic and strong partnerships, using a participatory approach, building on existing institutions and initiatives in climate change (co-financing), as well as selection of pilot sites in areas with ongoing projects and programmes. In addition the project involved districts and local communities in the design and implementation of project activities.

F. Factors affecting project performance:

The project experienced delays at the beginning (largely institutional and beyond the control of the project) which delayed initial implementation of project activities. However, this evaluation found out that after the Midterm Review (MTR), the project management, stakeholders and the public reacted positively to achieve a highly successful project performance. Although some complications were experienced in reporting and decision making, brought about by having two IAs (UNEP and UNDP) that operate different reporting mechanisms, this did not significantly affect project implementation. The Single Project Implementation Unit (SPIU) arrangement was very instrumental in the implementation and success because the project was able to have leverage from other projects and programmes in REMA in terms of project staff, Monitoring and Evaluation (M&E) and co-financing. The implementation of the project by two UN agencies (UNEP and UNDP) was particularly beneficial, given that UNDP is a resident agency in Rwanda and easily provided the much needed technical backstopping.

Table 2: Summary of Evaluation Ratings

Criterion	Overall Rating
A. Strategic relevance	Highly Satisfactory
B. Achievement of outputs	Highly Satisfactory
C. Effectiveness: Attainment of objectives and planned results	Highly Satisfactory
1. Achievement of direct outcomes as defined in the reconstructed TOC	Highly Satisfactory
2. Likelihood of impact using ROtI approach	Highly Satisfactory
3. Achievement of formal project objectives as presented in the Project Document.	Satisfactory
D. Sustainability and replication	
1. Socio-political sustainability	Highly Likely
2. Financial resources	Moderately Likely
3. Institutional framework	Likely
4. Environmental sustainability	Highly Likely
5. Catalytic role and replication	Satisfactory
E. Efficiency	Satisfactory
F. Factors affecting project performance	
1. Preparation and readiness	Satisfactory
2. Project implementation and management	Satisfactory
3. Stakeholders participation, cooperation and partnerships	Satisfactory
4. Communication and public awareness	Highly Satisfactory
5. Country ownership and drivenness	Highly Satisfactory
6. Financial planning and management	Highly Satisfactory
7. Supervision, guidance and technical backstopping	Highly Satisfactory
8. Monitoring and evaluation	Highly Satisfactory
i. M&E design	Highly Satisfactory
ii. M&E plan implementation	Highly Satisfactory
Overall project rating	Satisfactory

Summary of recommendations and lessons learned

The following is a summary of the main recommendations that have been generated from the evaluation findings:

Context	The project has created a considerable interest and confidence in early warning systems and disaster preparedness systems for use in adaptation planning and decision making. It has also generated useful lessons and best practices regarding EWS and adaptation interventions that need to be up scaled and replicated (Sections 3.3.2 - Likelihood of impacts, and 3.4.5 - Catalytic role and replication).
Recommendation 1:	**There is need for follow up activities to replicate and upscale the project results to the whole country, but this requires a follow-up phase or project. Strengthening the capacity of Meteo Rwanda (meteorological services) to generate income through sale of climate information is one of the avenues of ensuring financial sustainability of Rwanda's EWS.**
Responsibility	GOR, and other partners .
Time Frame	Design of follow up projects and capacity building at Meteo Rwanda to generate income
Context	There was a lot of community interest, response and adoption of adaptation interventions piloted. However the piloted adaptation interventions are still on a limited scale and in a few communities and cooperatives and are not yet rolled out (Section 3.4.5 - Catalytic role and replication).
Recommendation 2:	**The government should integrate community based adaptation into broader development programmes in which the needs of the most vulnerable communities are addressed. Community adaptation projects could be developed by districts, communities and cooperatives, and funding could be got through the FONERWA funding window, the Adaptation Fund and the GCF, since Rwanda is already accredited by the GCF). The private sector could also be encouraged and supported to engage actively in the design and implementation of community based adaptation projects.**
Responsibility:	Government of Rwanda and the Private Sector
Time-frame	Design and follow up projects
Context	The likelihood for project sustainability is high. However there is neither a follow up project or exit strategy to ensure that the project benefits are not lost after the expiry of the project (Section 3.4 - sustainability and replication).
Recommendation 3:	**Implementation of follow up projects is very necessary to build on the achievements and partnerships built by the project. Strengthening FONERWA through resource mobilisation and increased financing (from the GCF, AF and other bilateral partners) is one in which Rwanda could finance adaptation projects that increase climate resilience. In addition, mainstreaming EWS and climate change adaptation in sectoral plans, local development plans and budgets could provide national funding to scale up the project results and other adaptation interventions.**
Responsibility:	GOR, Local Governments, GEF, UNEP and UNDP
Time-frame	Design and implementation of follow-up projects.

The following is a summary of the main lessons that have been learned from the project's successes as well challenges:

Context	The Theory of Change (TOC) approach was not yet in use during the project design phase and was not used in the planning and implementation of the projects. The logical framework approach was the tool used to represent the project's causality and guide project planning, management and monitoring. (Sections 1.4.1 - Evaluation Limitations, and 2.9 - Reconstructed TOC)). Both the TOC and logic models can improve project design but in different ways. The TOC is a causal model that illustrates how and why desired outcomes and impacts are expected to come about, including the preconditions necessary for this to occur.
Lesson 1	**The TOC approach is a useful tool for articulating the key drivers and assumptions, and explaining the causal relationship between intended actions, outputs, outcomes, intermediate states and impact of projects. In order to depict the causal pathways from outputs to outcomes over intermediate states towards impact, it is ideal that the TOC be envisaged at the project design stage.**
Application	UNEP project design
Context	The project operated alongside other organisations, sectors, programmes and initiatives on the Rwanda climate change landscape, to contribute towards climate change resilience. Therefore, attribution by tracing back change to the project's specific outputs beyond immediate outcomes is difficult because of the many actors and programmes in the country that are contributing to the intended impact i.e. increased climate resilience. Impact cannot be attributed to one intervention (Sections 1.4.1 Evaluation Limitations and 3.3.2 Likelihood of impact)
Lesson 2	**Since the desired impact of increased climate resilience cannot be attributed to one intervention (a single project), outcome mapping, from project design to implementation and M&E, should not only focus on measuring behavioural changes exhibited by primary and secondary beneficiaries but also on attribution and contribution of other actors and programmes on behavioural change exhibited by the beneficiaries.**
Application	Design and implementation of projects
Context	The project was largely successful because it was country driven, aligned to the country's climate change and development needs and priorities, and implemented with the existing institutional frameworks that ensured a strong coordination and management mechanism (Section 3.1.4 - Relevance to national development and environmental needs and priorities).
Lesson 3	**Engagement of a cross-section of stakeholders, including local communities and beneficiaries, is important for the successful implementation of projects in which the long term impact is highly dependent on their actions.**
Application:	Building partnerships (during project design and implementation) that are essential to enhancing adaptive capacity and reduced vulnerability to climate change.
Context	The project's major approach to reducing vulnerability was using a 'learning-by-doing' approach and demonstrations, by directly involving technical staff, extension workers, district officials, communities and farmer cooperatives in the piloting and demonstration of climate change adaptation actions and strategies. The implementation of adaptation interventions using community based approaches translated into a strong sense of ownership (Sections 3.1.4 relevance to national development needs, 3.2.3 Component 3 - reduction in the impacts of floods and droughts, and 3.2.4 Component 4 - knowledge of good practices).

Lesson 4:	**'Learning-by-doing' capacity building approaches result in greater ownership of project results and impact.**
Application	Implementation of capacity building project activities and demonstrations.
Context	The project had two Implementing Agencies (UNEP and UNDP). This was advantageous in that the project implementation benefited from the comparative advantages of the two IAs. In addition given that UNEP is not a resident agency but UNDP is, the resident agency supervise and monitor project implementation which resulted in excellent results. However each of the IAs had different reporting formats and mechanisms (report templates and matrices) that complicated project management. The EA/project team had to report separately to UNEP and UNDP which was time and resource consuming. Complications also were also experienced by the EA in decision making and adaptive management (Sections 3.6.2 project implementation and management, 3.6.6 financial planning and management).
Lesson 5	**Implementation of projects with more than one Implementing Agencies, though beneficial, requires harmonization of reporting and financing systems, so that the Executing Agency has a single reporting mechanism to the various Implementing Agencies to ease project management.**
Application	Design and implementation of all UNEP projects.
Context	The project produced a documentary film that documented, among others the project achievements. The documentary was put on DVD and distributed to PSC members and the wider public and is also available on YouTube and this makes it accessible to the wider public. The documentary serves to demonstrate lessons learned for further activities addressing climate change adaptation. This method was found to be very effective and other projects hosted by REMA are deploying it (Section 2.6.4 communication and public awareness)
Lesson 6	**Documentaries (films) with innovative and concrete activities are an effective mechanism for demonstration and transmission of knowledge and good practice to stakeholders of all categories. However they need to be disseminated widely to the public.**
Application	Implementation of UNEP projects
Context	The project conducted two studies - "The assessment of economic impacts of the 2012 wet season flooding in Rwanda", and "The Development of a baseline and impact of the LDCF project on biophysical and chemical indicators and socio-economic situation of the project area". These did not inform or influence the implementation of the project activities and outputs and achievement of project outcomes (Section 3.3.1 - Achievement of direct outcomes).
Lesson 7	**During project implementation, only those planned activities/studies or those that have a direct link to project outcomes and impact should be implemented in an effort towards maximising the efficient use of available resources.**
Application	Project design and implementation.

1 INTRODUCTION

1. In line with guidance and eligibility criteria for the Least Developed Countries Fund (LDCF), managed by the Global Environment Facility (GEF/C.28/18, 12 May 2006), the Republic of Rwanda sought LDCF funding for a Full-Size Project (FSP) to implement adaptation priorities identified in the National Adaptation Programme of Action (NAPA)[3] to the United Nations Framework Convention on Climate Change (UNFCCC), to address the capacities needs of communities, local governments, and national government to manage and cope with the greater frequency and intensity of droughts and floods.

2. The Global Environmental Facility (GEF) administers the LDCF which was established by the Conference of the Parties (COP) to the UNFCCC. As Implementing Agencies (IAs) of the GEF, the United Nations Environmental Programme (UNEP) and the United Nations Development Programme (UNDP) supported the LDCF project in Rwanda. Thus, both UNEP and UNDP were responsible for overseeing and monitoring project implementation in accordance with their rules and procedures, including provision of technical backstopping. The project's Executing Agency (EA) was the Rwanda Environment Management Authority (REMA).

3. This evaluation report refers to the Project: "Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in Flood Prone Areas "(GEF Project ID:3838, IMIS No: LDL-2328-2724-4B52) that was approved by GEF in March 2010 for a duration of 4 years (48 months) in the period 2010-2014. The project had a total budget of USD 15,913,000 where 30% was GEF allocation (USD 3,486,000) and 70% (USD 12,427,000) was co-financing from UNDP - TRAC, Government of Rwanda (GOR) and UNDP Africa Adaptation Programme (AAP).

4. The project goal was "to contribute to Climate Change Risk and Flood Disaster Preparedness in Rwanda" and the project objective was "to reduce the vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change". The project expected results are described in section 2.9 of this document (Theory of Change).

5. The Terminal Evaluation (TE) was undertaken in line with the UNEP Evaluation Policy[4] and the UNEP Evaluation Manual[5] to assess project performance and to determine the outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation analysis used standard evaluation criteria to examine six aspects of the project: strategic relevance, attainment of objectives and planned result sustainability and replication, efficiency, factors and processes affecting project performance, and complementarity with the UNEP strategies and programmes. In this Evaluation Report, the evaluation team presents the results of the evaluation as well as the conclusions, lessons learned and recommendations.

[3] Government of Rwanda, 2006. National Adaptation Programmes of Action - NAPA Rwanda, Ministry of Lands, Environment, Forestry, Water and Mines, posted 2007

[4] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx

[5] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationManual/tabid/2314/language/en-S/Default.aspx

1.1 Subject and scope of the evaluation

6. Independent terminal project evaluations are an integral part of UNEP Evaluation Policy. To that end, in March 2015, the UNEP Evaluation Office (EO) commissioned a team of two consultants to undertake a Terminal Evaluation (TE) of the project. The evaluation covered the period from the start to the completion of the project (October 2010 to December 2014). The evaluation was conducted between March and June 2015 and included a visit to the UNEP Headquarters in Nairobi for consultations with UNEP officials, a country visit mission to Rwanda for consultations with project team, partners and beneficiaries and also for field visits to project pilot sites in March 2015. The detailed evaluation timeframe is given in Annex III.

7. In line with the Terms of Reference (TOR), the evaluation revolved around the following key questions, based on the project's components and the intended outcomes:

i. Is there a functional Early Warning System (EWS) in operation in Gishwati ecosystem?

ii. Have climate change risks been incorporated in Nyabihu district development planning?

iii. Is it likely that the adverse effects of floods will be reduced in the project area as a result of project outputs and outcomes?

iv. Has the level of knowledge of good practices to reduce vulnerability to climate change improved amongst the key project stakeholders and at the national level as a result of project activities?

v. Has the project made a significant contribution to the likelihood of improved climate change risk and flood disaster preparedness in Gishwati ecosystem, and at the national level?

vi. To what degree have technical outputs such as the socioeconomic and communication studies contributed to the project outcomes and objective? Were they valuable to other stakeholders beyond the immediate project?

These questions were expanded by the evaluation team (see evaluation matrix, Annex VI).

1.2 Evaluation objectives

8. The Terminal Evaluation had two primary proposes:

i. to provide evidence of results to meet accountability requirements, and;

ii. to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP and the key project partners.

9. In addition, the evaluation was intended to identify lessons of operational relevance for future project formulation and implementation.

1.3 Evaluation approach and methodology

10. In line with the TORs (Annex I), this evaluation was conducted using a mix of approaches: (i) a desk review of project documentation, including project outputs, studies, meeting minutes, and implementation and financial reports; (ii) a review of documentation of UNEP policies and programmes as well as country documents; (ii) conducting a set of interviews and discussions with key project partners, participants and beneficiaries; and (iii) a country visit to Rwanda and project

pilot sites. The list of stakeholders consulted and interviewed is available in Annex III and a list of consulted documents reviewed is provided in the Bibliography (Annex IV).

11. The evaluation was conducted by two Consultants; Revocatus Twinomuhangi (Lead Consultant) and Gilbert Ouma (Support Consultant), under the supervision and with the support of the UNEP Evaluation Office.

12. The deeper analysis in this evaluation is based on the Theory of Change (TOC). It suffices to mention that the project design (ProDoc) did not contain a TOC. To that end, a reconstructed TOC was developed based on analysis of the ProDoc in order to support a comprehensive Review of Outcomes to Impact (ROtI) analysis. Therefore, the evaluation may not correspond to the implicit TOC that the project team worked with (generally they did not use this framework). However, the reconstructed TOC analysis (Section 2.9) describes the main components of the project's logical framework. The evaluation table on design quality from the Inception Report is presented in Annex VII.

1.4 Main evaluation criteria and questions

13. In line with the UNEP Evaluation Policy, the UNEP Programme Manual and the TOR, the project was assessed with respect to a minimum set of evaluation criteria grouped into six categories:

i. Strategic Relevance, which looks at the alignment of project objectives to country policies, strategies and needs;

ii. Attainment of objectives and planned result, which comprises the assessment of outputs achieved, effectiveness and likelihood of impact;

iii. Sustainability and replication, which focuses on financial, socio-political, institutional and environmental factors conditioning sustainability of project outcomes, and also assesses efforts and achievements in terms of replication and up-scaling of project lessons and good practices;

iv. Efficiency; which covers cost-effectiveness and timeliness;

v. Factors and processes affecting project performance, including preparation and readiness, implementation and management, stakeholder participation and public awareness, country ownership and drivenness, financial planning and management, UNEP supervision and backstopping, and project monitoring and evaluation; and

vi. Complementarity with the UNEP strategies and programmes, which covers linkage to UNEP's Medium Term Strategy (MTS), Expected Accomplishments and alignment with the Bali Strategic Plan.

14. Several of these criteria were reviewed in the Inception Report. These have been updated and included in the full impact evaluation. All evaluation criteria were rated on a six-point scale in accordance with standard UNEP assessment guidelines which were given in the evaluation TORs. Sustainability is rated from Highly Likely (HL) to Highly Unlikely (HU) – as outlined in the TORs. According to the UNEP Office of Evaluation, all the dimensions of sustainability are critical; this means that the overall rating for sustainability must not be higher than the lowest rating of the individual sustainability dimensions.

15. In addition, the quality of project design was assessed (see Annex VII). An Evaluation Matrix (Annex VI) was used to outline in detail the proposed indicators that were used to answer the evaluation questions across the core areas of evaluation.

1.4.1 Evaluation Limitations

16. Use of the TOC to assess effectiveness: At project design, the TOC methodology was not used in the design and implementation of the project. The logframe model was however used to illustrate the project's causality. Therefore, the evaluation team reconstructed a TOC (post design) by relying on the ProDoc, in particular the Log-frame matrix, and refined the project's causality to address the higher level outcomes in the results chain, and also identified the preconditions necessary for impact achievement. However, the project team was not conversant with the TOC methodology. To enhance the effectiveness of the reconstructed TOC in the evaluation, the consultants discussed it with the project team and Project Steering Committee (PSC) early in the evaluation process and was able to get adequate input and consensus.

17. Attribution Vs Contribution: The project did not operate in isolation on the Rwanda climate change landscape. It therefore contributes toward the climate change adaptation results of a much wider set of sectors, actors and development partners. Thus, it was not easy for this evaluation to identify and qualify the project's relative contribution toward the high-level impact of increasing the resilience of Rwanda's ecosystems, population and communities to the impacts of climate change and the intermediate outcomes that was pursued by the project.

18. Generally, the country mission consultations were an extremely valuable component of the terminal evaluation, and feedback was very comprehensive. However, not all stakeholders were available during the country mission. Mostly, interviews were limited to "impact" assessment i.e. interviews with project partners, and some beneficiaries. However, despite the unavailability of some of the partners, in-country visits and interviews formed the most detailed project performance assessment.

19. The documentation for the project design was at output and immediate outcome level with very few specific indicators at the outcome and impact level formulated at project onset and during implementation. Some project proponents were not available during the country missions and did not respond to e-mails and hence could not be located for a response[6]. As a result project documentation (status, updates and reports) were used to identify some of the results, significant changes and lessons learnt.

20. Determining causality from limited results information: The project was designed to deliver outputs and achieve immediate outcomes and main project outcome. However, data at the intermediate state (medium-term and intermediate outcome level) was difficult to come by or triangulate. This challenge is generally encountered when conducting monitoring and evaluation for adaptation at project end-point, as longer term outcomes and impact in terms of climate change resilience may not be realised in any measurable way until many years further down after the completion of the project. This does not reflect on a flaw in the M&E design however. The evaluation team therefore had to, in some cases, rely on the evaluative evidence from the quality and utility of outputs (products and services) delivered by project interventions. The TOC analysis has further helped to overcome this limitation to the assessment, drawing out intended outcome level results, assumptions, and impact drivers from a variety of sources.

[6] The evaluation team was not able to meet the Monitoring and Evaluation Officer and some members of the PSC.

21. The evaluation considers aspects related to financial management and financial flows with respect to: consistency between planned and realized expenditures, efficiency of financial planning and reporting mechanisms, and the transparency of financial management processes. The evaluation did not include an assessment of financial management in the fiduciary sense, which would normally be delivered through regular account audits.

2 PROJECT BACKGROUND

2.1 Context

22. The Republic of Rwanda is a small landlocked country in central/eastern Africa. Twenty years after the 1994 Genocide, it is experiencing the rapid growth and socio-economic progress in its history with reinforcement of peace and security in the country. Rwanda was the tenth fastest growing economy in the world during the decade 2000 to 2009. Despite the disruptions caused by the 2008-2009 global financial crisis, its economy grew by a robust 8% annually since 2005-11, the headcount poverty and extreme poverty ratios both fell by nearly 12 percentage points, taking a million people out of poverty, and income inequality declined[7].

23. With almost 11 million inhabitants on a territory of only 26,338 sq.km, the population density is one of the highest in the world, above 400 persons per sq.km. A large majority of the Rwandan people depends on subsistence agriculture in rural areas, with limited but improving access to basic health and education services and infrastructures.

24. Rwanda is characterized by mountainous landscapes, which are recognized as particularly vulnerable ecosystems to climate change. Most of the rivers start from the slopes of the Nile-Congo watershed crest within the Gishwati ecosystem whose ecology is dynamic and complex. The lakes in the country constantly change their size and shape according to rainfall and the resulting river flows. Rainfall in this ecosystem can be heavy, measuring up to 66 mm per day[8], often resulting in violent floods. The Gishwati ecosystem is part of the Albertine Rift bio-geographic region, one of the world's biodiversity hotspots housing critically endangered species such as the mountain gorilla.

25. Over the past decade the Gishwati ecosystem, which was the focus of the project, has been experiencing worsening erratic rainfall. Between 1991 and 2000, this area experienced extreme drought followed by two years of unusually heavy rains. The resulting floods led to significant economic, environmental, and social damage, including deaths, destroyed roads and other infrastructure, and a significant reduction in agricultural production which threatened food security and livelihoods of the communities in the region.

26. The country's NAPA highlights the country's vulnerability to current and expected climate changes. Climate change is expected to increase the frequency and intensity of floods and droughts in this region[9]. The problem facing rural people living in the Gishwati ecosystem is that the capacities of communities, local governments and the national government to manage and cope with the greater frequency and intensity of droughts and floods are very limited. The NAPA also identified top

[7] Republic of Rwanda, 2013. Economic Development and Poverty Reduction Strategy (EPRS) II, 2013-2018.

[8] Figure issued by ISAE meteorological station near Nyabihu District in 2007.

[9] Government of Rwanda, 2006. National Adaptation Programmes of Action - NAPA Rwanda, Ministry of Lands, Environment, Forestry, Water and Mines, posted 2007

priorities for increasing climate change resilience, among which are (i) Integrated Water Resource Management, and (ii) Information systems for early warning and rapid intervention.

27. Although the need for early warning and disaster preparedness systems and other adaptation measures was identified after the heavy flooding, which took the lives of dozens of people in Nyabihu District in western Rwanda in 2007, the capacities to introduce and strengthen adaptation at the decentralized government level were felt to be limited, with institutional and systemic capacities to act on such risks low.

28. The key root causes for the destructive effects of climate change in this area were felt to be high levels of poverty; high population density; over reliance on rain-fed and low input agriculture for millions of households; reliance on biomass energy; and severe land and natural resource degradation.

29. The barriers to climate change adaptation included: low capacity of stakeholders (especially government to deliver EWS); low capacity to plan for climate risks and implement such plans at district and community level; limited investments into understanding and building ecosystem resilience; and lack of climate change specific communication and awareness training.

30. This project was designed to address the recognised vulnerability of the communities living in the Gishwati ecosystem by increasing and enhancing their adaptive capacity to current climate variability and future climate change risk. It addressed priorities identified under Rwanda's NAPA process through four interventions/components: (i) Climate Risk Assessment and Forecasting; (ii) Climate Change Adaptation Planning and Response Strategies; (iii) Demonstration of Adaptation Practices, and (iv) Knowledge Management, Public Awareness and Dissemination of Lessons.

31. The project complements and supports Rwanda's national development vision (Vision 2020), Economic Development and Poverty Reduction Strategy, and various sectoral policies and strategies (including *inter alia*: land, environment, water, forestry and agriculture strategies) that had environmental components well mainstreamed, and were all subject to climate change risks. It addresses priorities under United Nations Development Assistance Framework (UNDAF) Result 4: *Management of environment, natural resources and land is improved in a sustainable way* and specific outputs under the UNDAF Results and Country Program outputs. All of these outputs were jointly supported by UNEP and UNDP.

32. The project interventions were expected to generate tangible poverty reduction benefits by addressing food security and livelihood related issues. The project was also expected to have a considerable impact on health, biodiversity and the environment.

33. The project was implemented by UNEP (responsible for components 1, 2 and 4) and UNDP (responsible for component 3). The project was implemented jointly with UNDP's Africa Adaptation Programme (AAP). The Executing agency in Rwanda was the Rwanda Environmental Management Authority (REMA). The project implementation partners included Rwanda Meteorology Agency (Meteo Rwanda), four Districts (Nyabihu, Ngororero, Rubavu, and Rutsiro), and Ministries of Disaster Management and Refugees Affairs, Agriculture and Animal Resources, and Local Government

2.2 Project Objectives and Components

2.2.1 Objectives

34. The primary goal of the project was "to contribute to Climate Change Risk and Flood Disaster Preparedness in Rwanda" and the objective was "to reduce the vulnerability of the Gishwati

ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change".

2.2.2 Components

35. The project included 4 key components: (1) Climate risk assessment and forecasting; (2) Climate change adaptation planning and response strategy; (3) Reduction in the adverse effects of floods and droughts; and (4) Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot.

Component 1: Climate risk assessment and forecasting

36. This component was meant to provide support to establish an integrated climate change EWS in the Gishwati ecosystem for alerting decision-makers and the local population to extreme weather events that would lead to flooding or drought. The EWS would also enhance the early warning and climate change risk assessment capacities of relevant national partners, the Rwanda Meteorological Agency (Meteo Rwanda), and other potential stakeholders through training, investments into equipment, computer soft- and hardware, and very importantly, through improving the system of information dissemination to the end-users.

Component 2: Climate Change adaptation planning and response strategy

37. Through the climate change adaptation planning and response strategy component, support was meant to ensure that district level planning includes responses to the climate change risk posed in the area, including land-use planning instruments. This was to be achieved through research, participative planning and training, as well as demonstrations that show disaster risk responses at the community level e.g. flood-proofing housing infrastructure and moving out of high flood risk areas. In addition, the component was meant to support the development of a specific Disaster Risk Response Plan or integration of climate change disaster risk responses into the existing Nyabihu District Development Plans and Strategies.

Component 3: Reduction in the adverse effects of floods and droughts

38. This component was meant to support the improvement of the current land-use practices in the area. It was meant to contribute to the implementation of on-the-ground actions (e.g. reforestation, promotion of intercropping and fruit trees, application of soil and water conservation techniques) that increase ecosystem resilience against climate shocks. It was also meant to assist the district in the implementation of the recommendations of the improved land suitability study, through the development of a Land-use Master Plan and climate resilient land-use plans. The component was also geared at strengthening community and district level capacities to act against climate risks and foster climate change resilience of the ecosystem.

Component 4: Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot.

39. The component was meant to support efficient and systematic communication of all project outputs and lessons learned to all intended target groups, including fostering of South-South and global collaboration. It was also meant to support the documentation and communication of the lessons learned from the first NAPA follow-up project in Rwanda. The support was also meant to create links to the UNEP Global Adaptation Network and the UNDP Adaptation Learning Mechanism (ALM), and designing of training activities within Rwanda that would enhance the learning and uptake of the lessons learned. (The project's logical framework is presented in Annex VIII).

2.3 Target areas/groups

40. The project was implemented in Rwanda and the geographic scope was national and local. It promoted an alternative adaptation scenario whose aim was to strengthen national and district capacities to deliver a functional early warning and disaster preparedness system that would allow for early warning of vulnerable populations in the Gishwati ecosystem.

41. At the national level, the project targeted the main climate information provider, the Rwanda Meteorological Agency (Meteo Rwanda), (whose interest/role is climate information collection, packaging and dissemination), government ministries, departments and agencies (who are both users of climate information and makers of policy regarding environment, climate change and development)[10].

42. At the local level, the project intervention areas included regions within the crest area of Nile-Congo basins, also categorized as the Gishwati ecosystem, identified through the NAPA process as being among the most vulnerable to climate change. The pilot sites were in the target districts of Nyabihu, Ngororero, Rubavu and Rutsiro districts. In the pilot sites, the target group were:

i. The District Councils of Nyabihu, Ngororero, Rubavu and Rustiro, that are responsible for district, sector and local level activities planning and.

ii. The communities and households who are the most vulnerable to the impacts of climate change and the key beneficiaries of the project. These are the ultimate users of climate information and the project focused on enhancing their adaptive capacity.

iii. Farmers Associations and cooperatives who are also key beneficiaries of the project. They played a major role in site identification during the project preparation, and in testing, the climate change adaptation measures in the pilot areas.

2.4 Milestones in Project Design and Implementation

Table 33 below presents the milestones and key dates in project design and implementation:

Table 3: Milestones and key dates in project design and implementation

Milestones	Completion dates
GEF project approval date	23 March 2010
UNEP Project Approval Date	September 2010
Actual Start Date	October 2010
Intended Completion Date	June 2014
Planned Duration	48 months
Project Inception Workshop	August 2010
First PSC Meeting	July 2010
Last PSC Meeting (before Terminal Evaluation)	7 November 2014
Technical Completion Date	December 2014*
Actual Completion Date (Expected)	June 2015*
Date of financial closure (expected)	June 2015

10 Rwanda Environmental Management Authority (REMA), Ministry of Natural Resources (MINIRENA), Ministry of Disaster management and Refugee Affairs (MIDIMAR), Ministry of Agriculture and Animal Resources (MINAGRI), Rwanda Agriculture Board (RAB), The Ministry of Finance and Economic Planning (MINECOFIN/Department of Policy and Planning), Ministry of Health (MINISANTE), Ministry of Local Government (MINALOC), and National Land Centre (NLC).

Terminal Evaluation completion	June 2015

** The legal and financial closure of the Project Cooperation Agreement (PCA) between EA and UNEP was revised from December 2014 to June 2015, with technical completion at December, 2014. In practice, however, some activities and financial closing spilled over into 2015, with full closure is expected by 30 June, 2015.*

2.5 Implementation Arrangements

43. The project was implemented by UNEP and UNDP, both Implementing Agencies of the GEF, under the National Execution (NEX) modality procedures and Harmonized Approach to Cash Transfer (HACT) procedures. UNEP implemented components 1, 2 and 4, and UNDP implemented component 3. For UNEP, the Division of Environmental Policy Implementation (DEPI) was responsible for overseeing and monitoring the project implementation process, including technical backstopping. UNEP was also expected to ensure timelines, quality and fiduciary standards in project delivery. Both UNEP and UNDP Project Task Managers were responsible for project supervision.

44. The Chief Executive officer's (CEO) endorsement, and the ProDocs of UNEP and UNDP (each had a ProDoc) outlined the planned implementation arrangements. The UNEP ProDoc contains a stakeholder mapping exercise (p 17) that describes mandates and potential roles of various ministries and organizations, as does the CEO Endorsement (p 22). The UNDP ProDoc and UNEP ProDoc outline a stakeholder involvement plan (p 36), which ties the outcomes and outputs of the results framework to their respective lead institutions, and various stakeholders and roles. The project management structure (at project design) is presented in Figure 2 below.

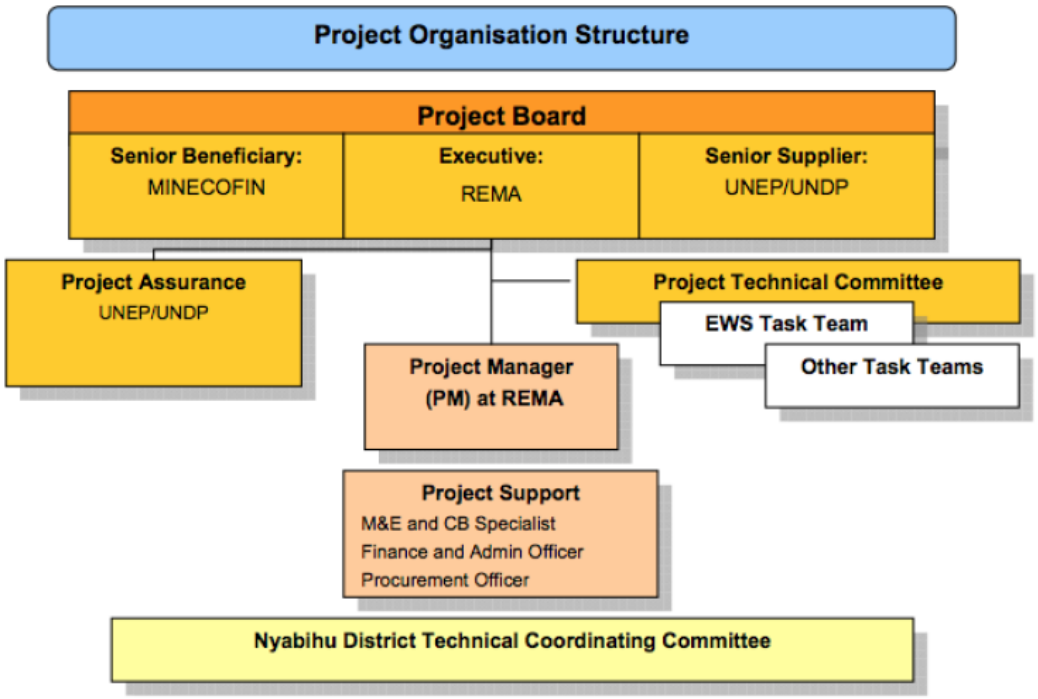


Figure 2: Project Management Structure

Source: UNEP ProDoc (p. 41), UNDP ProDoc (p.43)

45. Both UNEP and UNDP worked in close collaboration with the Government of Rwanda, in particular, REMA which was the EA. The other project implementing partners included Rwanda Meteorology Agency (Meteo Rwanda), Rwanda Agriculture Board (RAB), the four Districts (Nyabihu, Ngororero, Rubavu, and Rutsiro), and Ministry of Disaster Management and Refugees Affairs

(MIDIMAR), Ministry of Agriculture and Animal Resources (MINAGRI), and Ministry of Local Government (MINALOC).

46. A fifteen person Project Steering Committee (PSC) was formed and regularly met to fulfil the role envisioned for the Project Board in the ProDoc. The PSC, chaired by the Director General of REMA, played an oversight role and provided support, policy guidance and supervision for the project. It was multi-disciplinary and multi-stakeholder, composed of representation from the project partners, relevant government institutions, and NGOs. A multi-stakeholder Project Technical Committee (PTC) was put in place to guide the project technical work, chaired by REMA. A specific Task Team on EWS was also put in place. In addition, a Chief Technical Advisor (CTA) was also hired, on part time basis.

47. After the Inception Workshop in, July 2010, an Interim Project Management Unit was designated by REMA and approved by the UNDP Country Director to temporarily fulfil the role of the eventual Single Project Implementation Unit (SPIU)[11], which implemented the project. The Single Project Implementation Unit (SPIU) is a GOR special mechanism for project/programme delivery in public institutions intended to align projects outputs to programmes, as well as to strengthen governance and improve development performance. This temporary Unit stayed in place until early 2012 because the SPIU framework had not been clarified by MINECOFIN[12]. Under the SPIU implementation arrangement, the project was led by the Climate Compatible Development programme, headed by the PM (under the SPIU arrangement, more than one project are run on single management). At REMA, the SPIU provided project staff that included the PM, M&E Officer, Finance and Procurement Officer. The SPIU is headed by a Coordinator.

48. The ProDoc and project planning documents ambiguously refer to National Project Coordinator (NPC) and Project Manager (PM) as separate positions. However during the project implementation, the PM and NPC remained one and the same. The PM was a full time staff at REMA responsible for day-to-day management of the project on behalf of the Implementing Partners and reporting to the Project Steering Committee (referred to as Project Board in the ProDoc). Once the SPIU was put in place in 2012, staff was recruited to support the National Project Coordinator (NPC)/Project Manager (PM). In all, three Project Support staff: the technical/finance officer, M&E officer, and management support officer, were put in place to provide project management and technical support to the PM.

49. Though the project planners did not foresee the need for a Technical advisor to advise and support the NPC/PM, staff and PSC, the need was later realized. To that end, the IA Task Managers worked with the NPC/PM and REMA to develop TORs and recruit a Chief Technical Advisor (CTA) who provided technical guidance to the implementation of the project.

50. Effective partnership arrangements were formalized, through MoUs and contracts, between REMA on the one hand, and Ministry of Infrastructure (MINIFRA), Rwanda Agriculture Board (RAB), Districts and Cooperatives to ensure effective project execution. There was a change from

[11] SPIU is a standardized project management framework put in place in 2011 by GOR to coordinate and manage all donor funded projects in Rwanda government institutions. The SPIU is in charge of project management under the Chief Budget Agency. The SPIU helps to build synergy in project coordination and ensure sustainability of all donor funded projects. Currently, there are seven projects managed under the under the SPIU framework. SPIU ensures sustainability by making sure that the project outputs and services are handed over to the Department of Climate Change in REMA.

[12] UNDP, 2011. *Project Implementation Report.* September 2011. UNDP Country Office remarks

partnering with Non Governmental Organisations (NGO) for implementation, as envisaged in the ProDoc, to partnering with RAB.[13]

2.6 Project Financing

51. The project had a total budget of USD 15,913,000. LDCF financing for the project was budgeted at USD 3,486,000 of which UNEP's contribution was USD 1,495,000 (43%), while UNDP contribution was USD 1,991,000 (57%). UNDP track funds were budgeted at USD 600,000. Total Project co-financing was budgeted at USD 12,427,000. Table 4 below provides a summary of financial reporting 31 December 2014.

Table 4: Project budget summary

Particulars	Amount (USD)
Cost to GEF/LDCF Fund	3,486,000
Co-financing	12,427,000
Total Cost of the Project	**15,913,000**

2.7 Project partners

52. The main stakeholders were the implementing and executing agencies, and project partners. As mentioned in paragraph 34, UNEP and UNDP were the IAs on behalf of GEF, and REMA was EA. UNEP was responsible for components 1, 2 and 4, and UNDP was responsible for component 3.

53. The main project partners included; Rwanda Meteorological Agency (Meteo Rwanda), GOR ministries and local level actors as listed in "Section 2.5 - Implementation arrangements", and the UNDP/UN Rwanda Country Office.

2.8 Changes in design during implementation

54. The project started in October 2010 and had no major revision to the design. The project's log-frame was modified slightly in 2012 to cater for the recommendation of the Mid-Term Review (MTR). Three budget revision/modifications were conducted, the last being in May 2014[14]. At the time of evaluation, a final budget revision was underway to move funding into 2015, as the project was extended to 30 June 2015.

2.9 Reconstructed Theory of Change of the Project

55. Progress made towards achievement of project objectives and impacts was examined using the Theory of Change (TOC) approach and Review of Outcomes to Impacts (ROtI) analysis. Following UNEP's terminology, the TOC is a logical model derived directly from the Programmes of Work and strategy/design documents to identify and help explain the causal relationship between intended actions, outputs, immediate outcomes, medium-term outcomes, intermediate states and impacts of programmes and projects. In addition, the TOC highlights drivers and assumptions, which are important external factors affecting change at different levels of the causal pathways.

[13] Beucher, O., Spearman, M., and Lafontaine, A., 2012. UNEP/UNDP/GEF Project Mid-term Review Report, Baastel.

[14] These revisions refer to the UNEP side of the project only.

56. As already mentioned in Section 1.4.1 (on limitations) the TOC methodology was not yet in use in UNEP at the time the project was designed and the log-frame was the commonest method of representing the project's causality at that time. However, the TOC has an added advantage over the log-frame in that it refines the log-frame by addressing higher-level outcomes and identifying drivers and assumptions that are often not included in the log-frame. Nevertheless, the logframe matrix used in the project design, which in itself is an expression of the project's causality, was the basis upon which the TOC articulated in this evaluation was reconstructed post-design.

57. The TOC methodology has three distinct stages: (i) identifying the project's intended impacts, (ii) reviewing the project's logical framework and (iii) analysing and modeling of the project's outcomes to impact pathways.

58. **Stage 1 -** Referring to the "objectives" statement in the ProDoc, the goal of the project was "to contribute to climate change risk and flood disaster preparedness in Rwanda". Thus we consider the ultimate impact of the project as increased resilience of Rwanda's ecosystems, population and communities to the impacts of climate change. The main objective of the project was to reduce the vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change (called the objective in the Results Framework).

59. Therefore, we consider as the main Project Outcome[15]: "reduced vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased flood risks and droughts due to climate change". Achievement of this outcome would contribute to increasing the resilience of Rwanda's ecosystems, population and communities to the impacts of climate change. The project's activities were designed to deliver certain Outputs[16], which in turn aim to make a significant contribution to the achievement of a set of direct (or immediate) outcomes that, as a whole, represent the main Project Outcome defined above (see Figure 3).

60. **Stage 2:** The broader outcome defined in the logical framework is clear and can be verified by keeping track of the: (i) Number of climate data observation stations established (ii) number of hectares of land rehabilitated, (iii) number of policy briefs based on lessons learned from the implementation of EWS and disaster response in project areas developed, and (iv) percentage change in climate change vulnerability index of local community in pilot project sites.

61. The overall project logical frameworks (and now TOC) analysis is based on the premise that: functional climate EWS, incorporating climate in district development planning, reduced adverse effects of floods and droughts, knowledge of good practices to reduce vulnerability to climate change, will reduce vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased flood risks and droughts due to climate change.

62. The first group of Outputs (Outputs 1.1 – 1.3 in Figure 3) refer to the assistance given by the Project to establish a climate change EWS that is useful to local communities in the Gishwati ecosystem. The EWS was to provide up-to-date climate risk and weather information to small-scale farmers and government planners, enhancing the early warning and climate change risk assessment

[15] Outcomes: the short to medium term behavioural or systemic effects that the project makes a contribution towards, and that are designed to help achieve the project's impacts ("the ROtI Handbook", GEF, 2009)

[16] Outputs : the goods and services that the project must deliver in order to achieve the project outcomes (idem)

capacities of relevant national and local level partners at an individual, institutional and systemic level. The outputs were to be achieved through training, investments in equipment, and computer soft- and hardware, and improving dissemination of EW information to the end-users.

63. The second set of Outputs (outputs 2.1 and 2.2 in Figure 3) refers to the support given by the project for ensuring that climate change risk is integrated into district level planning. The outputs were to be achieved through research, participative planning and training support as well as demonstrations. Specifically, the adaptation support consists of a climate change disaster risk response component to be integrated into the District Development Plan for Nyabihu District, and developing a specific Disaster Risk Response Plan or incorporating climate change risks and response planning into existing plans and strategies.

64. The third set of Outputs (outputs 3.1 – 3.3 in Figure 3) includes the support given by the Project for the improvement of land use practices currently applied by the local farmers in the area. The outputs were to contribute to the implementation of on-the-ground actions (e.g. reforestation, promotion of intercropping and fruit trees, application of soil and water conservation techniques) to increase ecosystem resilience against climate shocks and to assist the district in the implementation of the recommendations of the improved land suitability study e.g. through the development of a Land-use Master Plan and climate resilient land-use plans.

65. The fourth set of outputs (outputs 4.1 – 4.3 in Figure 3) includes assistance given by the project to support an efficient and systematic communication of all project outputs and activities to all intended target groups as well as documenting and communicating the lessons learned from the first NAPA follow-up project in Rwanda. The focus is on communicating climate change risk management and adaptation options tested in the Gishwati ecosystem to stakeholders at all levels, and forging links with the UNEP Global Adaptation Network and the UNDP Adaptation Learning Mechanism (ALM) to facilitate communication of the lessons learned to the global climate change adaptation community and foster South-South collaboration. An integration and design of training activities within Rwanda that would lead to the absorption of the lessons learned is foreseen under the alternative scenario.

66. The project's direct/immediate Outcomes are interlinked and synergetic. For example, direct outcomes 1 and 3 are prerequisites to Immediate Outcome 2: the developed EWS for climate change risks and the appropriate adaptation responses and land-use practices that can reduce the adverse effects of floods and droughts in the Nile-Congo crest watersheds and Gishwati ecosystem would be integrated in district development planning. Still direct/immediate outcome 3 builds on direct outcome 2. The development of a Land-use Master Plan (direct outcome 2) has potential to promote climate resilient development and adaptation action at the local level e.g. implementation of on-the-ground actions like reforestation, promotion of intercropping and fruit trees, application of soil and water conservation techniques that can increase ecosystem resilience against climate shocks. Outcomes 1-3 are linked to outcome 4, as the lessons learned and knowledge practices are documented and disseminated to all intended target groups and the wider public.

67. Emerging from the ProDoc, the **key-drivers** for the delivery of the several goods and services (Outputs) are:

i. Effective guidance and supervision from the project IAs i.e. UNEP and UNDP;

ii. The project EA plays a leading role in coordinating the overall project while Nyabihu District Council plays the role of coordinating the local level interventions of the project;

iii. The project builds capacities for implementation in a systematic manner;

iv. The designed EWS is sensitive to local needs and integrates/responds to such needs;

v. Project supports participatory planning and decision making that ensures that adaptation measures are appreciated by government and communities;

vi. Project puts in place communication instruments that are culturally and socially sensitive and help overcome potential communication barriers and resistance to adaptation measures; and

vii. The project ensures that sufficient adaptation capacities will be built for the sustainability of project activities beyond the project's time horizon.

68. Derived from the four components each with a cluster of Outputs, four direct/immediate Outcomes will be achieved; provided that the REMA/MINIREMA will actively assume leading role and that the main national stakeholders will assume their specific responsibilities in the process (institutional uptake).

69. However, the achievement of the four Direct/Immediate Outcomes identified by the Project does not automatically imply that the main Project Outcome (Reduced vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased flood risks and droughts due to climate change) is achieved. At that stage, an effective coordination has to be in place in order to assemble and harmoniously implement all the functions and instruments included in the Framework. REMA/MINIREMA/Nyabihu District have to fully play a coordination and promotion role, while the institutional uptake by the main stakeholders has to be maintained and strengthened. Moreover, REMA should be fully operational under the **assumptions** that:

i. Government and partners are committed to adaptation and climate risk action;
ii. Pilot District and communities in the selected three sectors (Bigogwe, Karago and Rambura) and other partners are willing to participate in the project and take responsibility for its implementation;
iii. Communities respond positively to improved EWS and adopt the right adaptation responses;
iv. Investments into community adaptation projects through additional funds (co-financing) leveraged;
v.
vi. Stakeholders and communities remain committed to the project and provide necessary support;
vii. Human resources trained remain in place in their respective institutions and are effective.

70. **Stage 3-** The assessment of the TOC led to the identification of the impact pathways and specification of the intermediate states as summarized below:

71. The impact that this project intended to achieve was contributing to increased resilience of Rwanda's ecosystems, population and communities to the impacts of climate change. The pathway from the Project Outcome (Reduced vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased flood risks and droughts due to climate change) to the intended impact is not a straightforward process: Intermediate states, the transitional conditions between the project's immediate outcomes and the intended impact, are necessary conditions for the achievement of the intended impacts. We have identified the Intermediate States that have to be fulfilled (as shown in Figure 3), which presents our

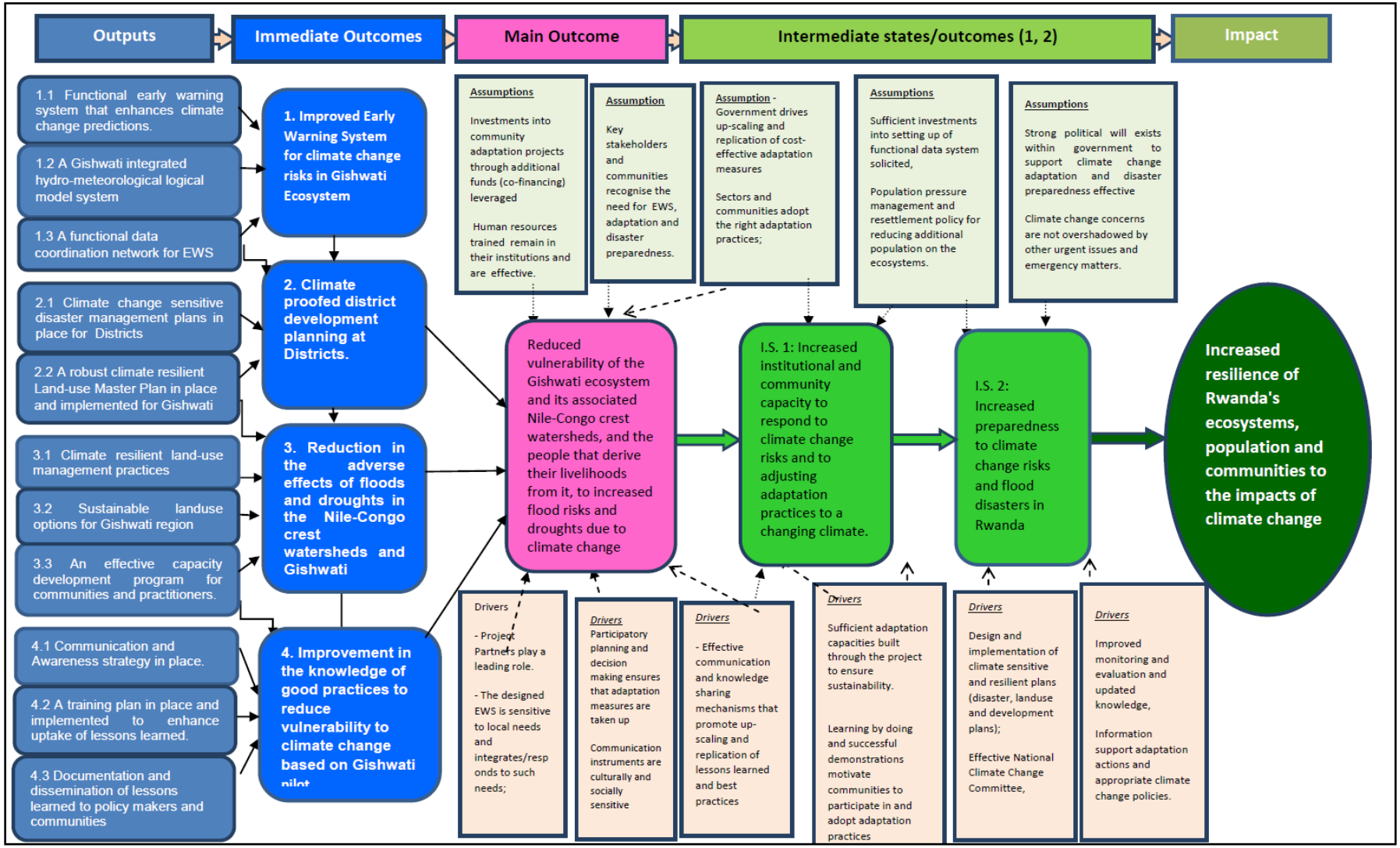
understanding of the causal logic and of the pathway from Outcome to Impact, which was also confirmed by the project team.

72. Two main Intermediate States (I.S.) were identified that would lead to the achievement of the intended impacts. Assuming that the Outcome is achieved and maintained (under the conditions that: (i) government drives up-scaling and replication of cost-effective adaptation measures; (ii) infrastructural, human and financial resources are adequate and sustained, and; (iii) stakeholders recognise the importance of early warning, disaster preparedness and adaptation planning and adopt them), the process would lead to "Increased institutional and community capacity to respond to climate change risks and to adjusting adaptation practices to a changing climate" **(I.S. 1)**. The key impact drivers (factors) expected to contribute to realisation of this I.S 1 are that the project: supports REMA/MINRENA to play a coordinating role; develops effective communication and knowledge sharing mechanisms that promote up-scaling and replication of lessons learned and best practices; and builds sufficient adaptation capacities to ensure sustainability.

73. Our understanding is that increased institutional and community capacity to respond to climate change risks and to adjusting adaptation practices to a changing climate will lead to: "increased preparedness to climate change risks and flood disasters in Rwanda" **(I.S. 2)**, on assumption that: strong political will exists within government to support climate change adaptation and disaster preparedness; good relationship with other agencies dealing in climate change issues; sectors and communities adopt the right adaptation practices; sufficient investments into setting up of functional data system solicited; and effective population pressure management and resettlement policy to reduce additional population on the ecosystems. The main impact drivers at that stage are that the project supports: the design and implementation of climate sensitive and resilient plans (disaster, landuse and development plans); learning by doing and ensures that successful demonstrations motivate communities to participate in and adopt adaptation practices; the effective functioning of the National Climate Change Committee; and the soliciting of knowledge, technology and policy support from global, regional and local partnerships

74. Finally under the assumptions: International and national commitments to addressing climate change; climate change concerns are not overshadowed by other urgent issues and emergency matters; and sudden and large-scale climate-related phenomenon occurs to wipe out advances in adaptation; the **Project Impact** (increased resilience of Rwanda's ecosystems, population and communities to the impacts of climate change) can be achieved. This is driven by improved monitoring, evaluation, updated knowledge, information support adaptation actions, and appropriate climate change policies.

Figure 2: Theory of Change – Outputs to Impact Analysis



3 EVALUATION FINDINGS

3.1 Strategic Relevance

3.1.1 Alignment with UNEP's strategy, policies and mandate

75. This section provides an analysis of the extent to which the Project was consistent with UNEP's policies, strategies and programme of work. In retrospect it is possible to affirm that the project's objectives were fully consistent with the UNEP's strategies, policies and mandate at the time of design.

76. Climate Change is one of the six thematic priorities of UNEP's Medium Term Strategy (MTS) 2010–2013. The thematic priority focuses on providing environmental leadership in the four areas prominent in the international response to climate change: adaptation, mitigation, technology and finance, and their interlinkages. The project's outcomes contribute to UNEP's aim to help developing countries to build resilience to the impacts of climate change, to build and strengthen national institutional capacities for adaptation planning, and support national efforts to integrate climate change adaptation measures into development planning practices.

77. The project is aligned to UNEP's Climate Change Strategy and Programme of Work (POW) 2010-2011 and 2012-2013 that provide the strategic framework for Climate Change. The overall objective of the Climate Change Strategy is "to strengthen the ability of countries to integrate climate change responses into national development processes". Along the life span of the project, the project's outcomes were aligned in several ways to the respective POW, most notably to integrate climate change responses into national development processes.

78. Most notably, the POW 2010-2011, has climate change as one of its four themes, and the project fits within the context of Expected Accomplishment (a) - on adaptation - i.e. Adaptation, *planning, financing and cost-effective preventive actions are increasingly incorporated into national development processes that are supported by scientific information, integrated climate impact assessments and local climate data*. Expected Accomplishment (a) is in line with the fourth area mentioned under UNEP's mandate that is "facilitating the development, implementation and evolution of norms and standards and developing coherent inter-linkages among international environmental conventions".

79. The project is one of the flagship cases of achieving synergy by One UN, through joint implementation by UNEP and UNDP. GEF wanted to use the comparative advantage of two UN agencies in the implementation of the project. The project was aligned to the country's UNDAF. UNEP was involved in the drafting of and is a signatory to the UNDAF.

Alignment with the Bali Strategic Plan (BSP)[17]

80. The focus of the Rwanda LDCF project was to reduce the vulnerability of the Gishwati ecosystem and population to increased floods and droughts due to climate change. To that end the project's objective is highly relevant to and consistent with the BSP for Technological Support and Capacity Building which aims at a more coherent, coordinated and effective delivery of capacity building and technical support at all levels and by all actors, in response to country priorities and needs.

[17] http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf

Gender balance

81. During the implementation of the project, the Ministry of Gender and Family Promotion was a member of the PSC. The project has put in place measures to ensure gender equality in the implementation of project activities. For example, 60% of the members of cooperatives are female and they have benefited from different training activities including mushroom production and poultry. The evaluation therefore finds the project relevant to gender issues.

Human rights based approach (HRBA)

82. For this project, human rights were not the primary focus of the intervention. The intervention theory considered human rights issues to some extent i.e. principles of inclusion, participation, fairness in design and implementation. The project targeted the most vulnerable communities who are also the poorest in Rwanda. By reducing the vulnerability of the poor communities the project promotes inclusive development.

83. Overall, the tenets of human rights were observed in the design and implementation of project activities. For instance project beneficiaries participated in the selection and design of project activities that are beneficial to them and there was timely remuneration for completed work. The project pilot sites were selected through stakeholder consultations. The local cooperatives and all bidders were selected through a transparent process from the beginning up to the payment. There were no cases of human rights violations.

South-South Cooperation

84. This project was a National project implemented in Rwanda. The project ProDoc does not explicitly mention South-South cooperation. In addition, there was no evidence of south-south cooperation in project implementation. However, South-South cooperation is an important component because Rwanda is member of the East African Community (EAC) and the Intergovernmental Authority on Development (IGAD). IGAD's Climate Prediction and Applications Centre (ICPAC) based in Nairobi- Kenya, has a similar initiative for the Greater Horn of Africa Region (GHA). They have a cluster computer installed and are developing products from the installation. That project has been ongoing for a while now and expertise that may be useful to Rwanda has been developed. Rwanda is a member of ICPAC and the evaluation team therefore recommends synergies with ICPAC initiative in future ventures and up-scaling of project activities.

3.1.2 Alignment with GEF focal areas and strategic priorities

85. GEF serves as a financial mechanism for the UNFCCC, supports adaptation and mitigation interventions that address climate change and provides the Secretariat for the LDCF. Climate change is one of the focal areas of the GEF. This evaluation finds that the project is aligned to and framed in GEF Portfolio for Climate Change and contributes to the achievement of the GEF strategic priorities and targets in adaptation.

86. The project was approved before implementation of the recent GEF strategy and Results Based Management (RBM) framework, and thus the project's results framework does not include indicators from the GEF adaptation tracking tool. However, the project is aligned with a number of outcomes from the GEF 2010-2014 adaptation strategy as indicated below:

- Project objectives and budget allocations incorporated in broader development frameworks;
- Project risk analysis and vulnerability assessment incorporated as part of development programs and project planning;
- Project adaptation practices under implementation respond to climate change-induced stresses in development sectors and vulnerable ecosystems;

- Project reduces absolute losses due to climate change, including variability;
- Project raises awareness and communities involved in disaster planning, preparedness and prevention, and;
- Project strengthens institutional adaptive capacity to implement adaptation measures.

87. Implementation of the project activities yields results that contribute directly to reducing ecosystem and communities' vulnerability to climate change through the establishment of early warning and disaster preparedness systems, and support for integrated watershed management in flood prone areas. These also contribute to the achievement of LDCF Objective 1 (reducing vulnerability) and Objective 2 (increasing adaptive capacity). In particular, the project contributes to Outcome 1.1 - *Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas,* as well as Outcome 2.1 - *Increased knowledge and understanding of climate variability and change-induced threats at country level and in targeted vulnerable areas*.

88. The project was designed taking into account overall GEF conformity i.e. sustainability, replicability, M&E and stakeholder involvement. During the implementation of the project, interpretation and application of the GEF Guidelines were adhered to as far as capacity permitted. From interviews with the Project Manager and the Chief Technical Adviser, who are members of the Project Management Team, the evaluation team realized that the two had gathered much expertise in the interpretation and application of GEF guidelines prior to their being engaged in the project.

3.1.3 Relevance to global, regional and national environmental issues and needs

89. This project is aligned to one of the most pressing challenges the world faces today, climate change. Globally, there is increased recognition for the need to build climate change resilience through adaptation. The need for adaptation to climate change impacts arises from the mounting scientific evidence that shows that ecosystems and communities are under unprecedented pressure from climate change impacts that undermine prospects for sustainable development especially in developing countries.

90. Parties to the UNFCCC recognize the paramount importance of promoting adaptation actions. One of the UN priorities is attainment of MDGs, and this project's activities supported adaptive capacity and hence it contributes towards the attainment of MDG 7 (ensure environmental sustainability) as well as other MDGs through the increased resilience of communities to the impacts of climate change.

91. Although MDGs expire at the end of 2015 (this year), Sustainable Development Goals (SDGs) - a proposed set of targets relating to future international development - are set to replace MDGs. Taking urgent action to combat climate change and its impacts is one of the proposed global SDGs (SDG 13). Given evidence on the critical links between climate change and development, development that does not take into account climate change resilience could put many of the most vulnerable nations at risk of failing to achieve the SDG targets. In addition, the development of SDGs that do not address climate change or climate resilience could mean that achieving the SDGs would not ensure long term climate compatible development. Thus, although at the design of this project SDGs were not in place, this evaluation finds that the project is in line with the global SDGs that will replace the MDGs.

92. The ProDoc indicates that Rwanda is highly vulnerable to current and expected climate changes. The Gishwati ecosystem, which was the focus of the project, is characterized by prolonged droughts as well as irregular and unpredictable rainfall associated with increased floods and landslides, both of which have adverse impacts on agricultural production and the livelihoods of the local communities living in this region. However, the capacity to induce and strengthen adaptation at

the decentralized government level is limited. Districts and local people have limited knowledge of climate change risks, adaptation needs and options.

93. The Gishwati ecosystem is part of the Albertine Rift bio-geographic region, one of the world's biodiversity hotspots, housing critically endangered species such as the mountain gorilla[18], and it supports one of Africa's most unique mountain forest biome with a very high degree of endemism, both in plant and animal species. It has several forest types: transitional forest, montane forest and afro-alpine moorlands with a variety of ericaceous shrubs and grassland species.[19] These ecosystems regulate a stable climate across the region, protect water catchment areas and provide alternatives for community livelihoods and sustainable development, but are threatened by climate change.

94. The WWF is implementing a cross-border conservation program in the Albertine Rift Valley (through its Eastern African Conservation Program), and the Albertine Rift Conservation Society (ARCOS) is an active conservation body on Rwandan side. Several international conservation organizations are especially engaged in the conservation of the critically endangered mountain gorillas and their habitat in the area (e.g. Mountain Gorilla Conservation Fund; International Gorilla Conservation Program).

95. In light of the foregoing, a robust EWS that predicts climate related risks and disaster preparedness systems as well as support for integrated watershed management resulting from this project are important for triggering the implementation of adaptive and protective actions and policies that contribute significantly towards managing potential negative impacts of climate change on these ecosystems of global significance. The expected improved climate change monitoring capacity, resulting from this project, will enable Rwanda to contribute more effectively to the global assessments for climate change led by the IPCC, as well as to the development of a comprehensive global climate EWS linked to natural hazards led by UNISDR, as requested by the Secretary General of the United Nations following the tsunami of 26 December 2004, and that such a system be built upon existing national and regional capacities.

96. Therefore, in its support of the strengthened early warning and disaster preparedness systems as well as support for integrated watershed management in Rwanda, the project objectives and outcomes are consistent with global, regional and national environmental needs.

3.1.4 Relevance to national development and environmental needs and priorities

97. The project addresses Rwanda's climate change adaptation needs. An analysis of climate data undertaken during the NAPA preparation (based on the INC) shows that the period between 1991 and 2000 has been the driest in Rwanda since 1961, and that there was a marked rainfall deficit in 1992, 1993, 1996, 1999 and 2000. At the same time, rainfall excesses were highlighted in 1998 and 2001 that resulted in cyclic droughts and floods. The analysis of rainy seasons shows a progressive tendency for shorter rainy seasons, which have led to decreases in agricultural production in the country. In addition, over the past two decades, Rwanda's rainy seasons have become shorter and have at times commenced later than usual.

98. Rwanda lacks adequate capacity to address the climates change risks and vulnerabilities (discussed in "Section 3.1.3 - Relevance to global, regional and national environmental issues and

[18] See IUCN Red List of Threatened Species; http://www.iucnredlist.org

[19] After Albertine Rift Conservation Society (ARCOS) http://www.arcosnetwork.org/index.php/en/

needs"). This project was therefore relevant to Rwanda's climate change needs and priorities for strengthened EWS and increased preparedness. The two are crucial in reducing vulnerability and contributing to current national efforts to develop appropriate and effective adaptive capacity and increasing climate resilience in the country.

99. Moreover, the project addresses the adaptation priorities identified in the NAPA, in particular, Priorities 1 and 2 Integrated Water Resource Management and Information Systems for early warning and rapid intervention respectively. The priorities were also considered as an urgent need in the INC. These priorities are addressed through the following interventions: (i) Climate Risk Assessment and Forecasting; (ii) Climate Change Adaptation Planning and Response Strategies; (iii) Demonstration of Adaptation Practices and (iv) Knowledge Management, Public Awareness and Dissemination of Lessons. The project deployed capacity building approaches that was based on learning by doing and demonstrations of climate change adaptation actions and strategies in the pilot sites

100. The project is well aligned with Rwanda's development strategies and priorities. It fully reflects the challenges of economic development and poverty reduction embedded in national development vision, the Rwanda Vision 2020[20], the Economic Development and Poverty Reduction Strategy (EPRS) 2008-2012[21], and the various sectoral policies and strategies (including *inter alia*: land, environment, water, forestry and agriculture strategies).

101. Though the EPRS2 2013-2018[22] was developed during the project implementation period, the project is in alignment with its goals and priorities. The ESPR2 recognizes climate change as Rwanda's major development challenge and prioritizes 'pursuing a green economic approach to economic transformation'. In addition, the project fits well in Rwanda's green growth and climate change resilient strategy.[23] The fact that the project is in tandem with the two national strategic documents is a strong indicator that the project has remained relevant and that its results are highly likely to remain relevant and will impact on Rwanda's national development in the future.

102. The project was also relevant and addressed priorities under UNDAF Result 4 (*Management of environment, natural resources and land is improved in a sustainable way)* and specific outputs under the UNDAF Results and Country Program outputs.

103. Furthermore, the project is also in line with the goals and needs of REMA, MINIRENA and MINAGRI the technical institutions and agencies responsible for environment, climate change and agriculture, as well as the District Authorities which implement adaptation interventions on the ground. From conceptualization to implementation, the project depicts country ownership. Stakeholder analysis and consultations were part of the project design in which the project sites were selected. Selection criteria included that western Rwanda has been identified as particularly vulnerable to the impacts of climate change and very representative, highlighted by the impacts of the devastating floods in 2007. Subsequently, district and local level consultations took place identifying the project sites within Nyabihu District. An area encompassing three sectors (Bigogwe, Karago and Rambura) in Nyabihu District was identified for their severe degradation and run-off impacts that would potentially lead to more severe flooding in the future. Consultations with local

[20] Republic of Rwanda, Rwanda Vision 2020 (revised in 2012)

[21] Republic of Rwanda, 2007. Economic Development and Poverty Reduction Strategy 2008-2012

[22] Republic of Rwanda, 2013. Economic Development and Poverty Reduction Strategy 2013-2018

[23] Republic of Rwanda, 2011. Green growth and climate resilience. National strategy for climate change and low carbon development.

governance structures confirmed the suitability of site selection and a willingness to participate in the project.

104. The project remained relevant to national and local needs by supporting a learning-by-doing approach. The project used the pilots to demonstrate better catchment management at the selected sites in Rwanda by altering/adapting agricultural practice with a view to possible replication elsewhere in the country, as well as informing national development plans and policies. The project was designed to complement other ongoing and planned projects and programs without duplicating them.

The overall rating for project relevance is Highly Satisfactory

3.2 Achievement of outputs

105. Overall, the achievement of outputs should be seen within the systems approach of the ROtI and TOC with the intermediate state/outcomes, their respective drivers that thrust the intermediate outcomes to impact(s) as well as underlying assumptions.

106. As previously discussed, the project sought to achieve four outcomes (11 outputs). The four outcomes ought to have led the project towards one higher-level result which the ProDoc presents as the principal objective: "to reduce the vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds and the people that derive their livelihoods from it, to increased floods and droughts due to climate change".

107. All the project components and their relative outputs were implemented in a manner in which their achievements are cross-cutting and overlapping. The detailed assessments below therefore may have cross-cutting emphasis into other outputs and outcomes.

108. In terms of the project budget and overall achievement, the implementation achieved great success. The achievement of individual outputs is discussed below.

3.2.1 Component 1: Climate risk assessment and forecasting

109. *Output 1.1 - Functional early warning system that enhances climate change predictions.* This output was fully achieved. A scoping study was successfully conducted through which the needs and capacities of the EWS were assessed at national and community levels. The results of the study were presented at a PSC meeting held in February 2013 and the final report was submitted in March 2013. The study identified the needs and capacity gaps to be addressed in order to achieve an effective and sustainable climate early warning and disaster preparedness system.

110. A MoU was signed between REMA and Meteo Rwanda regarding the establishment of an integrated EWS. Cluster computers were installed in Meteo Rwanda and seven modern automated weather stations[24] put in place in the four pilot districts (see Annex X - pictures). These weather stations are fully operational. Through the LDCF project and co-financing from UNDP AAP, a network of weather stations (fully operational) was established across the whole country. In all, 22 automatic weather stations (15 synoptic and 7 hydro-meteorological stations) were installed in 17 Districts (visit to some stations). The LDCF project support amounted to USD 746,573.37 (40%) while UNDP AAP co-financing provided support of USD 1,272,453.63 (60%).

[24] Bigogwe (Nyabihu District), Sebeya (Rubavu District), Ngororo and Muhembe (Ngororero District), Rutsiro and Iwawa (Rutsiro District)

111. Two Mobile Automatic Weather stations were purchased to enable regular calibration of the installed stations. Spare parts for the maintenance of the stations were purchased. A full maintenance exercise for all the 22 automatic weather stations was conducted by the project in collaboration with Meteo Rwanda staff to ensure future sustainable maintenance. In addition, rain gauges and automatic integrated wind, temperature and pressure gauges were installed in 12 schools for early education purposes (interview with the PM and a visit to one school).

112. After several meetings between REMA, Meteo Rwanda, MIDIMAR and Red Cross, a communication and outreach mechanism was agreed upon through which: (i) Meteo Rwanda would issue and send forecasts and warnings three times daily by email and SMS to stakeholders, districts and communities; (ii) MIDIMAR, Districts and Police prepare emergency intervention plans; (ii) Meteo Rwanda and MIDIMAR get feedback from Districts, administrative sectors and communities (by SMS). However, the climate change communication strategy was not developed because the consultant hired to undertake this activity failed to deliver on ToRs. REMA has indicated that it will develop the communication strategy after the end of the project.

113. The established hydro-meteorological network (of the 22 installed stations) provides live data, every five minutes, through GPRS communication system (local internet and mobile phone system) and the server computer located at Meteo Rwanda. Password-protected data are freely available over the Internet through the IP address 197.243.34.51 (visit to Meteo Rwanda headquarters). However, a practical test run of the EWS through SMS was not yet done at the time of the filed visit, but was to be conducted before the end of the project in June 2015. A contract was signed between MINIRENA and Meteo Rwanda and a mobile communication company – MTN and the technical implementation of this contract is underway.

114. A MoU was signed between REMA and MIDIMAR under which community leaders and District Disaster Management Committee members were trained in the interpretation of meteorological alerts. The trained members can now interprete and use the meteorological alerts in planning and decision-making.

115. A draft 'lessons learned' report expected to document the final achievements of the project is in place with the final document expected by June 2015 (meeting with PM and Director, Disaster Risk Reduction MIDIMAR).

116. Under a MoU between REMA and MIDIMAR, capacity building on the use of meteorological and EWS information was developed and implemented. Trainings were conducted on (i) use of early warning information for preparedness and decision making; (ii) the Structure of Rwanda Integrated EWS; and (iii) Simulation exercise for disaster preparedness and early warning (Interview with Director DRR, MIDIMAR). The following groups were trained and work closely with vulnerable communities on a day to day basis:

- Stakeholders in Kigali City (Public Institutions, NGO, Private Sector);
- First responders of Red Cross in the 4 Districts of Gishwati,
- Head of Villages and Head of Cells in the 4 Districts of Gishwati,
- Districts Disaster Management Committees in the 4 Districts of Gishwati

117. *Output 1.2 - A Gishwati integrated hydro-meteorological logical model system that integrates climate change risk assessment and socio-economic parameters.* This output was fully achieved. As already indicated (see paragraph 110 above), seven automatic hydro-meteorological stations were installed and the development of a hydrological database has been initiated at the seven stations.

118. A Gishwati model, including forecast development, EWS information dissemination and outreach, was successfully accomplished. The model includes several forecasting outputs using Ensemble Predictions System and Use of High Resolution Models customized over Rwanda. Experimental heavy rain forecast for the four pilot Districts is currently issued four times a day. A modelling consultant was hired for the period 1st November 2014 to 31st January 2015. The consultant has developed and installed data collection and processing software, installed and operationalized high resolution model WRF, and trained three meteorology staff and developed final report on the activities conduced (interviewed the trained staff at Meteo Rwanda).

119. In addition, training was conducted on Meteo data analysis, forecasting and early warning packaging. Training was conducted on future climate change projection and future impacts scenarios using a high resolution model over Rwanda. A training workshop was conducted on monthly and seasonal forecast over Rwanda. The Rwanda Seasonal Forecast System was established as a component of the Rwanda Integrated EWS. Meteo Rwanda staff were trained to make maintenance of automatic hydro-meteorological stations. Under a MoU signed between REMA and MIDIMAR, Community Leaders and District Disaster Management Committees were trained and can now easily interpret meteorological alerts for decision making. Probabilistic weather/climate warnings are delivered regularly to Districts and Sectors in order to assist population to plan accordingly (interviews with Meteo Rwanda trainees, Director DRR, MIDIMAR and the Mayor of Rutsiro District).

120. A platform for sharing lessons learned was put in place on the climate change portal[25] and the lessons and achievements will also be presented in the UNEP World Conservation Monitoring Centre websites[26].

121. *Output 1.3 - A functional data coordination network for EWS developed through inter-agency coordination.* This output was almost fully achieved. The final PIR indicates that an early warning communication and dissemination framework was developed that links the climate information producers (METEO-Rwanda) with users at the national level, districts and the communities (see Annex X - pictures).

122. The EWS protocol and the TORs for the EWS Task Team (EWS TT) were developed and approved by the PSC committee in October 2013. The EWS Task Team was established to regularly advise on EWS operational works. Focal points of the EWS TT were appointed by the participating institutions and the team is composed of representatives from: Meteo Rwanda, REMA, MIDIMAR, Rwanda Red Cross, RAB, Rwanda Natural Resource Authority, MINAGRI, MINALOC, MINIFRA, MINISANTE, and the National Police.

123. The EWS TT was trained in October 2012 and met in April 2013 for the EWS simulation exercise. Members of this team are at the same time members of the Disaster Management Steering Committee. They meet regularly to discuss progress, emerging issues and suggest way forward. They are supposed to be called upon at any time for early intervention. The last EWS TT meeting was conducted in October 2014 where they discussed the delivery of SMS for EWS alerts.

124. Project support was used to purchase and install a modern computing system for data analysis management and climate modelling. In addition network coordination between REMA, Meteo Rwanda, MIDIMAR, MINALOC, Districts, Police, etc. was established, and information sharing and operationalization is an integral part of the Rwanda Integrated EWS.

[25] http://www.rema.gov.rw/climateportal

[26] http://www.ebaflagship.org; www.unep.org/climatechange/adaptation

125. Framers have been empowered to monitor rainfall and foster drought preparedness. Rainfall stations have been installed and members of cooperatives monitor rainfall and send data to Meteo Rwanda headquarters and through this communication, farmers get forecasts for use in their activities (see Annex X - pictures). For example, in October 2014, 60 rain gauges and 30 automatic weather kits were installed in 30 farmers Cooperatives and 30 schools in 10 Districts. The community grouped in cooperatives in the four pilot Districts of Gishwati were trained to monitor rainfall and use data for agricultural activities (rainfall recording and estimation of soil moisture content). In all, 1,254 persons and NGOs were trained including participants from community to district level (discussions with farmer groups during evaluation mission).

The overall rating on the delivery of outputs related to this outcome is Highly Satisfactory.

3.2.2 Component 2: Climate Change adaptation planning and response strategy

126. Output 2.1 - Climate change sensitive disaster management plans in place for Nyabihu District in Gishwati ecosystem and capacity enhanced to implement them. This output was fully achieved. Climate change adaptation has been integrated into DDPs in the four pilot districts. (The main adaptation interventions integrated in the DDPs are soil conservation, forestry and agro-forestry, rain water harvesting, and riverbank and lake shores protection. Joint training on mainstreaming of climate change adaptation in DDPs was conducted by the project and REMA's Climate Change Department.

127. Climate change adaptation guidelines for five sectors (agriculture, health, energy, infrastructure and natural resources) were developed through REMA's project co-financing, and shared with concerned sector stakeholders through project support.

128. Climate change adaptation needs assessment was successfully completed for Nyabihu District and adaptation priorities identified. A pilot project proposal and business plan for climate change adaptation (bee keeping) was developed in collaboration with local communities (interviews with the PM, VCTA and Director, DRR MIDIMAR). The bee keeping project is being implemented around Gishwati Forest. In March 2014, a beekeeping expert was hired to conduct community training and supervise all activities related to beekeeping. Local beekeeping cooperatives were created and supervised by the beekeeping expert. Local beekeepers were trained on modern beekeeping practices (bee products and swam multiplication, etc.), and some of beekeeping materials provided to local beekeepers. In all 185 members are beneficiaries of this activity. In addition, five apiaries were established in five villages around Gishwati ecosystem. A honey collection (processing) centre was constructed. The first honey harvest is expected in July-August 2015 (after the expiry of the project) (Interview with the Vice Mayor of Nyabihu and Mayor of Rutsiro District).

129. The project successfully conducted and completed a study on the economic impacts of the 2012 wet season flooding in Rwanda[27]. Though this activity was not part of the project design, the GOR requested for the study after floods devastated Rwanda (including the Gishwati region) in 2002. The study was intended to establish the cost of flooding to the Rwandan economy (in terms of GDP) so as to inform adaptation planning. Through the study: (i) the impacts and losses due to the flooding were estimated in monetary terms and documented; (ii) flood-proofing adaptation strategies for agriculture and livestock activities, building structures and infrastructure were recommended for validation and application; (iii) a geo-referenced and statistical data base was

[27] REMA, 2013. The Assessment of the economic impacts of the 2012 wet season flooding in Rwanda.

developed and proposed as a baseline for future M&E as well as development of strategies; and (iv) survey analysis supported by statistical figures of losses was done. The report was shared with respective districts to be used as guidance for disaster preparedness community projects, e.g. on flood proofing housing and infrastructure, and moving out of high flood risk areas.

130. *Output 2.2 - A robust climate resilient Land-use Master Plan in place and implemented for Gishwati region.* This output was fully achieved. A climate change resilient land use master plan was developed through unplanned MINAGRI co-financing (this co-financing was part project design). The project funds dedicated for this activity were reassigned to the implementation of the land-use plan. In support of this activity, a number of interventions (in paragraph 132 below) were implemented.

131. The developed land use master plan categorises the Gishwati ecosystem into land for habitation, agriculture practice & agroforestry, exotic forestry and natural forestry. Some elements of the plan were implemented under Component 3 of the project. REMA, the Districts and communities agreed upon pilot adaptation projects that were later planned and implemented, including: establishment of graded terraces and progressive terraces as well as agroforestry (component 3). The pilot projects contribute to sustainable agriculture and protect soil from erosion and landslides. In addition, Sebeya, Karago, and Bitenga watershed were protected through land rehabilitation activities. Furthermore, through other government programmes, seeds (potatoes and maize) were provided by MINAGRI in response to challenges identified in the climate change resilient land use plan developed by the project interventions (Interview with the Vice Mayor of Nabihu and Mayor of Rutsiro).

132. MoUs between REMA and three Districts (Nyabihu, Rubavu and Rutsiro) were signed in July 2013. Under the MoUs, Districts fully participated in the implementation of pilot projects related to soil protection, river bank protection and agroforestry. Sebeya, Karago, and Bitenga watersheds were also protected. REMA has signed a handover of these activities to Districts, and Districts have committed themselves to maintain and upscale the project results (Interview with the Vice Mayor of Nabihu and Mayor of Rutsiro).

The overall rating on the delivery of outputs related to this outcome is Highly Satisfactory

3.2.3 Component 3: Reduction in the adverse effects of floods and droughts

133. *Output 3.1- Climate resilient land-use management practices appropriate for Gishwati pilot areas.* Project achievement with regard to this output was very good. Approximately 1,373.21 hectares of degraded land were rehabilitated against the targeted 1,440 hectares. The land rehabilitation activities in the four target districts composed of seedling production and planting activities, as well as terracing of sloppy land with both progressive and graded terraces where technically appropriate to do so (see Annex X - pictures). Both the progressive and radical terraces have been installed with plantation of trees (Alnus) and kikuyu grass on contours and maintained. The planting of trees and the developed graded terraces have contributed to protection and rehabilitation of fragile and degraded areas. In addition, graded terraces have been installed with check dams for water retention using local material (indigenous trees). This is notable achievement for future land stabilization and erosion control in the fragile ecosystem of the Gishwati forest that is expected to increase the resilience of the ecosystems to flooding and landslides.

134. The land rehabilitation endeavour was also extended to riverbank protection in the Nyamukongoro and Sebeya rivers as well as the protection of 25 ha of Nyamukongoro river watershed upstream of Karago Lake. For this, around 80,200 bamboos seedlings were planted along 10 km of river path in order to create buffer zones along the riverbanks and therefore reduce soil

erosion and siltation of Lake Karago and Lake Kivu in which these important watercourses drain their waters respectively. These activities will further strengthen the recovery rate of the Lake Karago (see Annex X - pictures) an important water source for the region and communities alike (visited established terraces and Lake Karago during the evaluation mission).

135. The project supported vulnerable communities by (i) providing 91,694 fruit trees (Tamarillo, Marakuja, Passion fruit and Avocado species) to the farming communities, (ii) Supporting the development of two small scale adaptation alternative livelihoods in farming of poultry and mushroom, and (iii) establishment of a veterinary pharmacy following the recommendations of local communities. This infrastructure (pharmacy), the first of its kind in the area, will assist the local farming communities with necessary chemical products, medicines and technical advice so as to better handle the problem of livestock diseases and pests. The activity will further strengthen livestock management capacity locally and will consequently enhance yields of livestock products such as milk and meat (visited the poultry and mushroom sites, and the pharmacy).

136. Additionally, the project has also contributed to the sustainability of these small scale alternative livelihoods projects by delivering training on how to better manage the daily activities and technicalities involved in mushroom and poultry farming to 60 members of two cooperatives in Bigogwe and Mukamira Sectors in Nyabihu District. It is also important to note that 60% of beneficiaries of these trainings were women and therefore, again a significant contribution to gender policy of the project (visited the poultry and mushroom project sites, and the pharmacy).

137. *Output 3.2 - Sustainable landuse options for Gishwati region (including resettlement) developed through systematic assessment of climate change impacts on land-use practices.* Under this output the planned activities were to revisit resettlement proposals made in the Land Suitability Study with the affected communities and develop alternatives, if appropriate, implement resettlement activities, and develop alternative livelihood options for resettled farmers. To that end, a study was successfully completed that documents best practices, gender considerations but also to measure the climate change vulnerability index and biophysical indicators. The finding indicates that the vulnerability of communities to climate change impacts has shifted from 28 to 17.7. This demonstrates that the target set (achieving a vulnerability index of 18) was achieved and even surpassed. Documentation of the lessons learnt is in progress and is reported under outputs in Component 4. The resettlement and developing alternative livelihoods is reported in output 3.1 (paragraphs –133 - 136).

138. *Output 3.3 - An effective capacity development program for communities and practitioners in Gishwati.* Under this output capacity development involved training and dissemination. Training materials and manuals were developed and produced in Kinyarwanda and the summary in English. 5000 copies of the materials have been printed and distributed and distributed.

The overall rating on the delivery of outputs related to this outcome is Highly Satisfactory

3.2.4 Component 4: Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot

Output 4.1 - Communication and Awareness strategy in place. This output was almost fully achieved. A Climate change website/portal was developed as already discussed in "Section 3.2.1 Component 1 - Climate risk assessment and forecasting (output 1.2)". The website/portal is live and regularly updated and serves as an institutional network for sharing information on ongoing climate change activities, research, lessons learned, challenges, etc. The portal is managed by Climate Change Department of REMA. A meeting to operationalize the network of institutions was conducted in

September 2014. In this meeting, stakeholders were trained to upload and download information on the portal.

139. REMA has hired District Environmental Facilitators (DEFs) who are based in all the 30 Districts in Rwanda. The DEFs were trained in environment and climate change and every quarter a meeting with all DEFs and all REMA Departments representatives will be organized. These meetings are intended to refresh DEFs on climate change and environment best practices and to allow exchange of lessons learned. As DEFs are based in Districts, they use their knowledge from REMA in their day to day work and functions as local focal points, trainers and guides for environment and climate change. However, the development of a climate change communication strategy was not fully achieved, as discussed in "Section 3.2.1 Component 1 - Climate risk assessment and forecasting (output 1.1)".

140. REMA and Meteo Rwanda have agreed to launch an SMS platform for communication of forecasts and/or alerts three times per day. MTN has already been contacted to launch the SMS user group and currently the technical set up is underway. After the end of the project, Meteo Rwanda will continue this activity with its ordinary budget (interview with representative of the DG Meteo Rwanda). All community leaders (chiefs of villages) trained by MIDIMAR will receive this information, forecasts and alerts. In all MIDIMAR trained 1,300 participants (leaders) in EWS. These leaders have mobile phones provided by the government for communication of all government information to communities (interview with the Director, DRR MIDIMAR). The short code authorization to operationalize the SMS platform was provided by RURA.

141. *Output 4.2 - A training plan in place and implemented to enhance uptake of lessons learned and engage stakeholders in the various project components*. This output was fully achieved. Stakeholders training needs were assessed and a training module was developed in collaboration with staff from REMA's Department of Climate Change, Environment, Education and Mainstreaming. Furthermore a climate change training module in Kinyarwanda for trainers has been developed.

142. In addition, a beekeeping training manual was developed to enhance the capacity of bee keeping communities. Under a MoU between REMA and MIDIMAR, training workshops were conducted on use of EWS for decision making including simulation exercises. The training was dedicated for local community leaders in Gishwati areas and disaster district management committees (Director DRR, MIDIMAR).

143. *Output 4.3 - Documentation and dissemination of lessons learned to policy makers and communities throughout the project.* This output was also fully achieved. A study to establish the climate change vulnerability index after project implementation was successfully completed. The impact of the project was conducted by assessing (i) the biophysical/chemical indicators of the project implementation; (ii) the socio economic impact of LDCF project (including gender assessment); and (iii) the vulnerability reduction assessment as result of LDCF project. The project methodology for assessment of Climate Change Vulnerability reduction has inspired REMA to develop a study on the national baseline of Climate Change Vulnerability assessment.

144. In addition, 5000 copies policy briefing materials were printed and distributed (paragraph 137). A Climate change portal and other dissemination websites have been developed (reported in paragraph 121). The project was successful in developing documentary films[28] on: (i) IVUBIRO, a traditional scoping with climate hazards; (ii) breeding of chicken as a climate adaptation intervention

[28] https://www.youtube.com/watch?v=4OdL4CXOce4&feature=youtu.be; http://www.youtube.com/watch?v=J6rH7h-K2BY; http://www.youtube.com/watch?v=Ai0opi6NjWU

and for demonstrating the replacement of chemical fertilizers with organic fertilizers; (iii) documenting the final project achievements. The documentaries were distributed to PSC and the wider public and will serve as lesson learned for further activities addressing climate change adaptation.

The overall rating on the delivery of outputs related to this outcome is Highly Satisfactory

3.3 Effectiveness: Attainment of objectives and planned results

145. Assessment of effectiveness concerns the extent to which the project achieved its immediate outcomes and objectives. Section 3.2 already presents an assessment of the project's rate of achievement of its various outputs and activities.

3.3.1 Achievement of direct outcomes as defined in the reconstructed Theory of Change

146. As discussed in section 2.9 (Reconstructed TOC), the project sought to achieve direct outcomes that are supposed to lead the project towards its overall objective and main outcome. The evaluation of the effectiveness is based on the extent to which the immediate outcomes were achieved, especially keeping in view the reconstructed TOC for the project. **Immediate Outcome 1 Improved Early Warning System for climate change risks in Gishwati Ecosystem.**

147. The project was highly successful in improving the EWS of the Gishwati region and the whole country. The indicators selected for measuring achievement of this outcome are: (i) the percentage of interviewed persons acknowledging reception of alerts and warnings about weather and climate in project sites; (ii) the percentage of EWS end-users rating the quality of EWS system as satisfactory; and, (iii) the number of climate data observation stations established in the project sites. The project succeeded in putting in place a modern and fully functional EWS and creating human capacity and institutional mechanisms to support it (see Table 5). The system is now delivering early warnings and climate information to end users. The installed meteorological network provides live data through GPRS communication system. In addition Meteo Rwanda is already issuing probabilistic rainfall forecasts three times per day and early warning messages to one million people per day (including project stakeholders and communities by mobile phone SMS, through an MoU between Meteo Rwanda and MTN). This achievement will eventually translate into the establishment of a fully-fledged Climate EWS for the whole of Rwanda in the longer term. The findings of a study conducted towards the end of the project[29] indicate that about 50% of the interviewed persons (the project targeted 70%) in the project sites had received alerts and warnings about weather and climate, and also rated the EWS as satisfactory. While the project targeted to install at least two full automatic observing stations per District (i.e. eight stations for the four pilot districts), only six automatic weather stations were installed in the project sites, which is a 75% achievement. In addition, the community leaders and District Disaster Management Committees that were trained under the MoU between REMA and MIDIMAR can easily interpret meteorological alerts and using them in decision making. The project was also successful in developing a strategy for monitoring rainfall and fostering drought preparedness in the pilot sites. The rain gauges installed in farmers' cooperatives are being used by the trained farmers to record and monitor rainfall in their communities. The rainfall data that is collected is sent to Meteo Rwanda and contributes to the overall EWS of Rwanda. The farmers reported that they use the collected data for their agricultural activities, especially monitoring soil moisture content and making decisions on cropping based on the data. However this

[29] Francois-Xavier and Naramabuye, 2015. Development of a baseline and impact of the LDCF project on biophysical and chemical indicators and socio-economic situation of the project area - Draft Report, REMA

evaluation was unable to determine the extent to which the strategy has enhanced the farmers' ability to adapt to the changing climate.

148. Overall, the strengthened EWS has improved climate information and early warning messages production and use. The project was successful in achieving the objective of climate prediction. While Meteo Rwanda still relies on global climate projections from the WMO global producing centres, it is also able to perform downscaling of climate data to local needs. The lessons learnt from this intervention may still emerge beyond the project pilot sites and timeframe, and be absorbed in the future.

Immediate Outcome 2: Climate proofed district development planning in Nyabihu District.

149. The project was successful in climate proofing development planning in the four pilot districts and thus was very effective in terms of contributing to the achievement of the overall project objective. The indicator selected for measuring the achievement of this outcome was the "number of district level plans that take into consideration climate change risks". Climate change adaptation was successfully integrated in the DDPs of the four pilot districts. In June 2014, REMA conducted an assessment of DDPs[30], and the findings revealed that all the 30 DDPs (2013-2018) had been climate proofed. While the project also successfully conducted an assessment of economic impacts of the 2012 wet season flooding in Rwanda[31], this evaluation did not find any evidence that the study informed or influenced the implementation of the project activities and outputs. As mentioned in section 3.2.2 ('Achievement of outputs of Component 2'), the study was not part of the project design but was requested by the GOR after floods affected the country in 2002. Thus, from the very beginning, the study was directly linked to the project outcomes. The overall objective of the study was to assess the economic impact of the 2012 wet season rainfall in Rwanda (economic costs in monetary terms of the 2012 floods on agricultural production, household livelihoods, and development infrastructure in the study areas). Though the study quantified the loss caused by the floods, it did not propose specific intervention activities for increasing climate change resilience and improving the livelihoods of the population in the pilot districts, but only recommended flood proof adaptation strategies in a generic way. A discussion with the Project Task Manger, it was revealed that study results did not contribute significantly to the project's outcomes and objectives, and to that end we find the output ineffective. This evaluation therefore finds that, the value of the study remains limited to assessing the economic impacts of the floods in Rwanda but it was not strategically linked to the outcomes and objectives of the LCDF project. It is not surprising therefore, that the study did not influence the implementation of the project activities and outputs. The output was "an end in itself" rather than being "a means to end".

150. The successful implementation of the Land use master plans developed through MINAGRI co-financing was effective in reducing the vulnerability of households and communities to the impacts of climate change through reduced soil erosion, flooding, increased food security and household incomes, and improved livelihoods. The climate resilient adaptation projects piloted under farmers' cooperatives have been largely successful i.e. the bee keeping, growing of mushrooms, piggery, poultry and land rehabilitation (discussed under outcome 3). For example, 187 household members are implementing the beekeeping pilot and the first harvest is expected in July-August 2015. The constructed honey collection and processing centre, through project support, will be instrumental in value addition and marketing of honey.

Immediate Outcome 3: Reduction in the adverse effects of floods and droughts in the Nile-Congo crest watersheds and Gishwati ecosystem

[30] REMA, 2014. Table 1 – Environment and Climate Change Integrated in DDPs (2013-2018).
[31] REMA, 2013. The Assessment of the economic impacts of the 2012 wet season flooding in Rwanda.

151. In the perspective of this project, reduction in the adverse effects of floods and droughts in the pilot area depended highly on the implementation of the developed EWS, and promoting sustainable land management based adaptation options through land rehabilitation. The indicators for measuring the achievement of this outcome included: (i) number of hectares of land rehabilitated; (ii) number of policy briefs based on lessons learned from the implementation of EWS and disaster response in project areas developed; and (iii) percentage change in climate change vulnerability index of local community in pilot project sites.

152. The high level of success in land rehabilitation (see paragraph 134), was perhaps the project's greatest achievement. The complexity of such an activity (requiring huge sums of money and high level participation and commitment of partners and beneficiaries) was immense. By the end of the project extension period in June 2015, there are indications that the target will have been fully achieved and even exceeded.

153. Moreover, the local communities who were highly involved in land rehabilitation were also trained in climate resilient agricultural techniques like poultry, beekeeping and mushroom growing which reduce pressure on ecosystem, thus increasing the climate resilience of both communities and ecosystems. The farmer cooperatives that were formed are a basis for effective participation in land rehabilitation and other off farm climate resilient practices. The training given to members of cooperatives was effective in ensuring the take-off of climate resilient interventions (beekeeping techniques and mushroom growing and projects) initiated by the project. These communities were paid for their labour and the income received was instrumental in increasing their resilience. The livelihood improvement projects started for communities living around Lake Karago including fishing, bee keeping, poultry, and horticulture activities are already showing signs of increased adaptive capacities of communities surrounding Lake Karago and are protecting the lake from degradation.

154. Overall, there is a reduction in the vulnerability of the communities in the Gishwati region to the impacts of climate change. A survey on Climate change vulnerability index undertaken in Nyabihu, Rutsiro, Ngororero and Rubavu Districts indicates that the project has been effective in reducing the average climate change household vulnerability index by 35.1% from 28.2 to 18.3. The exposure indicator has slightly changed from 3.8 in 2011 to 3.5 in 2014. The sensitivity index was reduced from 8 to 6.56 (18%) and the adaptive capacity index was increased from 3.7 to 4.71 (28.4%).[32] However, the adoption of the adaptation interventions piloted/demonstrated under the project is still limited to the project sites within a few communities and cooperatives, and thus needs to be rolled out in other communities, districts and the whole country.

Immediate Outcome 4: Improvement in the knowledge of good practices to reduce vulnerability to climate change based on Gishwati pilot.

155. The project was successful in documenting the project results, practices and lessons learned. The indicators for measuring achievement of the outcome included: (i) number of lessons learned codified to relate to all three project outcomes; and (ii) number of technical documents, other printed materials, videos, and soft products (such as CDs or websites) produced.

[32] Francois-Xavier and Naramabuye, 2015. Development of a baseline and impact of the LDCF project on biophysical and chemical indicators and socio-economic situation of the project area, Draft Report. REMA

Table 5: Project indicators, targets and achievement of immediate outcomes

Project Outcomes	Indicator	End-of-project target	Level of achievement of outcomes
Outcome 1: Improved Early Warning System for climate change risks in Gishwati Ecosystem.	Percentage of interviewed persons acknowledging reception of alerts and warnings about weather and climate in project sites.	Percentage of interviewed persons acknowledging reception of alerts and warnings about weather and climate in project sites increased to 70%.	A network of automatic weather stations installed in whole of Rwanda. Meteo Rwanda is already issuing p forecast 3 times per day and sends early warning mes people everyday (stakeholders and communities) by (MTN).
	Percentage of EWS end-users rating the quality of EWS system as satisfactory.	At end project: 70% end-users rate the quality of EWS system as satisfactory.	49.72% of interviewed persons acknowledging recept warnings about weather and climate in project sites
	Number of climate data observation stations established in the project sites.	At least two full automatic observing station established per District in project sites.	6 automatic weather stations installed in project sites Ngororero, Muhembe, Rutsiro, Iwawa, Bigogwe and S
Outcome 2: Climate proofed district development planning in Nyabihu District	Number of district level plans that take into consideration climate change risks.	At least one district level plan (e.g. DDP, land use master plan, lower tier land use plans) fully accounts for climate change in its implementation in each of the four pilot districts at the end of project.	REMA assessment of DDPs (2013-2018) for all 30 Dist Climate Change activities has been integrated in DDP is being reflected in annual action plan and annual pe
Outcome 3:Reduction in the adverse effects of floods and droughts in the Nile-Congo crest watersheds and Gishwati ecosystem	Number of ha of land rehabilitated.	1440 ha of land rehabilitated.	A total of 1,373.21 ha rehabilitated indicating a 95% a
	Number of policy briefs based on lessons learned from the implementation of EWS and disaster response in project areas developed.	At least one policy brief developed based on lessons learned from the implementation of EWS and disaster response in project areas.	Documentary film on final LDCF achievement was dev lesson learned for further activities addressing climat adaptation.
			Developed a training manual in Kinyarwanda for com beekeeping activities. This manual contains a brief su
			Developed a website for Rwanda Climate change port http://www.rema.gov.rw/climateportal/
	Percentage change in climate change vulnerability index of local community in pilot project sites.	Average climate change household vulnerability index reduced by 50% from 28 to 18.	The project reduced the average climate change hous index by 35.1% from 28.2 to 18.3
			The exposure indicator has slightly changed from 3.8 2014 (Note: Survey was conducted in the same area b respondent were surveyed after 3 years).
			The sensitivity index was reduced from 8 to 6.56 (18
			The adaptive capacity index was increased from 3.7 t
Outcome 4: Improvement in the knowledge of good practices to reduce vulnerability to climate change based on Gishwati pilot	Number of lessons learned codified to relate to all three project outcomes.	At least 10 lessons learned per outcome containing critical lessons learned, and good adaptation practices from the project site are codified.	**A study on evaluation of the impact of LDCF projec assessment of biophysical indicators was conducted reduced by 35.1%**; adaptive capacities increased by 2
	Number of technical documents, other printed materials, videos, and soft products (such as CDs or websites) produced.	At least one of each category of technical outputs produced.	The population's income has increased, village s mechanisms have been promoted as indicated by the shown earlier who are using these mechanisms and 8 who have been able to acquire loans;
			Developed a 21 minutes documentary film on LDCF a January to December 2013.
			Developed a website for Rwanda Climate change port http://www.rema.gov.rw/climateportal/

156. A study was conducted to document the lessons learned. The results of the assessment of biophysical indicators (through soil, water and sediment analysis) in the project pilots reveal that: (i) pH was increased; (ii) acidity was reduced; (iii) Ca, Ma, K, Organic carbon, organic matter, nitrogen, phosphorus increased; (iv) soil bulk density, soil loss, and turbidity increased. The results of the study also indicate that the project has increased the adaptive capacities in the project pilot sites by 28.3%. However apart from assessing the impacts of the project, and as mentioned under immediate outcome 1, there is no indication that the study's results have been useful in contributing to the outcomes of the project. The value of the study remains limited to assessing and communicating the impacts of implementing the LCDF project. The study objectives were not linked to the outcomes and objectives of the project. In addition, the study was conducted towards the end of the project and thus its results could not have significantly contributed to the achievement of outcomes and objectives of the project; neither did it influence the implementation of the project activities and outputs. This is yet another output that was "an end in itself" therefore this evaluation also finds it ineffective.

157. The project has contributed to the improvement of community and household incomes. Public works were given some monetary incentives through local banks (called SACCO) which provided a chance for communities to access financial services, including saving and credits. This has in a way contributed to increased income in the population. Village saving and lending mechanisms have been promoted, and 35% of the respondents have been able to use the financing mechanisms, while 9% of respondents have been able to acquire loans.

158. The documentary film developed to document the project's achievement, and discussed in Sections 3.2.1 and 3.2.4 serves to present lessons learned for further activities that address climate change adaptation. A website was developed as also discussed in Sections 3.2.1 and 3.2.4 and is being used by trained stakeholders[33]. Through enabling sharing of lessons learned, the communication channels developed and deployed by the project (i.e. documentary film and website) have been very effective not only in raising climate change awareness in communities and government but also disseminating best practices on adaptation in the project sites and the whole country.

The rating for overall achievement of outcomes is Highly Satisfactory

3.3.2 Likelihood of impact using the Review of Outcomes to Impact (ROtI) approach

159. The likelihood of impacts depends on an increasing number of external factors and conditions moving toward the higher-level objectives of the results chain. It is assessed in terms of the extent to which change is happening along the project results chains from immediate outcomes over the main outcome and intermediate states towards impacts, based on the reconstructed TOC (Section 2.9). The critical question is the extent to which the project is likely to achieve the intended impact. The details, observations, examples and highlights of moving toward main outcome and intermediate states pertaining to project activities 2010-2015 provided below are largely drawn from interviews and project documents obtained from REMA, UNEP headquarters, UNDP Country Office and field visits.

[33] (i) Vi-Agroforestry; (ii) Farmer-Managed Natural Regeneration (FMNR); (iii) Living Water International Rwanda; (iv) Rwanda Environmental NGO's Forum (RENGOF); (v) ARECO Rwanda Nziza; (vi) Rwanda Renewable Energy Alliance (RREA); (vii) Association pour la Conservation de la Nature au Rwanda (ACNR); (vii) APEFA, FIOM Rwanda (viii) Agency for Cooperation and Research in Development in Rwanda (ACORD Rwanda); (ix) Heifer International; (x) Sabyinyo Community Livelihoods Association (SACOLA); (xi) Rwanda Energy Group (REG); (xii) Wildlife Conservation Society (WCS) (xiii) Water & Sanitation Corporation Ltd (WASAC); (xiv) University of Rwanda (UR); (xv) Rwanda Natural Resources Authority (RNRA)(xvi) Rwanda Agriculture Board (RAB); and, (xvii) Ministry of Disaster Management and Refugee Affairs (MIDIMAR)

160. The ROtI analysis is used to assess the likelihood of impact by building upon the concepts of TOC. The ROtI approach requires ratings to be determined for the outcomes achieved by the project and the progress made towards the 'intermediate states' at the time of the evaluation. The rating system is presented in Table 6 below and the assessment of the project's progress towards achieving its intended impacts is presented in Table 7.

Table 6: Rating Scale for Outcomes and Progress towards Intermediate States

Outcome Rating	Rating on progress toward Intermediate States
D: The project's intended outcomes were not delivered	D: No measures taken to move towards intermediate states.
C: The project's intended outcomes were delivered, but were not designed to feed into a continuing process after project funding	C: The measures designed to move towards intermediate states have started, but have not produced results.
B: The project's intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding	B: The measures designed to move towards intermediate states have started and have produced results, which give no indication that they can progress towards the intended long term impact.
A: The project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.	A: The measures designed to move towards intermediate states have started and have produced results, which clearly indicate that they can progress towards the intended long term impact.

Table 7: Overall Likelihood of Achieving Impact

Results rating of project entitled: Reducing Vulnerability to Climate Change by Establishing Early warning and disaster preparedness systems and support for integrated watershed management in flood prone areas (Rwanda LDCF)							
Outputs	Outcomes	Rating (D – A)	Intermediate states	Rating (D – A)	Impact (GEB)	Rating (+)	Overall
1.1 Functional early warning system that enhances climate change predictions. 1.2 A Gishwati integrated hydro-meteorological logical model system that integrates climate change risk assessment and socio-economic parameters. 1.3 A functional data coordination network for EWS developed through inter-agency coordination. 2.1 Climate change sensitive disaster management plans in place for Nyabihu District in Gishwati ecosystem and capacity enhanced to implement them. 2.2 A robust climate resilient Land-use Master Plan in place and implemented for Gishwati region 3.1 Climate resilient land-use management practices appropriate for Gishwati pilot areas. 3.2 Sustainable landuse	1. Climate risk assessment and forecasting 2. Climate Change adaptation planning and response strategy 3. Reduction in the adverse effects of floods and droughts 4. Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot	A	1. Increased institutional and community capacity to respond to climate change risks and to adjusting adaptation practices to a changing climate" 2. Increased preparedness to climate change risks and flood disasters in Rwanda	B	Increased resilience of Rwanda's ecosystems, population and communities to the impacts of climate change		AB+

options for Gishwati region (including resettlement) developed through systematic assessment of climate change impacts on landuse practices. 3.3 An effective capacity development program for communities and practitioners in Gishwati 4.1 Communication and Awareness strategy in place 4.2 A training plan in place and implemented to enhance uptake of lessons learned and engage stakeholders in the various project components 4.3 Documentation and dissemination of lessons learned to policy makers and communities throughout the project.							
	Justification for rating:		Justification for rating:		Justification for rating:		
	The project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.		The measures designed to move towards intermediate states have started and have produced results but there is less likelihood that the results will progress towards the intended long term impact unless follow up interventions and financing are realised to scale up the results/achievements.		Project has achieved documented changes in environmental status during the project's lifetime.		

161. Almost all the project outcomes were achieved within the planned budget and timeframe. The outcomes achieved have implicit forward linkages to intermediate states and impacts as discussed in paragraphs –167-176. The improved climate EWS, climate proofed development planning at districts, reduction in the adverse impacts of floods and droughts, and improvement in knowledge of good practices should lead to reduced vulnerability of the Gishwati ecosystem and population to increased flood risks and droughts thereby leading to climate resilience. **Rating of progress towards Outcomes is "A".**

162. Significant progress in reducing community vulnerability has already been recorded as discussed in Section 3.3.1 (achievement of direct outcomes), showing significant progress towards intermediate state and impacts. In addition, there is country (and community) ownership and driven-ness of the project results (the EWS, disaster preparedness system, and climate change resilient projects in particular) that this is likely to translate into increased confidence and reliability of the climate early warnings and disaster preparedness systems. However, unless follow up projects/interventions and financing are put in place by the GOR or UNEP/UNDP and other partners to drive/scale up the project results, progress towards the intended impact may not be realised.

Nonetheless, opportunities for financing scaling up of project results may be realised through the national climate fund - the National Climate and Environment Fund for Rwanda (FONERWA) and international climate finance could be realised from the Adaptation Fund and the Green Climate Fund (GCF) as Rwanda/MINIRENA has been accredited by the Global GCF). These windows of opportunity could assist in translating the project results into increased preparedness and resilience of communities to climate risks and impacts if appropriate projects/programmes are developed. **Rating of progress towards the Intermediate States is "B".**

163. The overall aggregate rating for this project is "AB". Considering the high level of ownership of the project results at national and district levels, the partnerships built and institutionalisation of the project's achievements it is highly likely that the project outcomes can progress into impact. Thus a notation "+" is also attributed, producing a final rating **"AB+"**. The Project, with an aggregated rating of AB+ as described in the Table 7 above, can therefore be rated as "Highly Likely" to achieve the expected Impact. A further discussion and justification of the rating is presented below.

164. The project assumes that achieving the project's objective "to reduce the vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change" will lead to the desired impact of "increased resilience of Rwanda's ecosystems, population and communities to the impacts of climate change". As already mentioned in section 2.9, this **is** not an entirely correct assumption. There are many intermediate states and intervening variables between establishing effective early warning and disaster preparedness systems, reduced vulnerability, increased adaptive capacity, livelihood improvement, and climate resilience.

165. While early warning and disaster preparedness systems, and climate information sharing mechanisms may be a necessary element of a strategy to reduce vulnerability and increase climate resilience, as has been recently demonstrated by experience, it is not necessarily sufficient. Thus, utilizing the results and lessons derived from the medium term outcomes, such as knowledge and good practices generated from establishing and utilising EWS and implementing climate proofed policies and plans, the intermediate states and impacts illustrate the next and final high-level, tangible outcomes in the results chain. According to the reconstructed TOC, these results are probable if key impact drivers are addressed and assumptions managed to lead to this stage.

166. According to the results framework in the reconstructed TOC, the two intermediate states are: (i) Increased institutional and community capacity to respond to climate change risks and to adjusting adaptation practices to a changing climate, and; (ii) increased preparedness to climate change risks and flood disasters in Rwanda.

167. In terms of perceived likelihood of impact of the projects early warnings and alerts, a survey conducted by REMA in project pilot sites at the end of the project finds a high likelihood of impact. About 50% of interviewed persons acknowledged reception of alerts and warnings about weather and climate. Considering that the messages are sent by SMS, and therefore the recipients are those with mobile phones and are literate, this is an indicator of high progress. All the recipients indicated that they found early warning alerts/messages useful. Given that (i) community leaders and District Disaster Management Committees were trained to interpret meteorological alerts for decision making, (ii) farmers can monitor rainfall and moisture content and use it in their agricultural activities, (iii) a contract was signed between Meteo Rwanda and MTN to continue sending climate forecast and early waning alerts to the wider public, the project achievements are highly likely to progress to impact. In addition, the livelihood improvements accruing from the project interventions, including (i) increased agricultural production resulting from the rehabilitated land,

(iii) bee keeping projects, (iii) mushroom projects, etc, are less sensitive to climate and will also improve incomes and increase climate resilience.

168. It is important to recognise that the project's contributions are both capacity development, i.e. establishment of EWS, policy and planning, and also actual implementation of adaptation interventions (land rehabilitation and livelihood improvement projects). For both, many other factors come into play before these enhanced capacities can be translated into improved resilience of ecosystems and communities to climate change. The project has initiated many interventions that have already generated some changes that are likely to lead to anticipated impact (upgraded met. stations, trained met staff in place, improved delivery of climate information and early warnings, a functioning climate policy response system, climate proofed DDPs and landuse plans, rehabilitated land that is protecting ecosystems from floods and landslides). However, the higher we go in the TOC, the more theoretical and speculative the assessment becomes. Attribution by tracing back change to the project's specific outputs beyond immediate outcomes becomes increasingly difficult, verging on the impossible at intermediate state and impact levels. Additionally, the vast number of ongoing and planned projects and programmes in the country and region makes it difficult to attribute progress towards building climate change resilience to any one intervention.

169. Nevertheless, the project's legacy and achievements provide a very strong foundation on which to continue to build ecosystem and community resilience to the impacts of climate change. By putting in place a modern and fully functional EWS that delivers accurate and reliable climate information and early warnings, the users' confidence in climate information and early warnings has increased. The increased ability by users to correctly use the climate information in decision making, has the potential to deliver multiple co-benefits, help avoid mal-adaptation and contribute to a 'no regrets' approach to address climate change.

170. The effective communication and information sharing mechanisms (partnerships between REMA, Meteo Rwanda, MINIRENA, Districts, Disaster Management Committees, Early Warning Systems Task Team (EWS TT), media houses, and phone companies (MTN), the documentaries and platforms for sharing lessons learned, put in place by the project has increased climate change awareness in communities and government. In addition, the mechanisms have improved the delivery of climate information and early warnings. During the evaluation, the farming communities (cooperatives) indicated that they rely on climate information and early warning message alerts to plan their daily activities and prepare for extreme weather events. This achievement could translate into increased sharing and use of early warning information by users to inform adaptation planning and decision making, to adjusting adaptation practices based on a changing climate, and hence increased preparedness and resilience to climate change. Therefore, the replication and scaling up of the climate information sharing mechanisms initiated by the project is likely to translate to increased climate change preparedness and resilience in Rwanda.

171. The project's success in influencing the integration of climate change in DDPs and landuse master plans of the pilot districts and the development of climate change adaptation guidelines for four sectors - agriculture, health, energy and infrastructure, natural resources (through REMA co-financing), has a high likelihood of contributing to climate compatible development in the Gishwati region and Rwanda in general. Therefore, whereas many other factors come into play before such policies can be translated in improved climate resilience, the climate proofed DDPs, landuse plans sectoral guidelines have a high likelihood of impact for the following reasons: (i) the enhanced awareness of policy makers and decision makers gained through the climate proofing of DDPs, landuse plans and guidelines and the technical capacities gained are likely to make national and local managers take climate change risks into account in their planning and decision making at the national, district and community levels; (ii) the policy instruments and climate proofed DDPs and

already started climate change adaptation projects (sustainable land management and livelihood improvement projects) are likely to attract public and foreign funding to scale them up resulting into reduced climate vulnerability and increase resilience in Rwanda; and (iii) the foregoing potentially makes the ecosystems and communities on which these decisions are made become less vulnerable and more resilient to a changing climate.

The project is considered "highly likely" to achieve impact.

3.3.3 Achievement of the formal project objectives as presented in the Project Document

172. Regarding the overall project objective "to reduce the vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change ", analysis of project documentation and the results from the various interviews conducted confirm that the objective and main outcome was to a greater extent achieved due to the high rates of project activity completion. This achievement could also be attributed to basing on the analysis made on the log-frame indicators per output, which are already described as achievement of outputs in section 3.2. However, at immediate outcome level, the achievements differ slightly and some may have experienced greater success than others.

173. The indicators selected to measure achievement of the main objective and outcome were: (i) number of hectares of land rehabilitated; (ii) number of policy briefs based on lessons learned from the implementation of EWS and disaster response in project areas developed; and (iii) Percentage change in climate change vulnerability index of local communities in the pilot project sites (see Table 5).

174. By the end of the project, the Rwanda's EWS had been strengthened and was already providing reliable and accurate climate information and early warnings, and the necessary human capacity and institutional mechanisms had been created to support the system. Moreover, appropriate channels of communicating climate information and early warnings to users had been identified and developed. Meteo Rwanda is already delivering probabilistic forecasts to stakeholders and communities, and community leaders and district disaster management committees are able to interprete meteorological alerts for decision making. Already the benefits of the project are demonstrated through increased access and use of early warning messages and climate information by farmers and communities in their daily activities.

175. In addition, the results of this evaluation indicate that communities were sensitized on climate change impacts and also mobilised to rehabilitate degraded land and watersheds (see paragraph 134). As a result of the sensitizations and training of Disaster Management Committees, EW TT and communities and farmer cooperatives through project interventions, there has been increased knowledge of climate change risk factors and appropriate adaptation mechanisms among key stakeholders, and this is already translating into reduced vulnerability, exposure and sensitivity to the impacts of climate change. The project was very successful in reducing the average climate change household vulnerability, as mentioned in "Section 3.3.1 - Achievement of direct outcomes (Immediate outcome 4)".

176. Reduced vulnerability has also been achieved through improved EWS and disaster preparedness system, rehabilitation of land, mainstreaming of climate change into DDPs, landuse plans, and sectoral guidelines, as well as the roll out of pilot adaptation measures. All these will contribute to increased disaster preparedness, adaptive capacity and reduced vulnerability of communities and ecosystems to climate change risks (droughts, floods and landslides). The members

of the farmers' cooperatives interviewed in Nyabihu and Rustirio districts indicated that they are already having increased crop yields (especially irish potatoes, maize and beans) resulting from early warning messages that advise them when to plant and the rehabilitation of degraded land. Communities around Kagoro Lake indicated that rehabilitation of degraded land and watershed has reduced siltation and improved water quality in the lake and the streams that feed into it. Communities are now able to access clean water and the quantity of fish in the lake has increased.

The overall rating for the achievement of project goals and objectives is Highly Satisfactory

3.4 Sustainability and Replication

177. Sustainability is assessed in terms of the extent to which there is persistence of benefits resulting from the implementation of the project activities; including replication, up scaling and catalytic effects. This involves assessing whether a strategy and a system exists to sustain results set out in project design.

178. The project addressed key national development priorities highlighted in the EPRSP and Vision 2020 and the UNDAF. By addressing the priorities identified in the NAPA process the project was built on successful experience or lessons learnt from previous initiatives.

179. The project had strong capacity building and infrastructural development components designed to put in place a modern and functional climate early warning and disaster preparedness system in the Gishwati region and Rwanda in general that would be beneficial during and after the project implementation period. Through land rehabilitation, the project achievements are also beneficial to increasing the climate resilience of the communities and ecosystems for a long time after the expiry of the project.

180. The project was also instrumental in enhancing the human capacity (through training) and creating institutional mechanisms (elevating the NMS to an autonomous agency - Meteo Rwanda) to support the EWS. The institutional framework and human capacity put in place under the project will continue beyond the project's life span.

181. The project sensitized and trained national and local government officials and communities on the importance of EWS and the need to mainstream climate risk issues into policy and planning. The integration of climate change in DDPs and landuse plans means that climate change adaptation, and in particular early warning and disaster preparedness as well as integrated watershed management, will continue beyond the expiry of project.

182. It should be noted however, that a significant part of that sustainability is dependent on the continued flow of financial assistance. Though a deliberate exit strategy was not mentioned in the ProDoc, Rwanda has put in place the Environment and Climate Change Fund (FONERWA) also known as Rwanda's Green Fund. FONERWA, established by the GOR in 2012 as a national basket fund, is a vehicle from which climate change finance is channelled, programmed, disbursed and monitored in Rwanda. This fund provides an opportunity for funding to upscale the project results, although the evaluation finds that this fund is still insufficient.

183. In 2012, the UK International Climate Fund provided initial seed capitalization of GBP 22.5 million (USD 34 million) to FONERWA. Domestic capitalisation commitments were critical to securing this bilateral support and counterpart funding committed by the GOR is approximately USD 3.7

million[34]. In addition, FONERWA has successfully supported GOR in accessing approximately USD 15 million in external finance including USD 10 million from the Adaptation Fund (AF)[35] Currently FONERWA has capitalised commitments of approximately USD 44 million[36], and has partnered with the Rwanda Development Bank (BRD) to establish concessional lending facility for eligible private sector applicants at below market interest rates of 11.45% per annum[37]. Another opportunity is that MINIRENA/FONERWA has already been accredited by the Global Green Climate Fund (GCF) which will enable Rwanda to access project-based climate finance from the world's largest climate change adaptation and resilience fund. At the time of this evaluation, FONERWA had made seven public calls for proposals, and over 1,089 eligible project concept notes have been submitted, and 74 Full Proposals developed - of which 22 proposals have been approved and 17 are under implementation[38].

184. Taking into consideration both inherent factors constraining project sustainability, as well as the supporting network (which existed and was further enhanced under the project), there is little to doubt the sustainability of the project. In order to properly assess the sustainability of the project and its potential for replication, four parameters are in utilized as indicated in section 3.4.1 below.

The overall rating for project sustainability is Moderately Likely.

3.4.1 Socio-political sustainability

185. The project succeeded in generating political support and buy-in of the national and district governments. Consequently, there is a high commitment to up-scale the project achievements in the long-term national and district government actions and budgets. The partnership created between REMA, Meteo-Rwanda, MINIRENA, MIDIMAR, MINAGRI, MINALOC, and the Districts of Nyabihu, Rubavu, Rutsiro, and Ngororero ensured project ownership and political support that is likely to continue beyond the project's life span; this assessment is based upon the high level success of the project and involvement of local communities and cooperatives. In addition, the participation of MINICOFIN on the PSC is an assurance of political support for and sustainability of activities of the project.

186. The project was implemented in a participatory manner with stakeholders participating actively in all activities including the climate change mainstreaming processes, as well as in the piloting of on-the-ground adaptation interventions. The project's achievements have been found to be beneficial to the districts and communities, and have subsequently resulted in increased ownership of results and contribution to socio-political sustainability of the project results. The project achieved its objective of influencing national and local policy and planning, as sectoral and district policymakers and technicians were involved in climate proofing DDPS and landuse plans.

187. Climate change is already integrated into the ESRP2 2013-2018. In addition, Rwanda is pursuing a green economic approach to economic transformation and has developed a green growth and climate change resilient strategy. The foregoing implies that there is already a policy framework

[34] REMA, 2015. Lessons from Climate Compatible development in Rwanda. Climate Development and Knowledge Network- CDKN

[35] ibid

[36] Caldwell et al, (2015). Climate Compatible Development in the 'Land of a thousand hills': Lessons from Rwanda.

[37] Ntare B, (2015). FONERWA. Presentation at the South-South Exchange on Climate Finance workshop, July 2015.

[38] ibid

for sustaining the project's achievements and lessons learned beyond the project expiry period. Thus the developed and piloted adaptation interventions are highly likely to remain relevant to Rwanda's development agenda in the future.

188. The project deployed a highly participatory approach in the design and implementation. The piloted project interventions at the local level were needs driven and implemented by districts, communities and farmers cooperatives. This ensures a high level of sustainability and absorption of adaptive capacity in the medium and long-term. In particular the involvement and formation of farmer cooperatives enhances the socio and economic dimensions of the project results as the built networks will continue beyond the expiry of the project. The involvement of the private sector (for example MTN to send SMS alerts) is an entry point to engaging the private sectors in building climate resilience in Rwanda. With FONERWA beginning to fund both public and private sector climate change projects, and the commitment of GOR to PPPs, such processes are expected to continue after the project has ended.

189. At the local level, sustainability has been evaluated and is found likely due to the following factors: (i) demand for climate resilient seedlings among communities is high which will increase agricultural productivity on the rehabilitated land, (ii) the method of implementation is through agro-forestry which enables agricultural production to continue, and (iii) the project is being implemented through cooperatives, including payment for planting services. This should promote the collective protection of the trees planted and watershed rehabilitated.

The rating for socio-political sustainability is Highly Likely

3.4.2 Sustainability of Financial Resources

190. The continuation of project results, especially maintenance of the EWS, retention of trained staff, collection and dissemination of climate information, policy-making and climate change adaptation interventions, are all dependent on continued financial support. While the project succeeded in leveraging additional financial support (co-financing) from REMA, MINAGRI, UNDP TRACK etc) to sustain some its activities, follow-up financial support will be critical to sustaining the project results.

191. The opportunity here is that Rwanda has put in place a climate financing mechanism – FONERWA, which has also been accredited by the GCF; this can be used to continue and scale-up project activities. Above all, financial and capacity sustainability is assured through the harvested political will and support at the highest level of government and inclusiveness of all major stakeholders, especially districts and farmers cooperatives, which are a basis for increased funding of climate change activities.

192. The GOR resources, through the annual budget, will continue to be allocated to Meteo Rwanda and Water Resources Department to sustain running costs of the established meteorological network. Nonetheless, the capability to generate income by the climate information provider is one of the sure ways of sustaining the EWS put in place by the project. The elevation of NMS to Meteo Rwanda (an autonomous agency) is potential for putting in place self-financing mechanisms. Meteo Rwanda can generate income through sale of climate information to users like aviation, agriculture etc. Thus, there is a potential for cost recovery for provision of meteorological services. The income thus generated would serve to sustain current investments in weather and climate services as well as make investments to keep up with developments in the sector.

193. Furthermore, the sustainability of successful piloted adaptation interventions will depend on their ability to generate monetary benefits (the incentive to keep them going) which will depend on

continued access to technical advice and agricultural inputs. The piloted adaptation measures have already started to generate immediate local level benefits that reduce the current costs induced by climate-related disasters. A case in point is the rehabilitated land that is boosting agricultural productivity, food security and household incomes. For example, reports from Nyabihu District Agricultural Office indicate that the productivity of Irish potatoes has increased by 150% on the rehabilitated land, from 10 tons per hectare to 25 tons per hectare. It was also reported that the productivity of maize on the rehabilitated land has increased seven times. The interviewed farmers and communities confirmed increased productivity of Irish potatoes, maize and beans. Thus, improved ecosystem services will contribute to sustainability of production systems in the area that were declining before the project interventions.

194. The piloted interventions, like bee keeping, mushroom growing, piggery, poultry and agro-forestry will generate incomes for the household and communities, and this will enhance ability to sustain them. A sustainability assessment of these projects was undertaken aiming at strengthening the capacities of beneficiaries and ensuring continuity of the activities after the project ends. The setting up and strengthening of cooperatives, and financial mechanisms involved (SACCOS and credit and savings schemes), will assist beneficiaries and communities to sustain climate resilient and livelihood improvement interventions. The integration of climate change in DDPs (and budgets) will ensure sustained finance to upscale the project results.

195. The project was also linked to other climate change programmes and projects through the SPIU structure in REMA including: (i) the climate compatible development programme (which is led by the PM), (ii) the ecosystem recovery and pollution management programme, and (iii) the mainstreaming environment and climate change in development plans strategies/policies and knowledge management programme. The SPIU arrangement has high potential for ensuring financial sustainability through its maintenance of interaction between projects and programme components and sectors, and maintaining linkages with development partners. In that way project achievements can be up-scaled by other programmes and projects in REMA after the expiry of the project.

The rating for the financial sustainability is Moderately Likely

3.4.3 Sustainability of Institutional Frameworks

196. This section assesses the likelihood that institutional and government structures will allow for the project outcomes/benefits to be sustained. The institutional framework of the project enabled project outcomes and benefits to be sustained during the life of the project, as reflected in the extent to which outcomes were in fact achieved. For example, putting in place a modern and functional EWS achieved by putting in place a hydro-meteorological network and strengthening the human and institutional capacity to effectively utilize the system will ensure the continuation of project outcomes in the form of provision of climate information and early warning by the relevant institutions that were strengthened during the life of the project.

197. It suffices to mention that the project was designed with a strong capacity building focus as well as broad stakeholder participation and consultation so that project activities can be continued beyond the period of LDCF support. A long the way partnerships were built between REMA (EA) with UNEP and UNDP on the one hand (the IAs) and with ministries and agencies at the national level (MINIRENA, MIDIMAR, MINAGRI, RAB, Meteo Rwanda etc) and the pilot districts. A number of MoUs were signed and implemented and these partnerships can be built upon to enhance the sustainability of the project results.

198. In the evaluators' assessment, the coordination and management role played by REMA and more specifically the SPIU, in administering, overseeing and implementing all project activities was essential in driving the project to deliver outputs and achieve outcomes. Without the exemplary effective and efficient coordination, the project activities could not possibly continue. The Project also enhanced coordination and capacities of partners and stakeholders at the national, district and community levels to effectively network and support the implementation of each other's mandates.

199. During the implementation of the project, NMS was elevated to an autonomous agency Meteo Rwanda and moved from MINIFRRA to MINIRENA, a line ministry that also hosts REMA. By REMA and Meteo Rwanda being under the same ministry it eases collaboration on climate change issues. Thus the creation of Meteo Rwanda and putting it under MINIRENA strengthened the institutional set up of EWS and climate change that will be in place for a long time after the expiry of the project.

200. The implementation of projects under the SPIU arrangement in REMA, and Rwanda as a whole, enables single action planning and implementation, synergy between donors funded activities, cost effectiveness, and efficient implementation. Such an implementation arrangement enhances institutional sustainability.

The rating for the institutional sustainability is Likely.

3.4.4 Environmental sustainability

201. Climate change is a serious problem in Rwanda, and the Gishwati region in particular. By strengthening early warning and disaster preparedness systems, the project contributes to increased preparedness and resilience to climate change. In addition, the Gishwati ecosystem was highly degraded, unproductive and highly vulnerable to droughts, floods and landslides. By rehabilitating the degraded land and watershed, the ecosystem resilience has been increased and enhanced the delivery of ecosystem services to the communities. However the threats of increased population growth could create increased pressures on natural resources and ecosystems that could potentially undermine ecological sustainability. These need to be managed to ensure the integrity and resilience of ecosystems to continue providing ecosystem services to the population and communities.

202. The communities interacted with during the evaluation mission to Nyabihu and Rustiro districts reported improved water quality, de-siltation of rivers and lakes, improved agricultural productivity of the degraded landscape. The evaluators were also able to observe healthy ecosystems along the hill slopes, with terraces and tree cover, an indication that the integrity of ecosystems was being restored.

203. The integrated climate EWS systems, land rehabilitation, watershed management, and the lessons learned and best practices promoted should also assist communities, districts and national governments to make appropriate decisions on environment management and climate change adaptation options. For example, the climate proofed DDPs and Landuse Master Plans are designed to address, as a necessity, the issue of sustainable land management, fully taking current and future climate change impacts into consideration. EW TT, environmental committees and Disaster Management Committees, have been established at national, district and community levels in the Gishwati region and the whole of Rwanda. These will enhance environmental sustainability and scaling up of the project's achievement long after the end of the project.

The rating for the environmental sustainability element is Highly Likely

3.4.5 Catalytic Role and Replication

204. The partnerships built with Meteo Rwanda, Disaster Management committees, MTN, Districts, communities and farmers cooperatives, RLGs, media houses and agents, MDFGs has put in place a critical mass that has elevated climate information sharing to higher levels and has triggered behavioural change towards adaptation in the project's sites and beyond. The farmers already trained in monitoring rainfall and soil moisture content and using the information in their daily agricultural activities, as well as the committees already trained to interpret and use meteorological alerts for decision making (under the project) can be used to sensitize, train and build the capacity of the other groups within and outside the pilot sites. Therefore catalytic effect of the EWS model in the pilot sites is recognised and may be instrumental in strengthening the adaptive capacity of other communities.

205. Communities have also responded positively to the community-based and ecosystem-based adaptation interventions piloted in the project sites. The rehabilitated ecosystems are starting to deliver the much needed ecosystem services especially clean water, reduced soil erosion and reduced floods. The piloted climate resilient and livelihood improvement projects have demonstrated benefits that are catalytic to behavioural change towards climate resilience by communities within and outside the project sites

Incentives

206. Farmer groups/cooperatives were formed and used to mobilise communities and set up livelihood improvement projects. The communities and cooperatives were involved in the pilot activities and were paid for the work done. The funds were put into savings and credit financing mechanisms that members can access to improve their livelihoods. Additionally, the cooperatives and community are able to earn incomes from livelihood improvement projects (bee keeping, mushroom growing, poultry, and piggery). All these played a crucial role locally in strengthening the early warning and disaster preparedness system and supporting integrated water shed management in pilot sites and could be used to replicate and up-scale project results

Institutional changes

207. The human resources trained by the project have remained in place at Meteo Rwanda and are implementing the EWS. The elevation of NMS to Meteo Rwanda, backed by the established modern EWS, has enhanced its ability to implement EWS in Rwanda. These will translate into effectiveness of early warning and disaster preparedness system. The EW TT put in place is instrumental in the development of an integrated EWS in the country. The trained Disaster Management Committees are instrumental in ensuring preparedness to climate risks and disasters.

208. In addition key agencies and institutions (in sectors like agriculture, environment and natural resources, fisheries, health, disaster management, transport, finance, etc) in Rwanda now recognise the need for effective EWS, uptake of climate and early warning information, and the need for community based adaptation. The involvement of districts in the project coupled by climate proofing of DDPs and landuse plans has institutionalized climate change adaption at the local level. These institutions and stakeholders became committed in the implementation project interventions and provided necessary support. These institutions have expressed commitment to make climate change one of the top priorities in their plans.

Policy changes

209. The evaluation of EWS project has already highlighted the importance of raising climate change awareness among policy and decision makers at the national and local levels. The increased awareness of policy makers on the need to address climate change and EWS challenges has

catalyzed the mainstreaming of climate change adaptation in national planning and development processes (EPRS2, green growth and climate resilient strategy). In addition it has enabled political buy-in and country ownership of the project results. The integration of climate change in the DDPs, district landuse plans and sectoral guidelines is catalytic to increased climate financing which will result in replication and up scaling of climate change adaptation activities in Rwanda. Both the EPRS2 and the green growth and climate resilient strategy will catalyse climate change response in Rwanda. In addition, the EWTT, disaster management and environmental committees that were put in place in the project sites can catalyse policy response at the local level that can be replicated in other parts of the country.

Catalytic financing

210. The project received the UNEP/UNDP/GEF funding to implement its activities. Co-financing was provided by UNDP Track funding, UNDP AAP, REMA, MINIRENA and MINAGRI. As mentioned in the assessment of financial sustainability (section 3.4.2), follow up funding will be instrumental to further enhance the human capacity of Meteo Rwanda, enhance communication and dissemination of climate information, and scale up land rehabilitation and watershed management, and evolve other adaptation intervention appropriate for Rwanda.

Champions to catalyse change

211. The project has created a number of champions who strongly believe in the effectiveness of the EWS in increasing the adaptive capacity and reducing the vulnerability of households, communities and ecosystems to the impacts of climate change. The districts, communities and cooperatives involved in piloting adaptation interventions as well as the environmental and agriculture extension workers at districts reach deeper into the rural farming communities that are most vulnerable to droughts, floods and landslides. The increased confidence in weather forecasts and early warning alerts, effectiveness of the piloted adaptation interventions, and effective communication channels are catalytic and could champion innovations in adaptation that can translate into increased community and ecosystem resilience. The political buy-in and increased awareness of policy and decision makers to formulate and implement climate resilient policies and plans could increase preparedness and resilience to climate change translating into climate compatible development in Rwanda. However, the championing of climate compatible development will largely depend on climate finance to scale up project results.

Replication

212. The project was implemented in four districts in the Gishwati region. However, Rwanda has 30 Districts with similar vulnerability. There is therefore room for up scaling and replicating the piloted EWS and land rehabilitation countrywide.

213. There are also high prospects for replication based on the project's outputs and results which have created climate change awareness and the need for effective EWS at all levels. This has catalyzed action to integrate climate change adaptation into policy and planning frameworks at the national and district levels.

214. The ProDoc indicates that Rwanda, and the Gishwati region in particular, is highly sensitive and vulnerable to impacts of climate change. During the visit to the project sites in Nyabihu and Rutsiro districts in Gishwati region, the district officials and farming communities (cooperatives) showed great enthusiasm about replicating the lessons from the piloted projects. Some of them indicated that they had already shared experiences with adjacent districts and communities. However, additional support is required by the REMA, districts and communities for replication and up-scaling, which could be possible with a follow up phase or project.

215. The project impact assessment (survey) conducted by the REMA/SPIU[39] at the end of project also indicates that many stakeholders outside the pilot sites/districts are eager to get the best practices in addressing climate change from the project. An assessment of DDPs by REMA indicates that climate change adaptation has been integrated in district development planning process, and all 30 districts in Rwanda have included climate change adaptation activities in their DDPs (2013-2018). Various Districts have requested that sensitization of communities on climate change adaptation, more especially ecosystem rehabilitation and watershed management, be extended to their communities. The increased cooperation between the REMA, districts and the private sector is another indicator of replication.

216. Replicating of climate information sharing mechanisms as well as good adaptation practices is also enabled by the development of networks and partnerships that undertake information sharing and capacity building activities. The Rwanda integrated EWS model appears suitable for replication because it proposes solutions to overcome barriers to accessing effective and reliable climate information and early warnings to households, communities, private sector and government agencies in Rwanda, East Africa and Africa in general. By succeeding in putting in place a hydro-meteorological networks and functional EWS, the infrastructure is providing climate information and early warnings to the whole of Rwanda that can facilitate replication and up scaling of EWS and adaptation initiatives to the whole country.

217. Piloting was a key driver to capacity development to implement EWS and adaptation actions. Meteo Rwanda was also successful in down scaling climate predictions in Rwanda, rather than continuing to use the GCM products at the global level. If a follow up phase or project is initiated and implemented, it will consolidate the achievements of the project, through up-scaling and replication not only to other communities in the Gishwati region, but also other districts and communities in Rwanda. Moreover, a follow up project would strengthen the partnerships and networks built by the project.

218. However, the achievements of the pilot projects do not mean that the adaptation lessons and best practices can easily be transferred elsewhere, as there are many challenges in adapting to climate change[40]. Among such challenges are the high variability of environmental conditions; fragility of ecosystems; weak infrastructure and economies; poor agricultural performance; dependence on rain-fed agriculture high poverty and deteriorating livelihoods. Moreover, adaptation interventions involving land rehabilitation are very expensive and laborious, and alternative livelihoods are needed when the terraces are being constructed. Further, many farming communities are highly risk averse, which further limits their ability to accept adaptation measures such as changing crop varieties and planting patterns. They often prefer strategies with less risk but lower yields.

219. Though there is a potential for replication of the project results, realization of significant impact requires that the lessons learned be replicated and up-scaled over sufficiently large areas, considering the geographic scale at which climate change impacts are likely to be experienced. The outputs of the project should be made easily available, including to local communities in their own language (Kinyarwanda), and capacity building extended to other stakeholders.

[39] Francois-Xavier and Naramabuye, 2015. Development of a baseline and impact of the LDCF project on biophysical and chemical indicators and socio-economic situation of the project area, Draft Report. REMA

[40] Waithaka et al (eds). 2013. East African Agriculture and Climate Change: A Comprehensive Analysis. IFPRI, Washington. DC.

220. Rwanda Climate change portal (paragraph 121), is instrumental in up-scaling and replicating lessons learned. In addition the awareness materials produced by the project (reports, books, reports, DVDs) are used by REMA Department of Climate Change and International Obligations (DCCIO) and REMA's Department of Environment Education and Mainstreaming to popularise the project achievements and lessons learned.

221. It was realised from the project that documentary films with innovative and concrete activities are most effective in the transmission of knowledge and good practice to stakeholders of all categories. In addition, more concise technical documents are relevant to technical implementing entities and researchers. The project hired a consultant to follow all project implementation during the implementation period and develop regular documentary films[41]. Other projects hosted by REMA found that idea to be good and are beginning to do the same. Such documentation is catalytic to the up-scaling and replicating project results.

The project's catalytic role and replication is rated as Satisfactory.

3.5 Efficiency

222. This section examines the degree to which the implementation of the project was cost-effective and timely.

3.5.1 Cost effectiveness

223. In terms of cost-effectiveness, that is the degree to which the project funds were used in an optimal manner in order to achieve project results, the evaluation concludes that on the whole the project was cost effective. A number of measures to promote cost-effectiveness were identified in the project document and adopted during implementation:

i. Partnerships: Harnessing the comparative advantage of the partners and establishment of strategic partnerships with key organizations who already had a strong track record of experience in climate change adaptation in the country;
ii. Site selection: Pilot sites were selected in areas where potential partners and the Government were already conducting relevant projects and programmes;
iii. Engaging local communities: Districts and communities were involved in the project design and implementation, especially pilot sites selection and in the executing the adaptation interventions. These communities are among the most vulnerable and are among the ultimate implementers and beneficiaries of project adaptation interventions;
iv. Building on the past and ongoing programmes of partners and utilization of existing institutional structures (like the SPIU), programmes, information, equipment and data sets.

224. These cost-efficient measures contributed to the successful completion of the project within the budget. Whereas project disbursements in 2010 and 2011 were very low as a result of a slow start to implementation, implementation of project activities intensified and remained on tract in 2013 and 2014, after the MTR. By the end of December 2014, almost 95% of the project activities had been successfully completed well with the project budget. For example as at 31 December 2014, project expenditure was USD 3,176,309 (91%) out of the GEF grant/budget (through both UNEP and UNDP) amounting to USD 3,846,000.

[41] https://www.youtube.com/watch?v=4OdL4CXOce4&feature=youtu.be; http://www.youtube.com/watch?v=J6rH7h-K2BY; http://www.youtube.com/watch?v=Ai0opi6NjWU

225. The management costs, mainly composed of project staff, travel and administrative support, remained low as compared to the total project budget. Sharing management costs (especially the salaries and travel costs) between the project and supporting staff from the SPIU contributed greatly to cost-saving in the overhead/administrative costs. For example, salaries costs were 15% less than the planned costs while the travel and administrative support was less by 69% and 25% respectively. The signing of MOUs with partner institutions and use of commercial contracts instead of individual consultancies to implement project activities enabled the project save 17% of the planned budget for consultants.

226. The implementation of the project under SPIU was instrumental in reducing management costs. In addition the project was able to minimize management costs by disbursing funds directly to the Districts, instead of channeling the funds through RAB.

227. Therefore cost efficiency was good which resulted in small cost – big impact, supported by the high level of ownership. The cost-efficient measures adopted resulted in the successful completion of the project activities within the planned budget.

228. A key characteristic to be highlighted for this project is that it builds on successful experience or lessons learnt from prior projects or represent a scale-up of earlier successful activities. For example, the project builds on the country's experiences in the preparation of the NAPA. Similarly, evidence suggests that the project builds on the complementarities and synergies of other donor funded projects including those funded by GEF. For example, the project was linked to: (i) the UNDP AAP project which was running at the same time; (ii) the GEF/SLM MSP project - Building Capacity For Sustainable Land Use And Management In Rwanda; (iii) The UNDP Decentralization and Environmental Management Project (DEMP) Phase II - 2008- 2013; (iv) The Nile Trans-boundary Environmental Action Project (NTEAP) a regional GEF/International Waters project, encompassing eleven states (Burundi, Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, Uganda, Arab States); and (v) the "Integrating Vulnerability and Adaptation to Climate Change into Sustainable Development Policy Planning and Implementation in Eastern and Southern Africa" (ACCESA) a regional adaptation pilot project of GEF/UNEP and Rwanda was one of the participating countries. In addition the project benefited from co-financing from the GOR, REMA and MINAGRI.

229. In addition, by working directly with national institutions, like REMA, Meteo Rwanda, RAB, the project generated buy in, and took advantage of pre-existing systems including the SPIU as well as finance and procurement systems, which greatly reduced project overhead costs.

3.5.2 Timeliness

230. Generally, substantial effort went into the design process of the project, which put it in good stead for implementing its activities over its four year duration. The project was approved by GEF and UNEP in March 2010 and September 2010 respectively, and started on October 2010. The planned project duration was 48 months, expected to be completed by 30 June 2014. The project underwent three minor revisions, the last one being in May 2014 and another revision is ongoing to extend the project up to 30 June 2015. The main project activities were completed (95%) by 31 December 2014. However a few activities are still in progress and will be completed by the end of the expiry period, 30 June 2015.

231. The project experienced delays in implementation caused by factors external to the project. Some of the delays were caused by institutional changes in Rwanda (setting-up of REMA's SPIU and

recruitment of the team, changes in partnering institutions like RAB) and important delays in setting-up functioning partnerships (with RAB and the NMS) for project execution[42]. Initial delays were also experienced with implementation of component 3 specifically resulting from delays in (i) identifying the project sites, (ii) selecting partner cooperatives according to an agreed criteria, (iii) identifying possible land plots for tree nurseries, and (iv) providing a sufficient quantity of quality checked seeds for agro-forestry and forest trees.

232. The MTR identified these institutional challenges and the project implemented the MTR recommendations which fast tracked project activities from July 2012. Therefore, the project managed to overcome early delays in the launch of implementation, including severe understaffing, to reset on a more positive track. The timeliness in achievement of results was largely a result of REMA's effective and efficient management style that is well known in Rwanda.

233. The management response at UNEP was highly efficient and was instrumental towards timely achievements of project objectives and outcomes. The disbursement of funds was immediate once funding and reporting was approved. For example, the first disbursement was in October 2010, the same month that the project commenced and by the completion date (31 December 2014), both UNEP and UNDP had disbursed 91% of the project funds. The early PSC meetings placed great emphasis on timely implementation of the project activities as contained in the ProDoc and work plan. There have been no cases of none performance from co-financing partners.

The overall rating for efficiency is Satisfactory.

3.6 Factors affecting performance

3.6.1 Preparation and readiness

234. The Project was well designed, as indicated in Annex VII - matrix of the overall quality of project design. There were initial delays in project implementation due to factors external to the project, like putting in place the SPIU, recruitment of project staff and delays caused by inadequate institutional structures at one of the project partners, RAB. The MTR confirmed the existence of shortcomings (also discussed in Section 3.6.2 - project implementation and management) that negatively affected project readiness and rated the project progress unsatisfactory. A baseline study[43] conducted at the beginning of the project provided lessons learned that helped to revise the baselines, project indicators and targets proposed in the ProDoc. Consequently, the project indicators were amended to the extent that, of the 7 original indicators, one was removed, one was slightly modified, five were changed and four new indicators added.

235. The project's log-frame was well designed and detailed. The comprehensive nature of the Log-frame ensured that all possible activities were captured in the design and therefore could be taken into account in work plan and budgets. However, the nature of Log-frame is that it tends to be linear /sequential in nature and yet many project activities take place concurrently and feeding into each other. While the log frame is an excellent planning tool, it should be complemented by other planning tools like the TOC which clearly indicate linkages between the various project outputs and outcomes.

[42] Beucher, O., Spearman, M., and Lafontaine, A., 2012. UNEP/UNDP/GEF Project Mid-term Review Report, Baastel.

[43] Gbetibouo, G., & Mills, A., 2012. Baseline information and indicators for the Rwanda for the AAP Project and LDCF project: REMA

236. The implementation strategy was realistic and appropriate to achieve the stated outputs and outcomes. However, reducing vulnerability and achieving resilience require a longer timeframe to have any discernible impacts and to generate results for replication. To that end, strong linkages with other ongoing and planned initiatives should be built during project implementation.

237. Project stakeholders at the national and local levels were adequately identified in the ProDoc, including, among others, climate information providers and end users. In particular, the most vulnerable communities highly dependent on the Gishwati ecosystems for food security and livelihoods were identified as the main stakeholders. Therefore, planning and implementing of project activities focused on climate information providers, districts and vulnerable communities. Details on stakeholder participation are provided in section 3.6.3.

238. The project took account of previous and ongoing work and initiatives on environment and climate change in Rwanda and built on this foundation. The choice of implementing and executing partners, based on their respective competencies, contributed to the successful implementation of the project. The lead implementing agencies (UNEP and UNDP), the executing agency (REMA) as well as implementation and institutional arrangements were clearly described in the ProDoc. Local partners for the demonstration projects were identified in consultation with the relevant Government Ministries, Districts and local communities.

Overall, the project preparation and readiness was Satisfactory

3.6.2 Project implementation and management

239. A full time Project Manager (PM) was put in place to manage the project and he reported to the DG REMA and the PSC on a regular basis. The project management structure was very clear, and management was stable with roles and responsibilities clearly defined and understood. A CTA was hired on a part-time basis.

240. A MTR was completed in September 2012 and it rated project progress as unsatisfactory/moderately unsatisfactory (objectives/outputs). The MTR made a number of recommendations to improve project performance and all of them were implemented. Under an agreement between REMA and UNDP/UNEP, measures were put in place to ensure effective management of the project including: (i) expenditure tracking, activity based costing, and quarterly progress reporting/planning (ii) weekly meetings between UNDP CO and REMA; (iii) hands on UNDP/UNEP support for development of reports, (iv) assignment of three additional REMA officers to project team; and (v) implementation of GIS based monitoring system. Apart from quarterly progress reporting, these measures were missing in the ProDoc and project preparation.

241. Both UNEP and UNDP assigned Project Task Managers, who guided project implementation. The Task Managers understood the project well and worked excellently with the REMA/SPIU. Annual work plans were reviewed and adjusted as needed in consultation with partners to ensure that all activities were completed and outputs achieved. Generally, activities were well-managed, with responsibility and transparency at all levels.

242. A pertinent issue that needs to be noted in the project management was that the project had two IAs, UNEP and UNDP, both with funding from GEF. To that end, the project was one of the flagship cases of achieving synergy effects by One UN and aligned to the one UN agenda. GEF wished to build on the complementarities of the two agencies (UNEP and UNDP). However actual implementation of the project proved very complicated as each of the two agencies had different reporting and M&E mechanisms. For example, the project had two ProDocs, one for UNEP and the other for UNDP. Separate reporting systems were implemented were time and resource consuming.

Decision making was also complicated because for each decision, the two agencies had to first agree which took a lot of time. There was limited flexibility in reallocating resources from the components implemented by UNEP to UNDP and vice versa. The delays in recruiting a CTA was partly attributed to the complicated decision making and reporting mechanisms between UNEP and UNDP. The Project team, and particularly the DG of REMA, indicated that they found reporting mechanisms and decision making much easier with UNEP than UNDP, although the latter has a country office in Rwanda and the former is not a resident agency. However this complicated reporting structure did not significantly affect the implementation of project activities and achievement of results.

243. Procurement in terms of equipment and consultancies was managed by the Procurement/Contracts Committee of REMA, guided by the procurement laws of the GOR. The government bureaucracy sometimes delayed procurement of essential hydro-meteorological equipment. However, this did not significantly affect the achievement of project outputs and outcomes.

244. The Project Component 3 was originally intended for implementation through the Rwanda Environmental NGOs Forum (RENGOF). This evaluation established that currently Rwanda government institutions do not implement projects with NGOs. To that end, there was a change in project execution partner from NGO to RAB and a formal partnership (MOU) was signed between REMA and RAB in December 2011, under which REMA would provide technical support for implementation of component 3, especially on agriculture and extension services. However, challenges emerged with the long process of REMA passing funds RAB and then RAB passing on the funds to districts. The process increased overhead costs and bureaucracy that delayed project implementation. This was rectified through modification of the MOU, and REMA started disbursing project funds directly to Districts, an action that greatly fast tracked project implementation at district and community levels.

245. Nonetheless, the project largely followed the course that had been set out for it in the ProDoc. Despite the initial delays and management challenges encountered, the evaluation team concludes that project management was effective and efficient, with no major problems reported by executing partners. Where management challenges were encountered adaptive management and flexibility were applied to bring back the project implementation to course. The role of the SPIU in particular was praised by PSC members interviewed. It is the view of the evaluation team that the SPIU was an effective and efficient arrangement for implementing the project. The SPIU had very committed staff that contributed to the good performance of the project and linking the project interventions with other climate change programmes in REMA and the country at large. The professional and personal skills and dedication of the DG, PM, and the CTA was of such a high standard. This comment was also made by members of the PSC.

The project's performance in implementation and management is rated as Satisfactory.

3.6.3 Stakeholder participation, cooperation and partnerships

246. Project implementation involved working with stakeholders at the international, national, districts and local community levels. Stakeholder participation at all levels remained very high throughout the implementation of the project and partners are commended for this achievement. The project design recognized the benefit of adopting a participatory approach involving key stakeholders and communities in project activities. Participation was particularly ensured through signing MOUs with key partners and maintaining good communication channels between the project team at REMA with partner and stakeholders.

247. Engagement of local communities helped to ensure that their needs were taken into consideration in the development of EWS, implanting ecosystem based adaptation interventions and livelihood improvement projects, as well as ensuring ownership and buy-in. Significant effort went into raising public awareness on climate change adaptation, and EWS and disaster preparedness. A range of training and communication materials were prepared and sensitization government officials and technical staff at national and district levels as well as farmers at community level.

248. The combination of partners was effective and efficient, with each partner making important contributions towards different project components and outputs. Based on interviews and examination of the progress reports and project accomplishments, it was clear that there was reasonably good collaboration among the partners and especially engagement with stakeholders at the districts, communities, and cooperatives throughout the duration of the project. In summary, communication and engagement strategies were vitally important elements of all project activities.

249. Gender issues were taken into consideration in project implementation. The trainings conducted by the project considered gender. The findings from the interviews with community cooperative members, and documented in the PIR indicate that training of women has enhanced their basic capabilities and self-confidence to counter and challenge existing disparities and barriers against them. Cooperatives supported by the project had membership composed of men. Women and youth whose management skills were enhanced. Cooperative members were trained on access to micro-finance services and wealth creation strategies and this is expected to lead to individual economic empowerment through enabling decisions about savings and credit use, enabling them to set up micro-enterprises, and increasing incomes. Women from National Women Council (540 women from 12 Districts) were trained in climate change adaptation and impact of climate change on gender. The training helped them to develop climate change adaptation related action plan. Under other projects initiatives from REMA (LDCF and DEMP projects), funds will be allocated to implement the developed action plans.

250. As discussed in "Section 3.6.2 - project implementation and management", NGOs were only represented on the PSC through RENGOF, but they (NGOs) were not part of the project implementation process as had originally planned in the ProDoc. Interviews with DG REMA, PM and members of the PSC indicate that lessons learned from previous projects implemented by REMA is that working with NGOs is not always as easy and productive as expected in Rwanda. As an alternative farmer cooperatives were formed at community level through which the project was implemented.

Stakeholder participation, cooperation and partnerships is rated Satisfactory.

3.6.4 Communication and public awareness

251. The project team has done a great job in engaging with key institutional stakeholders, through effective communication and public engagements. Outcome 4 of the project was devoted to documentation of good practices and knowledge management. To that end effective communication and raising public awareness were a priority in the project. A range of communication material was prepared and public awareness workshops convened and demonstrations held. The involvement of the media (radios, TV and print media), regular meetings, training of village leaders, and Disaster Management Committees ensured that information about project results and progress were communicated and this kept the partners highly engaged. The project documented traditional knowledge on climate change and variability through a consultative meeting with 416 elders (60 years old and more) selected from 416 administrative sectors of Rwanda.

252. A website for the Rwanda Climate change portal, discussed in "Section 3.2 Achievement of outputs (section 3.2.1 - component 1, section 3.2.4 - Component 4)", was developed to support communication and awareness creation. As discussed in Section 3.3.1 - Achievement of direct outcomes, a documentary film was developed on, among others the project achievements. The documentaries will serve as lesson learned for further activities addressing climate change adaptation. Moreover, the method was found to be very effective and other projects hosted by REMA and are deploying it

253. Regular and clear communications between the project team (at the SPIU), IAs, project partners, and beneficiaries ensured that progress was on track. Clear communication also helped to manage 'unrealistic' expectations of the project stakeholders. There are clear communication channels created by the project for disseminating climate information and EW. The project, through its outputs and results, has produced an array of materials, tools, study reports policy briefs and training materials, and while some are uploaded on the website/portal, many others are not yet in the public domain.

The project's performance in ensuring communication and public awareness is rated Highly Satisfactory

3.6.5 Country ownership and driven-ness

254. Country ownership and drivenness was an integral part of the project from the time of conceptualization to implementation. The evaluation mission and documentation review confirm that the ownership was high because the project is highly relevant to Rwanda's development priorities and plans as outlined in the section 3.1: relevance.

255. The project was nationally implemented and the EA was REMA. All the project institutions and stakeholders were nationals, except for the CTA. The use of national data and the involvement of national technical experts (in REMA, Meteo Rwanda, RAB and Districts) in the scientific work also promoted country ownership. Above all, the involvement of national and local stakeholders in the implementation of the project, and building capacity based on the capacity needs of stakeholders, generated ownership of the project by the main stakeholders. Implementation of the project activities was country driven and the identification of pilot sites and beneficiaries was participatory. A baseline survey was conducted at the beginning of the project to refine the project indicators and targets. It also needs to be acknowledged that participation in the project involved some level of national funding commitment/co-financing.

256. It was obvious to the evaluators that the REMA and GOR were fully supportive of the project during its implementation and is committed to incorporating the results in national programmes. In fact, all national level stakeholders interviewed expressed interest in a follow up phase/phase.

Country ownership and driven-ness is rated Highly Satisfactory

3.6.6 Financial planning and management

257. Financial planning and management was consistent with UNEP's procedures. Project funds were disbursed to the EA for the execution of specific activities. As at 30 June 2015, UNDP had already disbursed all the GEF allocated project funds (100%) while UNEP had disbursed 99% of the GEF allocated funds (remaining with a balance of USD 56,057) Three project/budget revisions were carried out the latest in May 2014. A no-cost extension was granted to the project up 30 June 2015

to complete project activities[44]. The statement of expenditure as at 30 June 2015 shows a total expenditure of USD 14,530,255.40, including both GEF funds and co-financing. Secured co-financing was at USD 11,109,254.

258. Financial records were maintained by a Fund Management Officer (FMO) who also provided oversight on the funds administration. According to the FMO, this project was 'uneventful' in terms of the financial aspects, indicating that there were no irregularities and problems. Financial Audits were annually conducted by the reputable independent audit firms. However there was no evidence the audit recommendations were implemented. The project had a Finance Officer dedicated to the project as part of the SPIU arrangement and this greatly assisted financial management. However financial reporting was somehow complicated by two reporting mechanisms to UNEP and UNDP, in which two financial reports had to be prepared and submitted to each of the agencies. In addition there was lack of flexibility in decision making regarding the budgets of components for UNEP and UNDP.

Table 8: Summary of project expenditures

Component/ Sub-component/Output	Estimated cost at design	Actual cost	Expenditure ratio (actual/planned)
1. Climate risk assessment and forecasting	660,000	697,140.85	
2. Climate Change adaptation planning and response strategy	330,000	537,539.16	
3. Reduction in the adverse effects of floods and droughts	1,815,000	1,815,000.00	
4. Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot.	285,000	136,331.39	
Total	**3,486,000**	**3,421,001.40**	**1:00**

Project co-financing

259. In terms of project co-financing a total of USD 12,427,000 was budgeted for a being available. As at 31 December 2014 realised co-financing was USD 9,243,562, or 74% of the budgeted co-financing.

Table 9: Summary of project co-financing

Co-financing Source	Amount (USD)	
	Planned	Actual (USD)
UNDP Track Funding	600,000	600,000
UNDP AAP	2,847,000	2,847,000
GoR/MINIRENA PAREF	7,450,000	5,902,079
GoR/MINERINA/GASP	1,050,000	1,280,175
GOR/REMA	480,000	480,000

[44] June 30, 2015 was the legal closing date. The technical closing date was December 31, 2014 however UNEP activities and expenditures did not close on time primarily due to delay of some activities.

Co-financing Source	Amount (USD)	
	Planned	Actual (USD)
Totals	**12,427,000**	**11,109,254**

Overall project financial planning and management was Highly Satisfactory

3.6.7 Supervision, guidance and technical backstopping

260. The ProDoc stated that the project would be implemented by UNEP and UNDP. In UNEP, DEPI was responsible for the project, i.e. overseeing and monitoring the project implementation process as per UNEP rules and procedures, including technical back-stopping. UNEP worked closely with UNDP and REMA (the EA). A Project Task Manager was designated from UNEP to provide oversight and accountability during the life of the project. The UNEP Task Manager was highly regarded by the project management team.

261. As part of its supervision and backstopping role, UNEP closely monitored project progress and regularly communicated with the EA to provide guidance and ensure that any challenges were addressed. The Task Manager (TM) visited Rwanda in October 2012 and during the visit also attended a PSC committee meeting. The TM also participated in meetings with the Met Service and EW TT on the EWS component. This participation in meetings enhanced interactions and access to first-hand information from the project partners and beneficiaries, which contributed to project implementation and achievement of results. Where not present, UNEP was fully represented by UNDP, which has a resident agency in Rwanda that was available to provide project supervision and backstopping in case major issues in project implementation and execution were encountered.

262. REMA and other the local project partners greatly appreciate the involvement of the CTA who assisted with the implementation and reporting. Project supervision was also provided by the PSC which met regularly. The PSC provided important strategic guidance to the project management team. Over the course of the project, a good rapport and mutual trust was developed between the PSC and the project management team.

Overall UNEP/UNDP supervision and backstopping was Highly Satisfactory

3.6.8 Monitoring and evaluation

Monitoring and Evaluation design

263. The Monitoring and Evaluation (M&E) is designed according to UNEP's standard monitoring and evaluation procedure. The project log frame (results framework) included SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators of achievements also had means of verification for the project objective, outcomes and outputs. The indicators were measurable and relevant to the objective, and were achievable within the projects budget and time frame. A work plan is provided in the ProDoc that indicates outputs activities and timelines. The time frame to achieve the ultimate objective would depend very much on the impact drivers and assumptions (such as availability of financial resources for up-scaling/replicating) to move from project outcomes towards project impacts.

264. The ProDoc includes an M&E plan and budget consistent with GEF, UNEP and UNDP M&E Evaluation Policies. The ProDoc also makes provision for independent mid-term evaluation at the mid-point of project implementation (specifically July 2012). A provision was included in the ProDoc for an independent terminal evaluation to be conducted towards the end of the project. Periodic

monitoring of progress was conducted through periodic monitoring through site visits and annual progress review reports. The project design had a dedicated M&E staff provided by the SPIU.

The M&E design is rated as Highly Satisfactory.

M&E plan implementation

265. The M&E system put in place was operational and facilitated timely tracking of results and progress towards project objectives throughout the project implementation period. The SPIU (especially the PM, M&E officer and the CTA) ensured the operationalization of the M&E system. M&E was conducted through PSC meetings, contracts committee meeting, audits, and visits to project sites by project team and inspectors from Meteo Rwanda.

266. A baseline study was undertaken in January 2012. The baseline study provided an assessment of the project results framework and indicators, targets and baselines for each of them. In particular, the baseline study report recommended: (i) adjusted indicators that are "SMART-er" than those originally approved to monitor project progress; (ii) baseline values and data for all indicators; (iii) a detailed methodology for data collection for follow up measurement of individual indicators as well as outlining clear directions for implementing the M&E plan. On the basis of recommendations from the baseline study, the indicators were modified in the adjusted results framework and these remained very relevant and useful and measurable.

267. A MTR was conducted and successfully completed in September 2012, and it made several recommendations for improvement of project implementation. This evaluation confirms that the MTR recommendations were fully implemented and this put the project back on track to realise high achievement of project outputs and outcomes. The availability of a dedicated M&E staff ensured regular monitoring of progress against indicators and reporting.

268. Following the end of the project a final project report was prepared and was made available to the evaluators. In some instances the final report does not provide updated information and a few activities are reported as still ongoing.

The M&E plan implementation is rated as Highly Satisfactory.

4 CONCLUSIONS, RECOMMENDATIONS & LESSONS LEARNED

4.1 Conclusions

269. The Rwanda LDCF project was designed to reduce the vulnerability of the Gishwati ecosystem and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change. The project included four key components as described in Section 2.2.2.

270. The major objective of the terminal evaluation is to assess Rwanda's LDCF project performance (in terms of relevance, effectiveness and efficiency); determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability; and promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, UNDP, REMA and the key partners.

271. In terms of ROtI analysis and the TOC, the project objectives and implementation remained relevant in the context of the issues they intended to address. These issues include (i) improved early warnings and disaster preparedness systems for reduced vulnerability to climate change, (ii) increased institutional and community capacity to adapt to climate change risks, and (iii) increased preparedness to climate risks and flood disasters as intermediate states in the TOC remain important. The project addressed the issues by putting in place a fully functional climate EWS, and developing human and institutional capacity to use the upgraded EWS. In addition, the project developed the technical capacity for climate proofing DDP and landuse plans, generated credible climate information and developed early warning sharing mechanisms. It also engaged in the demonstration of climate change adaptation response strategies and promoting learning by doing approaches to capacity building, in order to enhance the ownership and sustainability of the EWS and piloted climate change adaptation actions.

272. As described in Section 3.1, the evaluation found the project highly relevant to GOR national development priorities. It is also relevant to GEF and UNEP's policies, programmatic objectives and expected accomplishments on climate change adaptation.

273. The project was successful in strengthening the institutional and human capacity to collect, process, and disseminate climate information and early warnings. In particular, a modern and fully functional EWS was put in place and the necessary human capacity and institutional mechanisms created to support it. The project deployed capacity building approaches that were based on learning by doing and demonstrations in the pilot sites.

274. The project worked directly with both climate information providers (Meteo Rwanda) and end users (districts and communities), provided training, and used participatory methods to communicate climate information and early warning alerts and to pilot adaptation interventions. The project also increased climate change awareness among the public and decision makers. Already climate change has been integrated in DDPs of the four pilot districts (Nyabihu, Ngororero, Rubavu and Rutsiro districts) and climate change adaptation activities are now included in all the 30 districts' DDPs (2013-2018) .

275. The climate proofed district landuse plans were implemented through rehabilitation of degraded land (discussed in paragraph 134 and 135); 1,373 hectares were rehabilitated. This has translated into increased the resilience of ecosystems and communities to a changing climate. Guidelines for mainstreaming climate change in four sectors were developed; agriculture, energy and infrastructure, environment and natural resources and health sectors. Overall, the project was

able to reduce the vulnerability of the population, communities and ecosystems to the impacts of floods, droughts and landslides. Vulnerability reduced by 35.1% and adaptive capacities increased by 28.3% in the areas where the project was implemented.

276. Moreover, the project has promoted partnerships and dialogue at community, district and national levels involving technical and political arms of government. This has fostered collaboration in sharing of data and information among stakeholders, which is critical for enhancing climate change adaptation. All these are key drivers towards the intermediate state. Based on the ROtI analysis, the overall likelihood that the intended impact will be achieved is rated on a six-point scale as 'likely'.

277. Overall, the targets set by project at design were achievable in the planned budget and time frame. However, while the project achieved almost all the outputs and outcomes, significant uptake of the lessons learned and best practices as well as up-scaling and replication requires a much longer time and additional funding. To that end a follow up phase or project is necessary. Nonetheless, the project should be commended for achieving the planned activities, outputs and outcomes. There are already promising cases where project results (EWS and land rehabilitation) are being applied in other areas within the communities of Rwanda to inform adaptation planning and decision making.

278. The overall impact from the outcomes and intermediate states was increased resilience of Rwanda's ecosystems, population and communities to the impacts of climate change. This impact is likely to be achieved based on the intermediate state assessments. The intermediate state of Increased institutional and community capacity to respond to climate change risks and to adjusting adaptation practices to a changing climate was achieved. The functional EWS is in place and human and institutional capacity to use it was strengthened. The combined impact of functional EWS, climate proofed DDPs and landuse plans, land rehabilitation, and climate resilient livelihood improvement are contributing to increasing preparedness to climate change risks and flood disasters in Rwanda.

279. Long term impacts are likely to accrue if the EWS forms part of a wider framework for adaptation planning and socio-economic development. The early successes of the pilots showcase the project's concrete, on-the ground achievements, which will be instrumental in promoting further stakeholder buy-in and acceptance by households and communities of climate information and climate change adaptation actions.

280. Prospects for sustainability are likely with respect to three factors (i.e. socio-political, institutional and environmental) conditioning sustainability of project outcomes, and less likely for financial sustainability. Availability of financial resources will also be instrumental to drive up scaling and replication. Though Rwanda has put in place a climate fund (FONERWA), it is not yet adequate to upscale and replicate the project achievements. Nonetheless, there are a number of ongoing and planned initiatives in climate change adaptation supported by both the GOR and bilateral donors that provide excellent opportunities for sustaining project outcomes through uptake. Additionally, the socio-political situation and institutional frameworks are currently very conducive to sustaining project outcomes. However, sustainability will be higher if follow up funding sources are secured, and ownership and enthusiasm at community and national level to keep momentum is kept high.

281. The evaluators, when visiting the project sites, found that there was considerable enthusiasm and drive to move the project's results forward and that country ownership was very strong. The partnerships forged and high stakeholder participation was considered by the respondents and evaluators alike to be some of the greatest achievements. Engagement of national and local stakeholders at all levels and alignment of the project goals with national and local

priorities and needs with respect to climate change adaptation was instrumental in promoting a high level of country ownership and drivenness.

282. Project implementation was generally cost-effective and timely. Project activities were low cost and cast a vast net in terms of livelihood impact – in this sense the programme was very cost-effective. This was achieved through establishing strategic partnerships through MoUs, selection of demonstration sites in areas with ongoing projects and programmes, involving local communities in implementation and utilization of existing institutions, structures and information.

283. By engaging many partners and having multi-sectoral representation on the PSC, the project helped to strengthen the institutional framework for climate change and directly helped institutions to overcome some capacity barriers and create opportunities for mainstreaming climate change into districts planning process as well as sectoral policies and national planning processes.

284. The project performed satisfactorily on M&E. The project had a dedicated M&E staff from the SPIU and a CTA, as well as technical backstopping from the UNDP Country Office. Thus, monitoring and reporting the progress of the project and documenting lessons learned and best practices was well conducted. A MTR was successful conducted and it informed remedial action for the project. The implementation of the recommendations of MTR made the project get back on track to have great achievements.

285. Ratings for the individual criteria are given in Table 10. The overall rating for this project based on the evaluation findings is Satisfactory.

Table 10: Summary of Evaluation criteria, assessment and ratings

Criterion	Summary Assessment	Ref.	Rating
A. Strategic relevance	The project's goal, objective and components are highly aligned to Rwanda's development, environment and climate change needs and priorities. The project is also relevant to GEF and UNEP's policies and programmatic objectives and consistent with the One UN agenda.	3.1	Highly Satisfactory
B. Achievement of outputs	Almost all the outputs were satisfactorily achieved based on the log-frame indicators. The technical outputs for all components were of a very high quality. In particular outputs on outcome 1 on climate EWS and outcome 3 on reduction on effects of floods were exceptionally achieved.	3.2	Highly Satisfactory
C. Effectiveness: Attainment of objectives and planned results	The project's planned results were achieved, and represent key steps towards the intermediate state. Rwanda's Gishwati region was assisted to reduce vulnerability through improved EWS, and piloting adaptation interventions. Overall, vulnerability reduced by 35.1% and adaptive capacities increased by 28.3% in project sites.	3.3	Highly Satisfactory
1. Achievement of direct outcomes as defined in the reconstructed TOC	The direct outcomes of the project were achieved. A functional EWS is in place delivering climate information and early warnings to end-users, climate proofed landuse plans are in place being implemented, degraded land has been rehabilitated and is resilient to effects of floss and landslides, and lessons learned and best practices have been documented.	3.3.1	Highly Satisfactory
2. Likelihood of impact using ROtI approach	The project outcomes achieved have implicit forward linkages to intermediate states and impacts. Considering the high level of ownership of the project results at national and local levels there is high likelihood of impact. However a follow up phase/project is necessary.	3.3.2	Highly Satisfactory

Criterion	Summary Assessment	Ref.	Rating
3. Achievement of formal project objectives as presented in the Project Document.	The project's formal objectives were achieved. Vulnerability to climate change was reduced through strengthened early warning and disaster preparedness systems. There is increased knowledge and awareness of climate change risk and of adaptation mechanisms among key stakeholders especially at the district and community levels.	3.3.3	Satisfactory
D. Sustainability and replication	The project built on successful experience or lessons learnt of previous initiatives. It also had strong capacity building and demonstration of adaptation initiatives at community levels that are beneficial after the project implementation period. However, financial sustainability is less likely because there are no indications of continued financial assistance after the project expiry. No deliberate exit strategy was mentioned in the ProDoc.	3.4	Likely
1. Socio-political sustainability	The project was implemented in a participatory manner and succeeded in getting political buy-in and ownership. It generated considerable social and political support at national and local community levels. It has also influenced policy and plan revisions. The socio-political environment is conducive to sustaining the project outcomes.	3.4.1	Highly Likely
2. Financial resources	The project succeeded in leveraging additional financial support (co-financing) to sustain some its activities. The creation of Meteo Rwanda has created chances of generating income by the climate information provider as a way of sustaining the investments by the project. Rwanda has also put in place a climate fund - FONERWA - which can locally finance climate change activities. However there is need for follow up funding to upscale project achievements.	3.4.2	Moderately Likely
3. Institutional framework	The project built strong partnerships with a number of government institutions, districts, communities and farmer cooperatives. However engagement with NGOs was inadequate. Strengthening the capacity of REMA, Meteo Rwanda, Districts and farmers cooperatives will ensure the continuation of project outcomes i.e. provision of climate information and early warning, incorporating climate change in policies and plans, implementing adaptations actions.	3.4.3	Likely
4. Environmental sustainability	Identification and implementation of adaptation projects, including land rehabilitation, promotes environmental sustainability. Up-scaling and replicating EWS and adaptation actions will greatly promote environmental sustainability in the whole of Rwanda. However increased population growth could create pressures on natural resources and ecosystems that could potentially undermine ecological sustainability.	3.4.4	Highly Likely
5. Catalytic role and replication	The project has raised climate change awareness and increased confidence in climate information and EWS. The implementation of land rehabilitation and adaptation projects in communities has demonstrated the benefits of promoting climate resilient activities. The project has produced a number of lessons and best practices as well as tools and documentaries that will facilitate replication. Examples of replication are already evident, but greater support and financial resources are required for scaling up.	3.4.5	Satisfactory
E. Efficiency	A number of cost efficient measures were adopted during implementation. The cost efficiency was good which resulted in achievement of project results within the planned budget and time frame, supported by the high level of ownership. Though the project experienced unnecessary delays in its initial stage, remedial measures were put in place after the MTR that fast tracked the project implementation to high	3.5	Satisfactory

Criterion	Summary Assessment	Ref.	Rating
	level success.		
F. Factors affecting project performance		3.6	
1. Preparation and readiness	The project implementation experienced initial delays serious delays caused by institutional factors like delay in putting in place the SPIU, delays in procurement and recruitment of project staff. However, after the MTR, project implementation was on track and almost all the project activities were completed in time, with the few remaining in progress and will be completed by end of June 2015. The project's log-frame was well designed and detailed. However some project targets had to be modified after a baseline study.	3.6.1	Satisfactory
2. Project implementation and management	The implementation approach was highly effective and the project went fairly smoothly. Adaptive management measures were taken when needed to ensure that the project remained on track. However, complications in implementation arrangement created by having to IAs (UNEP and UNDP) which operated different reporting mechanisms put enormous pressure on the project team at REMA.	3.6.2	Satisfactory
3. Stakeholders participation, cooperation and partnerships	A participatory approach was used, and wide range of stakeholders, from local communities to districts and national government were involved in project execution implementation or were targeted for capacity building. However NGOs participation in the project was minimal limited to representation on the PSC. Considerable effort went into public awareness raising on climate change, EWS, disaster preparedness and implementation of adaptation practices on the ground.	3.6.3	Satisfactory
4. Communication and public awareness	Significant effort went into raising public awareness and mobilising stakeholders to implement project activities. A range of communication material was prepared including documentaries and training materials. Public awareness workshops were convened and demonstrations of adaptation practices conducted. A website/portal was put in place to disseminate project achievements and success stories. Clear communication between PMU, partners and beneficiaries was key in the project success.	3.6.4	Highly Satisfactory
5. Country ownership and drivenness	The project responded to country needs for reducing vulnerability and increased resilience. As a result there was a high level of country ownership and drivenness.	3.6.5	Highly Satisfactory
6. Financial planning and management	Financial planning and management was in accordance with UNEP's and UNDP's requirements. The reporting was good, although two separate reporting's were done to UNEP and UNDP. There were no irregularities noted.	3.6.6	Highly Satisfactory
7. Supervision, guidance and technical backstopping	Both UNEP and UNEP played an adequate role in supervision and backstopping with great team commitment. No major issues in project implementation and execution were encountered.	3.6.7	Highly Satisfactory
8. Monitoring and evaluation	The overall rating on M&E is based on rating for M&E Implementation.	3.6.8	Highly Satisfactory
i. M&E design	The M&E was designed according to UNEP's standard M&E procedures. The project log frame included SMART indicators.	3.6.8	Highly Satisfactory
ii. M&E plan implementation	There was regular monitoring of progress against indicators, reporting and documenting lessons learned. A dedicated M&E officer was provided through the SPIU. A MTR was and recommendations implemented.	3.6.8	Highly Satisfactory
Overall project rating			Satisfactory

4.2 Recommendations

The following is a presentation of the main recommendations that have been generated from the evaluation findings:

Context	The project has created a considerable interest and confidence in early warning systems and disaster preparedness systems for use in adaptation planning and decision making. It has also generated useful lessons and best practices regarding EWS and adaptation interventions that need to be up scaled and replicated (Sections 3.3.2 - Likelihood of impacts, and 3.4.5 - Catalytic role and replication).
Recommendation 1:	**There is need for follow up activities to replicate and upscale the project results to the whole country, but this requires a follow-up phase or project. Strengthening the capacity of Meteo Rwanda (meteorological services) to generate income through sale of climate information is one of the avenues of ensuring financial sustainability of Rwanda's EWS.**
Responsibility	GOR, and other partners .
Time Frame	Design of follow up projects and capacity building at Meteo Rwanda to generate income
Context	There was a lot of community interest, response and adoption of adaptation interventions piloted. However the piloted adaptation interventions are still on a limited scale and in a few communities and cooperatives and are not yet rolled out (Section 3.4.5 - Catalytic role and replication).
Recommendation 2:	**The government should integrate community based adaptation into broader development programmes in which the needs of the most vulnerable communities are addressed. Community adaptation projects could be developed by districts, communities and cooperatives, and funding could be got through the FONERWA funding window, the Adaptation Fund and the GCF, since Rwanda is already accredited by the GCF). The private sector could also be encouraged and supported to engage actively in the design and implementation of community based adaptation projects.**
Responsibility:	Government of Rwanda and the Private Sector
Time-frame	Design and follow up projects
Context	The likelihood for project sustainability is high. However there is neither a follow up project or exit strategy to ensure that the project benefits are not lost after the expiry of the project (Section 3.4 - sustainability and replication).
Recommendation 3:	**Implementation of follow up projects is very necessary to build on the achievements and partnerships built by the project. Strengthening FONERWA through resource mobilisation and increased financing (from the GCF, AF and other bilateral partners) is one in which Rwanda could finance adaptation projects that increase climate resilience. In addition, mainstreaming EWS and climate change adaptation in sectoral plans, local development plans and budgets could provide national funding to scale up the project results and other adaptation interventions.**
Responsibility:	GOR, Local Governments, GEF, UNEP and UNDP
Time-frame	Design and implementation of follow-up projects.

4.3 Lessons Learned

The following key lessons learned emerged in the implementation of the project:

Context	The Theory of Change (TOC) approach was not yet in use during the project design phase and was not used in the planning and implementation of the projects. The logical framework approach was the tool used to represent the project's causality and guide project planning, management and monitoring. (Sections 1.4.1 - Evaluation Limitations, and 2.9 - Reconstructed TOC)). Both the TOC and logic models can improve project design but in different ways. The TOC is a causal model that illustrates how and why desired outcomes and impacts are expected to come about, including the preconditions necessary for this to occur.
Lesson 1	**The TOC approach is a useful tool for articulating the key drivers and assumptions, and explaining the causal relationship between intended actions, outputs, outcomes, intermediate states and impact of projects. In order to depict the causal pathways from outputs to outcomes over intermediate states towards impact, it is ideal that the TOC be envisaged at the project design stage.**
Application	UNEP project design
Context	The project operated alongside other organisations, sectors, programmes and initiatives on the Rwanda climate change landscape, to contribute towards climate change resilience. Therefore, attribution by tracing back change to the project's specific outputs beyond immediate outcomes is difficult because of the many actors and programmes in the country that are contributing to the intended impact i.e. increased climate resilience. Impact cannot be attributed to one intervention (Sections 1.4.1 Evaluation Limitations and 3.3.2 Likelihood of impact)
Lesson 2	**Since the desired impact of increased climate resilience cannot be attributed to one intervention (a single project), outcome mapping, from project design to implementation and M&E, should not only focus on measuring behavioural changes exhibited by primary and secondary beneficiaries but also on attribution and contribution of other actors and programmes on behavioural change exhibited by the beneficiaries.**
Application	Design and implementation of projects
Context	The project was largely successful because it was country driven, aligned to the country's climate change and development needs and priorities, and implemented with the existing institutional frameworks that ensured a strong coordination and management mechanism (Section 3.1.4 - Relevance to national development and environmental needs and priorities).
Lesson 3	**Engagement of a cross-section of stakeholders, including local communities and beneficiaries, is important for the successful implementation of projects in which the long term impact is highly dependent on their actions.**
Application:	Building partnerships (during project design and implementation) that are essential to enhancing adaptive capacity and reduced vulnerability to climate change.
Context	The project's major approach to reducing vulnerability was using a 'learning-by-doing' approach and demonstrations, by directly involving technical staff, extension workers,

	district officials, communities and farmer cooperatives in the piloting and demonstration of climate change adaptation actions and strategies. The implementation of adaptation interventions using community based approaches translated into a strong sense of ownership (Sections 3.1.4 relevance to national development needs, 3.2.3 Component 3 - reduction in the impacts of floods and droughts, and 3.2.4 Component 4 - knowledge of good practices).
Lesson 4:	**'Learning-by-doing' capacity building approaches result in greater ownership of project results and impact.**
Application	Implementation of capacity building project activities and demonstrations.
Context	The project had two Implementing Agencies (UNEP and UNDP). This was advantageous in that the project implementation benefited from the **comparative advantages of the two IAs. In addition given that UNEP is not a resident agency but UNDP is, the resident agency supervise and monitor project implementation which resulted in excellent results. However each of the IAS** had different reporting formats and mechanisms (report templates and matrices) that complicated project management. The EA/project team had to report separately to UNEP and UNDP which was time and resource consuming. Complications also were also experienced by the EA in decision making and adaptive management (Sections 3.6.2 project implementation and management, 3.6.6 financial planning and management).
Lesson 5	**Implementation of projects with more than one Implementing Agencies, though beneficial, requires harmonization of reporting and financing systems, so that the Executing Agency has a single reporting mechanism to the various Implementing Agencies to ease project management.**
Application	Design and implementation of all UNEP projects.
Context	The project produced a documentary film that documented, among others the project achievements. The documentary was put on DVD and distributed to PSC members and the wider public and is also available on YouTube and this makes it accessible to the wider public. The documentary serves to demonstrate lessons learned for further activities addressing climate change adaptation. This method was found to be very effective and other projects hosted by REMA are deploying it (Section 2.6.4 communication and public awareness)
Lesson 6	**Documentaries (films) with innovative and concrete activities are an effective mechanism for demonstration and transmission of knowledge and good practice to stakeholders of all categories. However they need to be disseminated widely to the public.**
Application	Implementation of UNEP projects
Context	The project conducted two studies - "The assessment of economic impacts of the 2012 wet season flooding in Rwanda", and "The Development of a baseline and impact of the LDCF project on biophysical and chemical indicators and socio-economic situation of the project area". These did not inform or influence the implementation of the project activities and outputs and achievement of project outcomes (Section 3.3.1 - Achievement of direct outcomes).
Lesson 7	**During project implementation, only those planned activities/studies or those that have a direct link to project outcomes and impact should be implemented in an effort towards maximising the efficient use of available resources.**
Application	Project design and implementation.

5 ANNEXES

ANNEX I. TERMS OF REFERENCE FOR THE EVALUATION

1. Objective and Scope of the Evaluation

1. In line with the UNEP Evaluation Policy[45] and the UNEP Evaluation Manual[46], the Terminal Evaluation is undertaken at completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP, UNDP and REMA. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation and will provide recommendations for the planned second phase of the project.

2. It will focus on the following sets of **key questions**, based on the project's intended outcomes, which may be expanded by the consultants as deemed appropriate:

i. Is there a functional Early Warning System in operation in Gishwati ecosystem?

ii. Have climate change risks been incorporated in Nyabihu district development planning?

iii. Is it likely that the adverse effects of floods will be reduced in the project area as a result of project outputs and outcomes?

iv. Has the level of knowledge of good practices to reduce vulnerability to climate change improved amongst the key project stakeholders and at the national level as a result of project activities?

v. Has the project made a significant contribution to the likelihood of improved climate change risk and flood disaster preparedness in Gishwati ecosystem, and at a national level?

vi. To what degree have technical outputs such as the socioeconomic and communication studies contributed to the project outputs, outcomes and objective? Were they valuable to other stakeholders beyond the immediate project?

vii. In addition the consultant should explore and comment on the value of the UNEP/UNDP co-implementation arrangements

2. Overall Approach and Methods

3. The Terminal Evaluation of the Project will be conducted by independent consultants under the overall responsibility and management of the UNEP Evaluation Office in consultation with the UNEP and UNDP Regional Office and the National Project Coordinator.

4. It will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation methods will be used to determine project achievements against the expected outputs, outcomes and impacts. It is highly recommended that the consultant(s) maintains close communication with the project team throughout the evaluation implementation phase in order to increase their ownership of the evaluation findings.

5. The findings of the evaluation will be based on the following:

(a) A **desk review** of:

- Relevant background documentation and Baseline studies.
- Project design documents; Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), the logical framework and its budget;
- Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence etc.;
- Technical reports e.g. UK Met reports on EWS, socioeconomic study, communication strategy.
- CTA Mission reports.
- Project outputs (films, dissemination materials, EWS reports etc.)
- MTR or MTE of the project
- Reports from key technical outputs: biophysical indicators, vulnerability capacity assessment and gender studies.

(b) **Interviews (individual or in group) with**:

UNEP and UNDP Task Managers

Project management team

UNEP and UNDP Fund Management Officer;

[45] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx

[46] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationManual/tabid/2314/language/en-US/Default.aspx

Project partners and key stakeholders.

(c) **Field visits** to project implementation sites in the following districts: Nyabihu, Rubavu, Ngororero and Rutsiro)

(d) **Other data collection tools** - Data collection tools will be determined by the Evaluation team as part of the inception report development.

3. Key Evaluation principles

6. Evaluation findings and judgements should be based on **sound evidence and analysis**, clearly documented in the evaluation report. Information will be triangulated (i.e. verified from different sources) to the extent possible, and when verification was not possible, the single source will be mentioned. Analysis leading to evaluative judgements should always be clearly spelled out.

7. The evaluation will assess the project with respect to **a minimum set of evaluation criteria** grouped in six categories: (1) Strategic Relevance; (2) Attainment of objectives and planned result, which comprises the assessment of outputs achieved, effectiveness and likelihood of impact; (3) Sustainability and replication; (4) Efficiency; (5) Factors and processes affecting project performance, including preparation and readiness, implementation and management, stakeholder participation and public awareness, country ownership and driven-ness, financial planning and management, UNEP supervision and backstopping, and project monitoring and evaluation; and (6) Complementarity with the UNEP strategies and programmes. The evaluation consultants can propose other evaluation criteria as deemed appropriate.

8. **Ratings.** All evaluation criteria will be rated on a six-point scale. However, complementarity of the project with the UNEP strategies and programmes is not rated. Annex 3 provides guidance on how the different criteria should be rated and how ratings should be aggregated for the different evaluation criterion categories.

9. In attempting to attribute any outcomes and impacts to the project, the evaluators should consider the difference between *what has happened with and what would have happened without the project*. This implies that there should be consideration of the baseline conditions and trends in relation to the intended project outcomes and impacts. This also means that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project. Sometimes, adequate information on baseline conditions and trends is lacking. In such cases this should be clearly highlighted by the evaluators, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

10. As this is a terminal evaluation but a follow-up project is planned, particular attention should be given to learning from the experience. Therefore, the "*Why?*" question should be at front of the consultants' minds all through the evaluation exercise. This means that the consultants need to go beyond the assessment of "*what*" the project performance was, and make a serious effort to provide a deeper understanding of "*why*" the performance was as it was, i.e. of processes affecting attainment of project results (criteria under category F – see below). This should provide the basis for the lessons that can be drawn from the project. In fact, the usefulness of the evaluation will be determined to a large extent by the capacity of the consultants to explain "*why things happened*" as they happened and are likely to evolve in this or that direction, which goes well beyond the mere review of "*where things stand*" at the time of evaluation.

11. A key aim of the evaluation is to encourage reflection and learning by UNEP and UNDP staff and key project stakeholders. The consultant should consider how reflection and learning can be promoted, both through the evaluation process and in the communication of evaluation findings and key lessons.

12. Once the consultant(s) has obtained evaluation results, the evaluation office will share the findings and lessons with the key stakeholders. Evaluation results should be communicated to the key stakeholders in a brief and concise manner that encapsulates the evaluation exercise in its entirety. There may however be several intended audiences, each with different interests and preferences regarding the report. The Evaluation Manager will plan with the consultant(s) what audiences to target and the easiest and clearest way to communicate the key evaluation findings and lessons to them. This may include a webinar, and/or conference calls with relevant stakeholders.

4. Evaluation criteria

5. 4.1.1 Strategic relevance

13. The evaluation will assess, in retrospect, whether the project's objectives and implementation strategies were consistent with global, regional and national environmental issues and needs. The evaluation should assess the project's alignment with UNEP and UNDP's policies and strategies. The evaluation should provide a brief narrative of the following:

- *Alignment with the Bali Strategic Plan (BSP)*[47]. The outcomes and achievements of the project should be briefly discussed in relation to the objectives of the UNEP BSP.
- *Gender balance*. Ascertain to what extent project design, implementation and monitoring have taken into consideration: (i) possible gender inequalities in access to and the control over natural resources; (ii) specific vulnerabilities of women and children to environmental degradation or disasters; and (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation. Appreciate whether the intervention is likely to have any lasting differential impacts on gender equality and the relationship between women and the environment. To what extent do unresolved gender inequalities affect sustainability of project benefits?
- *Human rights based approach (HRBA) and inclusion of indigenous peoples issues, needs and concerns*. Ascertain to what extent the project has applied the UN Common Understanding on HRBA. Ascertain if the project is in line with the UN Declaration on the Rights of Indigenous People, and pursued the concept of free, prior and informed consent.

[47] http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf

- *South-South Cooperation.* This is regarded as the exchange of resources, technology, and knowledge between developing countries. Briefly describe any aspects of the project that could be considered as examples of South-South Cooperation.

14. The evaluation will also assess the project's relevance in regards UNEP's mandate and alignment with UNEP's policies and strategies at the time of project approval. UNEP's Medium Term Strategy (MTS) is a document that guides UNEP's programme planning over a four-year period. It identifies UNEP's thematic priorities, known as Sub programmes (SP), and sets out the desired outcomes of the SPs, also known as Expected Accomplishments (EAs). The evaluation will assess whether the project makes a tangible contribution to any of the EAs specified in the MTS (2010 – 2014). The magnitude and extent of any contributions and the causal linkages should be fully described.

15. The evaluation should assess the project's alignment with UNEP's policies and strategies. The evaluation should provide a brief narrative of the following:

16. It will further assess whether the project was in line with the GEF [name] focal area , strategic priorities and operational programme(s).

17. Based on an analysis of project stakeholders, the evaluation should assess the relevance to key stakeholder groups.

4.1.2 Achievement of Outputs

18. The evaluation will assess, for each component, the project's success in producing the programmed outputs and milestones as presented in Table 2 above, both in quantity and quality, as well as their usefulness and timeliness.

19. Briefly explain the reasons behind the success (or failure) of the project in achieving its different outputs and meeting expected quality standards, cross-referencing as needed to more detailed explanations provided under Section F (which covers the processes affecting attainment of project results).

20. Have key stakeholders been appropriately involved in producing the programmed outputs?

4.1.3 Effectiveness: Attainment of Objectives and Planned Results

21. The evaluation will assess the extent to which the project's objectives were effectively achieved or are expected to be achieved.

22. The ToC of a project depicts the causal pathways from project outputs (goods and services delivered by the project) through outcomes (changes resulting from the use made by key stakeholders of project outputs) towards impact (long term changes in environmental benefits and living conditions). The ToC will also depict any intermediate changes required between project outcomes and impact, called 'intermediate states'. The ToC further defines the external factors that influence change along the major pathways, whether one result can lead to the next. These external factors are either drivers (when the project has a certain level of control) or assumptions (when the project has no control). It also clearly identifies the main stakeholders involved in the change processes.

23. The evaluation will reconstruct the **Theory of Change (ToC)** of the project based on a review of project documentation and stakeholder interviews. The consultant will be expected to discuss the reconstructed TOC with the stakeholders during evaluation missions and/or interviews in order to ascertain the causal pathways identified and the validity of impact drivers and assumptions described in the TOC. This exercise will also enable the consultant to solve some of the key evaluation questions and make adjustments to the TOC as would be found appropriate.

24. The assessment of effectiveness will be structured in three sub-sections:

(a) Evaluation of the **achievement of outcomes as defined in the reconstructed ToC**. These are the first-level outcomes expected to be achieved as an immediate result of project outputs. For this project, the main question will be to what extent the project has contributed to the three project components.

(b) Assessment of the **likelihood of impact** using a Review of Outcomes to Impacts (ROtI) approach[48]. The evaluation will assess to what extent the project has to date contributed, and is likely in the future to further contribute, to the intermediate states identified in the theory of change.

(c) Evaluation of the **achievement of the formal project overall objective, overall purpose, goals and component outcomes** using the project's own results statements as presented in the Project Document. This sub-section will refer back where applicable to the preceding sub-sections (a) and (b) to avoid repetition in the report. To measure achievement, the evaluation will use as much as appropriate the indicators for achievement proposed in the Logical Framework (Logframe) of the project, adding other relevant indicators as appropriate. Briefly explain what factors affected the project's success in achieving its objectives, cross-referencing as needed to more detailed explanations provided under Section F.

(d) The evaluation should disaggregate outcomes and impacts for the key project stakeholders.

4.1.4 Sustainability and replication

25. Sustainability is understood as the probability of continued long-term project-derived results and impacts after the external project funding and assistance ends. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of benefits. Some of these factors might be direct results of the project while others will include contextual

[48] Guidance material on Theory of Change and the ROtI approach is available from the Evaluation Office.

circumstances or developments that are not under control of the project but that may condition the sustainability of benefits. The evaluation will ascertain that the project has put in place an appropriate exit strategy and measures to mitigate risks to sustainability. The evaluation should ascertain to what extent follow-up work has been initiated and how project results will be sustained and enhanced over time. The reconstructed ToC will assist in the evaluation of sustainability, as the drivers and assumptions required to achieve higher-level results are often similar to the factors affecting sustainability of these changes.

26. Four aspects of sustainability will be addressed:

(a) *Socio-political sustainability.* Are there any social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts? Is the level of ownership by the main stakeholders sufficient to allow for the project results to be sustained? Are there sufficient government and other key stakeholder awareness, interests, commitment and incentives to [add as relevant]? Did the project conduct succession planning and implement this during the project life? Was capacity building conducted for key stakeholders?

(b) *Financial resources.* To what extent are the continuation of project results and the eventual impact of the project dependent on financial resources? What is the likelihood that adequate financial resources [49] will be or will become available to use capacities built by the project? Are there any financial risks that may jeopardize sustenance of project results and onward progress towards impact?

(c) *Institutional framework.* To what extent is the sustenance of the results and onward progress towards impact dependent on issues relating to institutional frameworks and governance? How robust are the institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. required to sustaining project results and to lead those to impact on human behaviour and environmental resources?

(d) *Environmental sustainability.* Are there any environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits? Are there any foreseeable negative environmental impacts that may occur, as the project results are being up-scaled?

27. **Catalytic role and replication**. The *catalytic role* of UNEP interventions is embodied in their approach of supporting the creation of an enabling environment and of investing in pilot activities which are innovative and showing how new approaches can work. UNEP also aims to support activities that upscale new approaches to a national, regional or global level, with a view to achieve sustainable global environmental benefits. The evaluation will assess the catalytic role played by this project, namely to what extent the project has:

(a) *catalyzed behavioural changes* in terms of use and application by the relevant stakeholders of capacities developed;

(b) provided *incentives* (social, economic, market based, competencies etc.) to contribute to catalyzing changes in stakeholder behaviour;

(c) contributed to *institutional changes*, for instance institutional uptake of project-demonstrated integrated environmental assessment approaches;

(d) contributed to *policy changes* (on paper and in implementation of policy);

(e) contributed to sustained follow-on financing (*catalytic financing*) from Governments, private sector, donors etc.;

(f) created opportunities for particular individuals or institutions ("*champions*") to catalyze change (without which the project would not have achieved all of its results).

28. *Replication* is defined as lessons and experiences coming out of the project that are replicated (experiences are repeated and lessons applied in different geographic areas) or scaled up (experiences are repeated and lessons applied in the same geographic area but on a much larger scale and funded by other sources). The evaluation will assess the approach adopted by the project to promote replication effects and determine to what extent actual replication has already occurred or is likely to occur in the near future. What are the factors that may influence replication and scaling up of project experiences and lessons?

6. Efficiency

29. The evaluation will assess the cost-effectiveness and timeliness of project execution. It will describe any cost- or time-saving measures put in place in attempting to bring the project as far as possible in achieving its results within its (severely constrained) secured budget and (extended) time. It will also analyse how delays, if any, have affected project execution, costs and effectiveness. Wherever possible, costs and time over results ratios of the project will be compared with that of other similar interventions. Evaluations/reviews of other large assessments may provide some comparative information on efficiency.

30. The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency. For instance, the evaluation will consider how well other information sources (on global and regional environmental status and trends, and on the costs and benefits of different policy options) accessible to the different target audiences have been tapped, and how the project ensured the complementarity of its process and products to other assessment processes and information sources, to avoid duplication of efforts? Was there sufficient information about the assessment capacity of collaborating institutions and experts and about other capacity building initiatives, to limit and target training and technical support to what was really needed, avoiding duplication?

7.

8. Factors and processes affecting project performance

[49] Those resources can be from multiple sources, such as the national budget, public and private sectors, development assistance etc.

31. **Preparation and readiness**. This criterion focuses on the quality of project design and preparation. Were project stakeholders [50] adequately identified and were they sufficiently involved in project development and ground truthing e.g. of proposed time frame and budget? Were the project's objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing agencies properly considered when the project was designed? Was the project document clear and realistic to enable effective and efficient implementation? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities) and enabling legislation assured? Were adequate project management arrangements in place? Were lessons from other relevant projects properly incorporated in the project design? What factors influenced the quality-at-entry of the project design, choice of partners, allocation of financial resources etc.?

32. **Project implementation and management**. This includes an analysis of implementation approaches used by the project, its management framework, the project's adaptation to changing conditions (adaptive management), the performance of the implementation arrangements and partnerships, relevance of changes in project design, and overall performance of project management. The evaluation will:

(a) Ascertain to what extent the project implementation mechanisms outlined in the project document have been followed and were effective in delivering project milestones, outputs and outcomes. Were pertinent adaptations made to the approaches originally proposed?

(b) Evaluate the effectiveness and efficiency of project management and how well the management was able to adapt to changes during the life of the project.

(c) Assess the role and performance of the teams and working groups established and the project execution arrangements at all levels.

(d) Assess the extent to which project management responded to direction and guidance provided by the UNEP Task Manager and project steering bodies.

(e) Identify operational and political / institutional problems and constraints that influenced the effective implementation of the project, and how the project partners tried to overcome these problems. How did the relationship between the project management team and the collaborating partners (institutions and individual experts) develop?

33. **Stakeholder participation and public awareness**. The term stakeholder should be considered in the broadest sense, encompassing both project partners and target users (such as [list]) of project products. The TOC and stakeholder analysis should assist the evaluators in identifying the key stakeholders and their respective roles, capabilities and motivations in each step of the causal pathway from activities to achievement of outputs, outcomes and intermediate states towards impact. The assessment will look at three related and often overlapping processes: (1) information dissemination to and between stakeholders, (2) consultation with and between stakeholders, and (3) active engagement of stakeholders in project decision making and activities. The evaluation will specifically assess:

(a) the approach(es) used to identify and engage stakeholders (within and outside UNEP) in project design and implementation.

What were the strengths and weaknesses of these approaches with respect to the project's objectives and the stakeholders' motivations and capacities? Were there mechanisms in place to enable stakeholders to participate in project, implementation and monitoring? What was the achieved degree and effectiveness of collaboration and interactions between the various project partners and stakeholders during design and implementation of the project? (This should be disaggregated for the main stakeholder groups identified in the inception report).

(b) The degree and effectiveness of any public awareness activities that were undertaken during the course of implementation of the project to communicate the project's objective, progress, outcomes and lessons. (this should be disaggregated for the main stakeholder groups identified in the inception report). Did the project identify and make us of existing communication channels and networks used by key stakeholders? Did the project provide feedback channels?

(c) Do the results of the project (strategic programmes and plans, monitoring and management systems, sub-regional agreements etc.) promote participation of stakeholders, including users, in decision making.

34. **Country ownership and driven-ness.** The evaluation will assess the performance of government agencies involved in the project, participants to the Intergovernmental and Multi-stakeholder Consultation and High Level Intergovernmental Advisory Panel in particular:

(a) To what extent have Governments assumed responsibility for the project and provided adequate support to project execution, including the degree of cooperation received from the various public institutions involved in the project?

(b) How well did the project stimulate country ownership of project outputs and outcomes ?

(c) [Any other project-specific questions]

35. **Financial planning and management**. Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime. The assessment will look at actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co-financing. The evaluation will:

(a) Verify the application of proper standards (clarity, transparency, audit etc.) and timeliness of financial planning, management and reporting to ensure that sufficient and timely financial resources were available to the project and its partners;

(b) Assess other administrative processes such as recruitment of staff, procurement of goods and services (including consultants), preparation and negotiation of cooperation agreements etc. to the extent that these might have influenced project performance;

[50] Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or 'stake' in the outcome of the project. The term also applies to those potentially adversely affected by the project.

(c) Present the extent to which co-financing has materialized as expected at project approval (see Table 1). Report country co-financing to the project overall, and to support project activities at the national level in particular. The evaluation will provide a breakdown of final actual costs and co-financing for the different project components (see tables in Annex 4).

(d) Describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective. Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector.

36. Analyse the effects on project performance of any irregularities in procurement, use of financial resources and human resource management, and the measures taken UNEP to prevent such irregularities in the future. Determine whether the measures taken were adequate.

37. **Supervision, guidance and technical backstopping.** The purpose of supervision is to verify the quality and timeliness of project execution in terms of finances, administration and achievement of outputs and outcomes, in order to identify and recommend ways to deal with problems which arise during project execution. Such problems may be related to project management but may also involve technical/institutional substantive issues in which UNEP has a major contribution to make.

38. The evaluators should assess the effectiveness of supervision, guidance and technical support provided by the different supervising/supporting bodies including:

(a) The adequacy of project supervision plans, inputs and processes;

(b) The realism and candour of project reporting and the emphasis given to outcome monitoring (results-based project management);

(c) How well did the different guidance and backstopping bodies play their role and how well did the guidance and backstopping mechanisms work? What were the strengths in guidance and backstopping and what were the limiting factors?

39. **Monitoring and evaluation**. The evaluation will include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The evaluation will assess how information generated by the M&E system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensuring sustainability. M&E is assessed on three levels:

(a) *M&E Design*. The evaluators should use the following questions to help assess the M&E design aspects:

- Did the project have a sound M&E plan to monitor results and track progress towards achieving project objectives?
- How well was the project logical framework (original and possible updates) designed as a planning and monitoring instrument?
- SMART-ness of indicators: Are there specific indicators in the log frame for each of the project objectives? Are the indicators measurable, attainable (realistic) and relevant to the objectives? Are the indicators time-bound?
- Adequacy of baseline information: To what extent has baseline information on performance indicators been collected and presented in a clear manner? Was the methodology for the baseline data collection explicit and reliable? For instance, was there adequate baseline information on pre-existing accessible information on global and regional environmental status and trends, and on the costs and benefits of different policy options for the different target audiences? Was there sufficient information about the assessment capacity of collaborating institutions and experts etc. to determine their training and technical support needs?
- Arrangements for monitoring: Have the responsibilities for M&E activities been clearly defined? Were the data sources and data collection instruments appropriate? Was the time frame for various M&E activities specified? Was the frequency of various monitoring activities specified and adequate? To what extent did the project engage key stakeholders in the design and implementation of monitoring? Which stakeholders (from groups identified in the inception report) were involved? If any stakeholders were excluded, what was the reason for this?
- Arrangements for evaluation: Have specific targets been specified for project outputs? Has the desired level of achievement been specified for all indicators of objectives and outcomes? Were there adequate provisions in the legal instruments binding project partners to fully collaborate in evaluations?
- Budgeting and funding for M&E activities: Determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.

(b) *M&E Plan Implementation*. The evaluation will verify that:

- The M&E system was operational and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period;
- Half-yearly Progress & Financial Reports were complete and accurate;
- The information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs.

The Consultants' Team

For this evaluation, the evaluation team will consist of a Team Leader and one Supporting Consultant. Details about the specific roles and responsibilities of the team members are presented in Annex 1 of these TORs. The Team Leader should have extensive evaluation experience, including using a Theory of Change approach. The Supporting Consultant will have a solid environmental education and professional experience; adequate monitoring and evaluation experience. Between them, the team members should have skills and experience in meteorology, hydrology, socioeconomics, policy analysis, information and communication.

40. The Team Leader will coordinate data collection and analysis, and the preparation of the main report for the evaluation, with substantive contributions by the Supporting Consultant. Both consultants will ensure together that all evaluation criteria and questions are adequately covered.

41. By undersigning the service contract with UNEP/UNON, the consultants certify that they have not been associated with the design and implementation of the project in any way which may jeopardize their independence and impartiality towards project achievements and project partner performance. In addition, they will not have any future interests (within six months after completion of the contract) with the project's executing or implementing units.

Evaluation Deliverables and Review Procedures

42. The evaluation team will prepare an **inception report** (see Annex 2(a) of TORs for Inception Report outline) containing a thorough review of the project context, project design quality, a draft reconstructed Theory of Change of the project, the evaluation framework and a tentative evaluation schedule.

43. It is expected that a large portion of the desk review will be conducted during the inception phase. It will be important to acquire a good understanding of the project context, design and process at this stage. The review of design quality will cover the following aspects (see Annex 7 for the detailed project design assessment matrix):

- Strategic relevance of the project
- Preparation and readiness;
- Financial planning;
- M&E design;
- Complementarity with UNEP strategies and programmes;
- Sustainability considerations and measures planned to promote replication and up-scaling.

44. The inception report will present a draft, desk-based reconstructed Theory of Change of the project. It is vital to reconstruct the ToC *before* most of the data collection (review of progress reports, in-depth interviews, surveys etc.) is done, because the ToC will define which direct outcomes, drivers and assumptions of the project need to be assessed and measured – based on which indicators – to allow adequate data collection for the evaluation of project effectiveness, likelihood of impact and sustainability.

45. The inception report will also include a stakeholder analysis identifying key stakeholders, networks and channels of communication. This information should be gathered from the Project document and discussion with the project team.

46. The evaluation framework will present in further detail the overall evaluation approach. It will specify for each evaluation question under the various criteria what the respective indicators and data sources will be. The evaluation framework should summarize the information available from project documentation against each of the main evaluation parameters. Any gaps in information should be identified and methods for additional data collection, verification and analysis should be specified. Evaluations/reviews of other large assessments can provide ideas about the most appropriate evaluation methods to be used.

47. Effective communication strategies help stakeholders understand the results and use the information for organisational learning and improvement. While the evaluation is expected to result in a comprehensive document, content is not always best shared in a long and detailed report; this is best presented in a synthesised form using any of a variety of creative and innovative methods. The evaluator is encouraged to make use of multimedia formats in the gathering of information e.g. video, photos, sound recordings. Together with the full report, the evaluator will be expected to produce a 2-page summary of key findings and lessons.

48. The inception report will also present a tentative schedule for the overall evaluation process, including a draft programme for the country visit and tentative list of people/institutions to be interviewed.

49. The inception report will be submitted for review and approval by the Evaluation Office before the any further data collection and analysis is undertaken.

50. [Optional] When data collection and analysis has almost been completed, the evaluation team will prepare a short **note on preliminary findings and recommendations** for discussion with the project team and the Evaluation Reference Group. The purpose of the note is to allow the evaluation team to receive guidance on the relevance and validity of the main findings emerging from the evaluation.

51. **The main evaluation report** should be brief (no longer than 40 pages – excluding the executive summary and annexes), to the point and written in plain English. The report will follow the annotated Table of Contents outlined in Annex 2. It must explain the purpose of the evaluation, exactly what was evaluated and the methods used (with their limitations). The report will present evidence-based and balanced findings, consequent conclusions, lessons and recommendations, which will be cross-referenced to each other. The report should be presented in a way that makes the information accessible and comprehensible. Any dissident views in response to evaluation findings will be appended in footnote or annex as appropriate. To avoid repetitions in the report, the authors will use numbered paragraphs and make cross-references where possible.

52. **Review of the draft evaluation report**. The evaluation team will submit a zero draft report to the UNEP EO and revise the draft following the comments and suggestions made by the EO. Once a draft of adequate quality has been accepted, the EO will share this first draft report with the Task Manager, who will alert the EO in case the report would contain any blatant factual errors. The Evaluation Office will then forward the first draft report to the other project stakeholders, in particular [list] for their review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. It is also very important that stakeholders provide feedback on the proposed recommendations and lessons. Comments would be expected within two weeks after the draft report has been shared. Any comments or responses to the draft report will be sent to the UNEP EO for collation. The EO will provide the comments to the evaluation team for consideration in preparing the final draft report, along with its own views.

53. The evaluation team will submit the final draft report no later than 2 weeks after reception of stakeholder comments. The team will prepare a **response to comments**, listing those comments not or only partially accepted by them that could therefore not or only partially be accommodated in the final report. They will explain why those comments have not or only partially been accepted, providing evidence as required. This response to comments will be shared by the EO with the interested stakeholders to ensure full transparency.

54. **Submission of the final evaluation report.** The final report shall be submitted by Email to the Head of the Evaluation Office. The Evaluation Office will finalize the report and share it with the interested Divisions and Sub-programme Coordinators in UNEP. The final evaluation report will be published on the UNEP Evaluation Office web-site www.unep.org/eou.

55. As per usual practice, the UNEP EO will prepare a **quality assessment** of the zero draft and final draft report, which is a tool for providing structured feedback to the evaluation consultants. The quality of the report will be assessed and rated against the criteria specified in Annex 3.

56. The UNEP Evaluation Office will assess the ratings in the final evaluation report based on a careful review of the evidence collated by the evaluation consultants and the internal consistency of the report. Where there are differences of opinion between the evaluator and UNEP Evaluation Office on project ratings, both viewpoints will be clearly presented in the final report. The UNEP Evaluation Office ratings will be considered the final ratings for the project.

Logistical arrangements

57. This Terminal Evaluation will be undertaken by two independent evaluation consultants contracted by the UNEP Evaluation Office. The consultants will work under the overall responsibility of the UNEP Evaluation Office and will consult with the EO on any procedural and methodological matters related to the evaluation. It is, however, the consultants' individual responsibility to arrange for their travel, visa, obtain documentary evidence, plan meetings with stakeholders, organize online surveys, and any other logistical matters related to the assignment. The UNEP Task Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the evaluation as efficiently and independently as possible.

Evaluation timeline

Milestone	Deadline
Consultant's contracts signed	1 March 2015
Inception Report finalised shared with UNEP	5 March 2015
Inception Report finalised	10 march 2015
Evaluation Mission – Rwanda	21 - 28 March 2015
Zero draft report	30 April 2015
Draft Report shared with UNEP and UNDP Task Managers	8 May 2015
Draft Report shared with stakeholders	22 May 20156
Final Report	15 June 2015

ANNEX II. RESPONSE TO STAKEHOLDER COMMENTS

This annex will be compiled and inserted in the final draft following the completion of the stakeholder review process

ANNEX III. EVALUATION PROGRAM AND STAKEHOLDERS CONSULTED

A: Rwanda LDCF EWS Project Terminal Evaluation Programme - Main Timelines

Milestone	Deadline
Consultant's contracts signed	1 March 2015
Inception Report finalized and shared within UNEP	5 March 2015
Inception Report finalized	10 March 2015
Evaluation Mission in Rwanda	21 - 28 March 2015
Zero draft report	15 May 2015
Draft Report shared with UNEP and UNDP Task Manager	20 May 2015
Draft Report shared with stakeholders	25 May 20156
Final Report	15 June 2015

B: Evaluation Program - Evaluation mission to UNEP Nairobi 9-10 March 2015 and to Rwanda 21-28 March 2015

Day, Date	Activity	Details	Responsible/ Participants
9 March	Meeting at the UNEP offices in Nairobi	Review of inception report and reconstructed TOC, agree on TE approach and methodology	Harriet Matsaert (UNEP EO)
21-22 March 2015	Travel	Evaluators travel to Rwanda	
Monday, 23rd March	Meeting with Director General (DG) and Project Team at REMA	Introducing the evaluation mission, objectives, discussion of the of project achievements	Dr. Rose Mukankomeje (DG) Mr. Alphonse Mutabazi (PM) Alphonsine Ntabana (SPIU Coordinator) Timoteo Caetano Ferreira (CT
	Meeting with UNDP Rwanda Country Office	Discussion on project implementation, achievements and lessons learned	Nanou Kone (UNEP Coordinating Officer, Rwanda) Sophie Nyirabakwiye - UNDP (Head Poverty and Environment Unit) Peter Kamau (UNDP Programme Analyst Alphonsine Munezero (UNDP Programme Associate)
	Visit of Meteo Rwanda	Evaluation of EWS put in place by the project	Anthony Twahirwa Joseph Sebasiga Ndakize Prosped Ayabagabo Marcellin Habimana
Tuesday, 24th March 2015	Field Visit to Nyabihu district	**Nyabihu:** *Meeting with District Authority, Cooperatives and visiting project sites*	Angela Mukaminani - Deputy Mayor Henry Robert Uwizeye - Env. Officer Jean Pierre Nyiramanzi Members of Cooperatives
Wednesday, 25th March	Field Visit to Rustiro District	*Meeting with District Authority, Cooperatives and visiting project sites*	Gaspard Byukusenge – Mayor Rutsiro District Bimenyimana Remy – REMA representative, Rutsiro District Claudine Mukamurenzi., Veterinary Technician Members of Cooperatives and communities
Thursday, 26th March	Visit of MIDIMAR	Meeting with MIDIMAR	Jean Baptiste Nsengiyumva, Direct DDR Habyarimana Jean, EW Officer
	Visit to MINIRENA	Meeting with MIDIMAR	Innocent Musabyimana, Director

	Visit to Rwanda Natural Resources Authority	Meeting with Rwanda Natural Resources Authority (Water Department)	Vincent de Paul Kabilisi, Deputy DG
Friday, 27th March 2015	REMA	Final meeting with LDCF Team and REMA on preliminary findings and way forward	Dr. Rose Mukankomeje (DG) Mr. Alphonse Mutabazi (PM) Alphonsine Ntabana (SPIU Coordinator)
Saturday 28th March 2015	Travel	Evaluators Departure from Rwanda	

C: Stakeholders Consulted from the UNEP - Nairobi

S.No	Names	Organization	Title
	UNEP		
1	Harriet Matsaert	UNEP	Evaluation Office
2	Pauline Marima	UNEP	Evaluation Office
3	Lars Christiansen	UNEP	Task Manager
4	Duncan Turere	UNEP	Fund Management Officer

D: **Stakeholders Consulted during the Rwanda Mission**

S.No	Names	Organization	Title	E-mail address/Phones
1	Rose Mukankomeje	REMA	Director General	dgrema@gmail.com/ +250788300208
2	Alphonse Mutabazi	REMA/Project	Project Manager	mutalph@hotmail.com +250785745057
3	Alphonsine Ntabana	REMA	Head - Single Project Implementation Unit (SPIU)	sherialphonsine@gmail.com +250788304206
4	Nicole Riziki	REMA	Project M&E Officer	nriziki@gmail.com +250788611780
5	Thiery Habimana	REMA	Project Accountant	habithi@yahoo.fr +250788847033
6	Fabrice Mugabo	REMA	Project - Sector Specialist/Climate Change	mugabofabrice@yahoo.fr
7	Nanou Kone	UNEP	UNEP Coordination Officer, Rwanda	kone.nagnouma@undp.org
8	Sophie Nyirabakwiye	UNDP Rwanda	Head of Unit - Poverty Reduction and Environment	sophie.nyirabakwiye@undp.org
9	Peter Kamau	UNDP Rwanda	Programme Analyst	kamau.ngumba@undp.org
10	Alphonsine Munezero	UNDP Rwanda	Programme Associate Poverty Reduction and Environment	Alphonsine.munezero@undp.org
11	Timoteo Caetano Ferreira	UNDP/UNEP	Project - Chief Technical Advisor	Timfer52@gmail.com
12	Anthony Twahirwa	Rwanda Meteorological Agency	Division Manager - Weather/Climate and Applications	twahirwa_anthony@yahoo.com
13	Joseph Sebasiga Ndakize	Rwanda Meteorological Agency	Forecasting Officer	sebajeef6@yahoo.fr
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15	Marcellin Habimana	Rwanda Meteorological Agency	Data Manager	nhmarcellino@yahoo.fr
16	Ngoga Gisireni Ntege	Rwanda Agricultural Board (RAB)	Head, Agroforestry Programme	ngogatenge@gmail.com
17	Bright Ntale	MINECOFIN/FONERWA	Team Leader/Programme Manager	ntarebright@yahoo.com
18	Ariane Zingiro	MINECOFIN/FONERWA	PSC Member	arianne.zingiro@gmail.com
19	Innocent Musabyimana	Ministry of Natural Resources	Director, Planning, Monitoring and Evaluation	musasebin2000@yahoo.fr
20	Vincent de Paul Kabilisa	Rwanda Natural Resources Authority	Deputy Director General, Water Resources	kabalisa@hotmail.com
21	Jean Baptiste Nsengiyumva	Ministry of Disaster Management and Refugees Affairs (MIDIMAR)	Director, Disaster Risk Reduction	jbatigol@yahoo.com
22	Jean Habyarimana	Ministry of Disaster Management and Refugees Affairs (MIDIMAR)	Early Warning Officer, Disaster Risk Reduction	jeanhabyarimana@yahoo.com
23	Henry Robert Uwizeye	REMA/Nyabihu District	Nyabihu District Environmental Affairs Officer	uwizeyehenryrobert@yahoo.com
24	Jean Pierre Nyirimanzi	RAB/Nyabihu District	Nyabihu District Agricultural Officer	ipeternzi@yahoo.fr/ +2500788806 266
25	Angela Mukaminani	Nyabihu District	Deputy Mayor - Economic Affairs	minange2020@yahoo.fr
26	Kayumba Venuste	Nyabihu District/Kotunga Cooperative	President	+250788 429822
27	Jeannette Mujawimana	Nyabihu District/Kotunya Cooperative	Treasurer	+250788 507215
28	Leonard Bizimana	COAPTKA-ABAJYANAMA Cooperative, Nyabiuhu, District, Cyamabuye, Karago Sector	Farmer/Rain gauge reader	Phone +250788752207
29	Charlotte Mukarugira	Nyabihu District/Nyirabashoni Cooperative of Farming Chickens (NCOFC)	President of the Cooperative (youth)	+250783 999571
30	Jeavine Mukamuhire	Nyabihu District/Nyirabashenyi Cooperative of Farming Chickens (NCOFC)	Member	N/A
31	Seraphin Gahizi	Nyabihu District/Nyirabashoni Cooperative of Farming Chickens (NCOFC)	Member/not a member but was on site buying mushroom	+250781511783
32	Jean de Dieu Ndayambate	Rubavu District, Groupe Scolaire Stella Maris Gisenyi	Teacher	Phone +250788465171
33	Dan Nsengiyumva	Rubavu District/Groupe Scolaire Gisenyi	Teacher	N/A

34	Gaspard Byukusenge	Rustiro District	Mayor	Byugas12@gmail.com/ +250788830620
35	Remmy Bimenyimana	Rustiro District	REMA Representative	remytonto@gmail.com +250788864413
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ANNEX V. PROJECT COSTS AND CO-FINANCING TABLES

Summary of project expenditures

Component/ Sub-component/Output	Estimated cost at design	Actual cost	Expenditure ratio (actual/planned)
1. Climate risk assessment and forecasting	660,000	697,140.85	
2. Climate Change adaptation planning and response strategy	330,000	537,539.16	
3. Reduction in the adverse effects of floods and droughts	1,815,000	1,815,000.00	
4. Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot.	285,000	136,331.39	
Total	**3,486,000**	**3,421,001.40**	**1:00**

Summary of project co-financing

Co-financing Source	Amount (USD)	
	Planned	Actual (USD)
UNDP Track Funding	600,000	600,000
UNDP AAP	2,847,000	2,847,000
GoR/MINIRENA PAREF	7,450,000	5,902,079
GoR/MINERINA/GASP	1,050,000	1,280,175
GOR/REMA	480,000	480,000
Totals	**12,427,000**	**11,109,254**

ANNEX VI. EVALUATION MATRIX

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
Strategic Relevance: **How does the project relate to the main objectives, outputs, outcomes, and to the needs, issues and challenges at the local, national, regional and international levels?**				
Complementarity/Relevance (Alignment) of the project to UNEP mandate, strategies and programmes. *Relevance to GEF focal areas, strategic priorities and operational project?*	• *How is the project aligned (supporting) to the objectives of the UNEP, GEF and partners?* • *Does the project support other international environmental and climate change conventions?*	Nature and extent of link between expressed needs by UNEP, GEF and partners and project objectives • at country level • across project intervention areas	• Key informant interviews • Documentary review	• Project documents • UNEP, GEF documents and websites • UNEP MTS at the time the project was designed. • UNEP Climate change strategy.
Relevance (alignment) of project to the Government of the Rwanda's environmental, sustainable development and climate change goals and objectives	• How does the project support the environmental, sustainable development and climate change objectives of Rwanda? • Is the project aligned with other donor or government projects and projects in the project areas and in which way? • Is the project country-driven? • What was the level of stakeholder participation in project design? • What is the level of stakeholder ownership in implementation? • Does the project adequately take into account the national realities, both in terms of institutional and policy framework in its design and its implementation? • Are the implementation strategies appropriate (is the log-frame logical and complete)? • Is the project responsive to threats and opportunities that emerge during the course of implementation?	• Degree to which the project supports national environmental/development objectives • Degree of coherence between the project and national priorities, policies and strategies • Appreciation from national stakeholders with respect to adequacy of project design and implementation to national realities and existing capacities • Level of involvement of government officials and other partners in the project design process	• Key informant interviews • Documentary review	• Project documents • National policies and strategies • Key project partners

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
Does the project address the needs of target beneficiaries at the local levels?	• How did the project support the climate information, early warning and disaster preparedness needs of relevant stakeholders? • Has the implementation of the project been inclusive of all relevant stakeholders? • Were local beneficiaries and stakeholders adequately involved in project design and implementation? • Does the project have buy-in and support from all stakeholder levels, i.e. has it met stakeholder expectations and how?	• Degree to which the project supports objectives of national and local governments and communities regarding early warning and disaster preparedness • Degree to which the project supports local needs and aspirations • Degree to which the project meets expectations	• Key informant interviews • Documentary review • Group discussions	• Project Documents • Planning documents of Rwanda • Local partners and beneficiaries
Relevant lessons and experiences for the project and other similar projects in the future	Has the experience of the project provided relevant lessons for the future of the project and other future projects targeted at similar objectives	Extent of lessons learned documentation	• Key informant interviews • Group discussions • Documentary review	• Project Documents • Local partners and beneficiaries
Attainment of objectives and planned results				
(a) Effectiveness **To what extent have the outputs and expected outcomes of the project been achieved?** *Outputs delivery (goods and services produced through project activities); Immediate Outcomes/results achievement (direct changes resulting from the use made by stakeholders of project outputs) Main Project Outcome achievement*				
Effectiveness of the project in achieving its intended purpose, outputs, and immediate outcomes *Extent to which the project contributes to the overall goal and main outcome*	• How has the project performed against its indicators and targets (given in the log-frame)? • What have been the key factors leading to project achievements? • To what extent can observed results be attributed the project or not? • Has the project failed in any respect? • Have there been notable changes in the enabling environment for the project? • How has the project contributed to raising capacity of government, communities, and other partners to produce, disseminate and share climate information, early warnings to enhance disaster preparedness? • How has the project contributed to the capacity of government, communities and other partners for	• Achievement of milestones and targets as laid out in the log-frame and monitoring plan • Extent of support from government/ political staff • Extent to which government technical staff actively participate in the project • Evidence of early uptake of project documentation and results (early warnings and disaster preparedness mechanisms) within planning/thinking	• Documentary review • Key informant interviews • Focus Group Discussions	• Project documents/reports • Minutes of Project Coordination Unit and Committees • Local partners and beneficiaries • Weather/climate observation installations/infrastructure • Samples/Case studies of early warnings and disaster preparedness being disseminated

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
	effective disaster preparedness to reduce vulnerability? • What are the views of the various stakeholders on the achievements of the project? • How well has the project documented its achievements?			
Lessons that can be drawn regarding effectiveness for the future of the project and other similar projects in the future	• What lessons have been learned from the project regarding achievement of outputs and outcomes • What changes can be made to the design of similar projects in order to improve the achievement of the expected results?	• Extent of lessons learned documentation • Evidence of early application of lessons learned	• Key informant interviews • Group Discussions • Document review	• Project reports • Local partners and beneficiaries
Management of risks and risk mitigation	• How well are risks, assumptions and impact drivers being managed? • What is the quality of risk mitigation strategies developed? Are these sufficient? • Are there clear strategies for risk mitigation related with long-term sustainability of the project?	• Extent to which project responds to identified and emerging risks (particularly risks of low participation due to perceived needs for immediate action rather than planning) • Level of attention paid to up-dating risks log	• Group Discussion/Focus Groups • Document review • Key informant interviews	• Project risk log • Project reports
(b) Likelihood of impact: Review of Outcomes to Impacts (ROtI) In light of achievements and limitations during the project implementation period, what is the likelihood of the project reaching intende d impacts?				
Likelihood of impact relative to execution of design	• What is the extent to which the changes along causal pathways from outputs through outcomes to impacts happen as anticipated • What was the accuracy of originally identified impact drivers? • What was the accuracy of originally identified assumptions?	• Evidence of changes from outputs through outcomes • Evidence of deviations from planned pathway; nature/type of the deviation, why deviations happened, results of this deviation (positive, negative, neutral)	• Documentary review • Key Informant interviews • Group Discussions	Project documents Project Partners
Planning impact	• To what extent has knowledge and appreciation of project intent improved? • What impact has the project had on policy and institutional frameworks relating to EWS, disaster preparedness, and climate information sharing and climate change as a whole?	• Evidence of uptake of project/new knowledge and ideas • Extent to which government (national/local) planning supports project interventions	• Documentary review • Key Informant interviews • Group Discussions	• Project reports • Minutes of Committee meetings • Discussions with Project Partners

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
	• Is there a clear link between the planning interventions and the actions carried out under the project?			
On ground impact	• What impact has the project had so far or is likely to have on the Rwandan people and communities (in terms of preparedness and adaptation to the impacts of climate change)? • What impact has the project had so far or is likely to have on reducing the vulnerability of the Rwandan people and communities (including livelihoods improvement and income generation)? • Has the project had any impact on gender equality and economic empowerment for women and other marginalized groups? Was this impact intended? • How well has the project met the expectations of stakeholders/beneficiaries? • How well are project interventions on stakeholders/beneficiaries documented? What lessons are likely to be learnt and how will this inform policy processes.	• Evidence of early uptake (replication) of the interventions • Level of satisfaction of project interventions (the demand for large-scale intervention) • Evidence of gender equity in selection and implementation of project activities • Disaggregated baseline data to understand characteristics and needs of different user groups, and disaggregated by gender. • Evidence of using gender analysis in development of communication strategy. • Disaggregated baseline data to understand characteristics and needs of different user groups, and disaggregated by gender. • Evidence of using gender analysis in development of communication strategy.	• Document review • Key informant interviews • Group Discussions/Focus Groups	• Reports from stakeholders involved in project activities • Project reports • Local partners and beneficiaries • User groups (disaggregated focus groups by gender).
Lessons that can be drawn regarding efficiency for the project and other similar projects in the future	• Has the project documented lessons learned? • What lessons have been learned from the project regarding likelihood of impact? • What changes can be made to the design of similar projects in order to improve the likelihood of impacts?	• Evidence of documentation	• Documentary review • Key informant interviews	• Project reports and technical documents • Local partners
Efficiency: **To what extent has the project been implemented in a cost-effective and timely manner?**				
Cost-effectiveness and financial efficiency	• Were the accounting and financial systems in place adequate for project management and for producing accurate and timely financial information? • Were funds made available or transferred efficiently to address the project purpose, outputs and planned	• Extent to which funds were converted into outcomes as per the expectations of the Project proposal • Level of transparency in the use of funds • Level of satisfaction of partners and	• Documentary review • Key informant interviews	• Project financial records • Discussions with FMO (UNEP) and Finance Officer • Project audit reports

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
	activities? • Were funds used correctly – (explain any over- or under-expenditures)? • Were financial resources utilized efficiently (converted into outcomes)? Could financial resources have been or be used more efficiently? • Were procurements carried out in a manner making efficient use of project resources? • Were project audits conducted? Were issues raised in audit reports efficiently addressed? • Was the project implementation as cost effective as originally proposed (planned vs. actual) • Did the leveraging of funds (co-financing) happen as planned?	beneficiaries in the use of funds		• Project work plans and reports
Implementing efficiency (including monitoring)	• Were the project logical framework and work plans (and any changes made to them) used as management tools during implementation? • Was the project implemented as planned, including the proportion of activities in work plans implemented? • Was monitoring data collected as planned, analysed and used to inform project planning? • Was project implementation responsive to issues arising (e.g. from monitoring or from interactions with stakeholders)? • What learning processes have been put in place and who has benefited (e.g. training, exchanges with related projects) and how did this influence project outcome? • Were progress reports produced accurately, timely and responded to including adaptive management changes? • Did the project experience any capacity gaps (e.g. staffing gaps)? • Were internal and external communications effective and efficient?	• Extent to which project activities are conducted on time • Extent to which project delivery matches the expectation of the proposal and the expectations of partners • Level of satisfaction expressed by partners in the responsiveness (adaptive management) of the project • Level of satisfaction expressed by project implementing agency and in regard to technical back-stopping	• Key informant interviews • Group Discussions/Focus group • Document review	• Project work plans and reports • Local partners

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
	• How efficiently have resources and back-up been provided by donors, including quality assurance			
Efficiency of partnership arrangements for the project	• To what extent are partnerships/ linkages between institutions/ organizations encouraged and supported? • Which partnerships/linkages were facilitated? Which ones can be considered sustainable? • What was the level of efficiency of cooperation and collaboration arrangements? • Which methods were successful or not and why?	• Extent to which project partners committed time and resources to the project • Extent of commitment of partners to take over project activities	• Key informant interviews • Group Discussions/Focus group • Document review	• Project work plans and reports • Local partners
Lessons that can be drawn regarding efficiency for the project and other similar projects in the future	• What lessons can be learnt from the project regarding efficiency? • How can/could the project have been more efficiently implemented (in terms of management structures and procedures, partnerships arrangements etc.)? • What changes can/could have been made (if any) to the project in order to improve its efficiency?	• Level of satisfaction in project implementation arrangements • Suggestions put forward by partners for possible improvement	• Key informant interviews • Group Discussions/Focus group • Document review	• Project reports • Local partners
Sustainability and Replication: **To what extent is there persistence of benefits resulting from the implementation of project activities? Including (possibili ties of) replication, up-scale and catalytic effects?**				
Enabling environment	• Is the social, legal and political environment conducive to enhance sustainability? • Are there signs of activities being taken up by project partners, and plans being developed to sustain them?	• Evidence to which planning supports project interventions • Evidence of discussion or revision of policies and plans to include project targets • Extent to which in-coming Government projects are in line with and provide support to project targets	• Documentary review • Key Informant interviews • Group Discussions/Focus Groups	• Minutes of Committee meetings • Local partners and beneficiaries

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
Project sustainability measures	• What project sustainability measures exist? • What factors are likely to negatively affect project sustainability? • What are the key constraints to sustainability of project interventions? • Have partners and stakeholders successfully enhanced their capacities and do they have the required resources to make use of these capacities? • Does the project have a clear exit strategy or transformational strategy to another phase?	• Extent to which local technical staff and stakeholders are applying new ideas outside of the immediate project context • Extent to which other local stakeholders are liaising with the project for information sharing	• Documentary review • Key Informant interviews • Group Discussions/Focus Groups	• Project reports • Local partners and beneficiaries
Factors Affecting performance: **What factors have facilitated or constrained the performance of the project to achieve its intended outcome and impact ?**				
Project Design and Structure	• Was the design and structure of project activities conducive to the achievement of the objectives and outcomes?	• Quality of causal logic linking project outputs and outcomes • Number and quality of impact drivers, assumptions and risks identified • Sufficiency of resources set aside for project implementation • Extent and quality of planned activities related to communication and knowledge management • Incorporation of gender into outcomes/design elements	• Documentary review • Key informant interviews • Group discussions	• Project reports • Minutes of Committee meetings • Partners and beneficiaries
Project Coordination and Management	Have the project coordination and management arrangements been conducive to the achievement of its objectives?	• Level of clarity of roles and responsibilities of different project partners and staff • Nature and relative weight of factors within or between project partners that enabled/inhibited project implementation • Quality of supervision/oversight by the project coordination unit • Perceptions on the quality of UNEP project supervision, guidance and technical backstopping provided	• Documentary review • Key informant interviews • Group discussions	• Project reports • Minutes of Committee meetings • Partners and beneficiaries

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
Human and Financial Resources Administration	• Did the project have sufficient and appropriate human and financial resources available for planning and implementation of the project activities • To what extent did the project ensure cost-effectiveness of its interventions?	• Evidence of gaps in competencies or profile of persons required to execute specific project activities • Project staff turn-over rate and level of satisfaction with work: • Difference between allocated funds and expenditure by intervention • Financial management systems and processes at HQ and field: quality, transparency and effectiveness • Perceptions on administrative processes in terms of enabling execution of project activities	• Documentary review • Key informant interviews • Group discussions	• Project reports • Minutes of Committee meetings • Partners and beneficiaries
Stakeholder involvement	• Did the project involve the relevant stakeholders through information sharing and consultation and by seeking their participation in project design, implementation, and M&E? For example, did the project implement appropriate outreach and public awareness campaigns? • Did the project consult with and make use of the skills, experience, and knowledge of the appropriate government entities, nongovernmental organizations, community groups, private sector entities, local governments, and academic institutions in the design, implementation, and evaluation of project activities? • Were the perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process taken into account while taking decisions (including relevant vulnerable groups and powerful supporters and opponents)?	• Number, fluency, type, and quality of stakeholder engagement at each stage of project design, implementation and M&E • Changes in public awareness as a result of outreach/ communication by project • Quality of consultations/feedback mechanisms/ meetings/ systems in place for project implementers to learn the opinions of - Community groups - Local government - National government - Non-government groups - Other • Extent of beneficiary needs integrated into project design (appropriateness of strategies chosen, site selection, degree of vulnerability of targeted HHs, etc) • Evidence of participation from a wide range of stakeholder groups (in support and opposed to the project)	• Documentary review • Key informant interviews • Group discussions	• Project reports • Local implementing partners • Community members, groups • Government stakeholders • Other local stakeholder groups (non-government) • UNDP/UNEP staff • Workshop reports/attendance

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
Partnerships and collaborations	Did the project build effective partnerships and collaborations?	• Number and types of partners (internal and external) identified and involved in project implementation • Perceptions on level of collaboration between project stakeholders and partners • Relative level of complementarity between the project and other related projects (internal and external) • Extent of joint activities and pooling of resources with other organizations and networks	• Documentary review • Key informant interviews • Group discussions	• Project reports • Minutes of Committee meetings • Partners and beneficiaries
Country ownership and drivenness	• Was the project concept in line with development priorities and plans of Rwanda? • Were the relevant country representatives from government and civil society involved in project implementation, including being part of the Project Steering Committee? • Is there a functional intra-governmental committee to liaise with the project team and connect various ministries/government offices involved in or affected by the project?	• Coherence between project objectives and national development objectives • Coherence between project objectives and community-level needs • Number and titles of representatives from government and civil society present at workshops, planning meetings • Proportion of steering committee members who represent government and civil society • Existence of a communications/coordination body within the government to oversee and link various government offices relevant to project planning, implementation and intended outcomes • Extent of influence and control of coordinating body to prompt/encourage convening or decision-making	• Documentary review • Key informant interviews • Group discussions	• Rwanda Government strategy and planning documents • Project reports • Partners • UNDP/UNEP staff • Community members • CSOs and local non-government stakeholders • Government partners • Local implementing partners • Project monitoring and reporting information (workshop summaries, attendance lists, action items etc)
Project monitoring and evaluation	Were there appropriate and effective arrangements for reporting, monitoring and evaluating the project?	• Quality (and volume) of reporting on the project: on outputs, outcomes, impact, and regularity of reporting • Number and types of quality assurance processes to ensure reliability of reporting and accuracy of reporting • Perceptions of project monitoring and internal review systems • Clarity of roles and responsibilities among	• Documentary review • Key informant interviews • Group discussions	• Project reports • Minutes of Committee meetings • Partners and beneficiaries

Evaluation Criteria	Evaluation Questions	Indicators	Data Collection and Analysis Method	Information Sources
		involved staff for data collection, data analysis, and information sharing, monitoring and reporting • Resources available for monitoring, reporting and evaluation • Performance indicators accurately capture achievements of project outputs and outcomes. • Tools, systems and structures in place for use in monitoring and reporting, adaptive management and to improve project performance • Proportion and evidence of independent evaluation • Difference between resources required for independent evaluations and amount available.		

ANNEX VII. COMPLETED MATRIX OF THE OVERALL QUALITY OF PROJECT DESIGN

Evaluation criteria		Evaluation Comments	ProDoc reference
Relevance			
Are the intended results likely to contribute to UNEP's Expected Accomplishments and programmatic objectives?		The ProDoc does not explicitly refer to the UNEP's Expected Accomplishments (EAs) and Strategic/Programmatic objectives. However, the project design fully responds to one of the UNEP's strategic direction in the MTS 2010-2013 i.e. climate change. Climate change adaptation has been recognized as priority within UNEP's Climate Change Strategy with a focus on building resilience of ecosystems and economies. The project contributes to UNEP's Programme of Work (2010-2011) sub-programme 1: Climate Change: *To strengthen the ability of countries, in particular developing countries, to integrate climate change responses into national development processes*	Section 2.2 Global significance. Section 3.1 Project rationale, policy conformity and expected global environmental benefits
Does the project form a coherent part of a UNEP-approved programme framework?		Again this is not explicitly mentioned in the ProDoc. However, the project conforms with / is part of a global UNEP Programme regarding climate change, in compliance with the implementation of the UNFCCC. The project is also in line with UNEP's mandate of providing policy advice and early warning information, based upon sound science and assessments. As mentioned above project forms a coherent part of UNEP approved programme framework related to climate change and ecosystem management (medium term strategy 2010-2013) and Programme of Work (2010-2011) sub-programme 1.	Section 3 Intervention strategy; UNEP MTS 2010-2013
Is there complementarity with other UNEP projects, planned and ongoing, including those implemented under the GEF?		Yes, There is complementarity with other UNEP (and GEF) projects related to climate change impacts and adaptation. The project is expected to build on/ add to other GEF/UNEP/UNDP projects and initiatives including the Nile Trans-boundary Environmental Action Project (a regional GEF/International Waters project), the Nile Basin Discourse Forum, the CCDARE initiative, the SGP/GEF intervention supporting a local NGO called "Partners in Agriculture and Environment" , the African Adaptation programme, the Decentralization and Environmental Management Project, Integrating Vulnerability and Adaptation to Climate Change into Sustainable Development Policy Planning and Implementation in Eastern and Southern Africa" .	Section 2.7 Linkages with other GEF and non-GEF interventions
Are the project's objectives and implementation strategies consistent with:	i) Sub-regional environmental issues and needs?	Africa is highly vulnerable to the impacts of climate change, partly caused by lack of effective and reliable early warning systems for preparedness. The need to strengthen climate EWS, increase preparedness and reduce vulnerability is identified as a priority in Eastern and Central African and the Rwandan in particular. The project is designed to implement priorities 1 &2 of identified in Rwanda's NAPA i.e. Integrated Water Resource Management and Information systems for early warning and rapid intervention, respectively. In addition, the project contributes to attaining critical goals set the Rwanda Vision 2020 - increase of land portion against erosion and reduce level of reforestation, which are both part of the project's ecosystem resilience building component.	Section 3.6 Consistency with National Priorities and Plan.
	ii) the UNEP mandate and policies at the time of design and implementation?	Though not explicitly mentioned, the project is framed in line within UNEP's mandate and policies (MTS 2010-2013). It consistent with UNEP's mandate on climate change (adaptation), which was established at the 22nd session of UNEP's Governing Council (2003). UNEP's niche in climate change adaptation in the UN system has been defined as *adapting by building resilience of ecosystems and economies.*	3.1Project rationale
	iii) the relevant GEF focal areas, strategic priorities and	Yes. The project is framed in GEF Portfolio for Climate Change. GEF serves as financial mechanism for the UNFCCC, supports both climate change mitigation and adaptation, and manages the LDCF. The project	GEF website Section 3.1 Project

Evaluation criteria		Evaluation Comments	ProDoc reference
	operational programme(s)? (if appropriate)	takes into account overall GEF conformity (sustainability, replicability, M&E, stakeholder involvement).	rationale, policy conformity and expected global patters (Overall GEF conformity)
	iv)Stakeholder priorities and needs?	Yes. The UNE ProDoc contains a stakeholder mapping exercise that describes mandates and potential roles of various ministries and organizations, as does the CEO Endorsement. Both the UNDP ProDoc and UNEP ProDoc outline a stakeholder involvement plan. The need to address vulnerability to climate change was identified as a priority by the Rwandan government and stakeholders. Rwanda is committed to strengthening EWS and enhancing preparedness, adaptive capacity and reducing vulnerability as identified in the NAPA and Initial National Communication. Further, this project is expected to contribute to poverty reduction in Rwanda as defined in its Vision 2020, Economic Development and Poverty reduction Strategy 2008-2012.	Section 2.1 Background and context (Climate change impacts in Gishwati ecosystem) 2.3Threats, root causes and barrier analysis Sections 2.5 and 5 Stakeholder analysis and participation
Overall rating for Relevance		**S (Satisfactory)** Though not explicitly stated in the ProDoc does, the project is closely aligned with UNEP's objectives, policies and strategies. The project is also aligned with regional and national stakeholder priorities and needs in respect to climate change adaptation.	
Intended Results and Causality			
Are the objectives realistic?		The project intent to reduce the vulnerability of the Gishwati ecosystems and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change is realistic. However, reducing vulnerability requires much more than strengthening early warning and disaster preparedness systems. In addition it requires a much longer timeframe and is contingent on a number of conditions many of which are not within the control of the project and its partners. In addition, reduced vulnerability is not a static condition because climate change is a dynamic phenomenon associated with many uncertainties.	Section 3.2 Project Goal and Objective Appendix 4- Results framework
Are the causal pathways from project outputs [goods and services] through outcomes [changes in stakeholder behaviour] towards impacts clearly and convincingly described? Is there a clearly presented Theory of Change or intervention logic for the project?		The causal pathways and intervention logic are well described. The project objective is based on the premise that: an operating early warning system, integrating climate risk assessment into socio economic parameters and data collection networks; with actions targeted towards increased institutional and community capacity for responding to climate change risks, knowledge, communication, and; public awareness as well as actions towards the demonstration of concrete adaptation measures reduce vulnerability of the population and communities in Congo crest watersheds and Gishwati ecosystem. An important aspect of the project is also to bridge science to policy and sensitize various national policy making bodies to main stream climate change and climate proof relevant policies.	Section 3.4- Intervention logic and assumptions Appendix 4 - Results Framework
Is the timeframe realistic? What is the likelihood that the anticipated project outcomes can be achieved within the stated duration of the project?		The timeframe for the four anticipated outcomes (48 months) is realistic. However, this does not take into account unforeseen events that would delay implementation. In addition, some interventions that would reduce vulnerability and enhance adaptation require a longer timeframe to have any discernible impacts and to generate results for replication.	Section 3.3 - Project components and expected results Appendix 4 - Results Framework
Are the activities designed within the project likely to produce their intended		Yes. The main activities (climate risks assessment and forecasting, incorporating climate change adaptation in development planning, reducing adverse impacts of floods and droughts, and improved	Section 3.3 - Project components and

Evaluation criteria	Evaluation Comments	ProDoc reference
results	knowledge of good practices) are effective to reducing vulnerability and improving adaptive capacity. Again, this does not take into account any unforeseen circumstances and whether other conditions are present.	expected results Appendix 4: Results Framework
Are activities appropriate to produce outputs?	Yes, activities are appropriate to produce the expected outputs.	Section 3.3 - Project components and expected results Appendix 4: Results Framework Appendix . 5
Are activities appropriate to drive change along the intended causal pathway(s)	Project activities are appropriate to drive change, based on the premise that other required conditions would be present. However, institutional up-taking is needed for that. Capacity development, planning and knowledge management activities may not, by themselves, be sufficient to drive changes.	Appendix 4: Results Framework
Are impact drivers, assumptions and the roles and capacities of key actors and stakeholders clearly described for each key causal pathway?	Overall, the ProDoc clearly identifies the key risks and assumptions and an exhaustive stakeholders mapping and analysis was conducted. The assumptions closely align with the risks. Impact drivers are not explicitly described but are implicit in the ProDoc.	Section 3.4- Intervention logic and key assumption Section 3.5 Risk analysis and risk management measures Appendix 4 - Results Framework
Overall rating for Intended Results and causality	**S (Satisfactory)** Reducing vulnerability through functional EWS and disaster preparedness is realistic. However, some other interventions are required to reduce vulnerability.	
Efficiency		
Are any cost- or time-saving measures proposed to bring the project to a successful conclusion within its programmed budget and timeframe?	A number of cost- and time-saving measures were adopted e.g. multi-criteria analysis was used to prioritize the adaptation measures in which cost effectiveness being one of the selection criteria. The project was designed to build on linkages with other policies and programmes in order to generate multiplied benefits at national level. Project is co-financed by Rwandan government and through a number of ongoing project interventions in Rwanda, which are directly linked to the intended LDCF project outcomes. The project encourages NGOs and other partners to associate with the various project outcomes and especially the on-the-ground action under outcome For example, during the project preparation phase alone, two NGOs, the umbrella organization RENGOF and PIAAE secured funds for targeted community-based adaptation interventions in the LDCF project area.	Section 7.3 - Project cost-effectiveness Section 2.7 Linkages with other GEF and non-GEF interventions
Does the project intend to make use of / build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency?	Yes. The project built on pre-existing institutions (REMA, MINECOFIN/MINREMA), agreements and partnerships and relevant ongoing initiatives. The project foresees strong partnerships with different stakeholders in order to maximise human resources, infrastructures and equipment. For instance, the cooperation with other GEF funded projects.	Sections 2.4, 2.5 and 2.9
Overall rating for Efficiency	**S (Satisfactory)** The project is closely linked with existing institutions in Rwanda, provides for co-financing, and builds on existing projects and programmes.	
Sustainability / Replication and Catalytic		

Evaluation criteria		Evaluation Comments	ProDoc reference
effects			
Does the project design present a strategy/ approach to sustaining outcomes / benefits?		Yes. Capacity Building, integration of results into planning, use of a participatory approach, inter-institutional cooperation and strong leadership of REMA are considered crucial elements of sustainability. The project has strong government support as well as buy-in at the District level which makes would increases absorption of adaptive capacity in medium and long term. However, the ProDoc does not discuss in details the different aspects of sustainability (institutional, political and financial).	Section 3.8 - Sustainability Section 3.6 Consistency with national priorities or plans: Sections 2.5 and 5 Stakeholder analysis and participation
Does the design identify the social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts? Does the design foresee sufficient activities to promote government and stakeholder awareness, interests, commitment and incentives to execute, enforce and pursue the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project?		The project addresses key national development priorities highlighted in the EPRSP and Vision 2020, the UNDAF as well as climate change related priorities identified and specified through the participatory and bottom-up NAPA process. In addition, the project has a strong capacity focus with training and awareness raising activities among government bodies and stakeholders and broad stakeholder participation and consultation. The project also underlines the need of an effective communication between experts and decision-makers in order to achieve political commitment and sustainability. In addition the project design encourages NGOs and other partners to associate with the various project outcomes and especially the on-the-ground action under outcome so that the project activities can be continued beyond the period of LDCF support.	Section 3.8 - Sustainability Section 5: Stakeholder participation
If funding is required to sustain project outcomes and benefits, does the design propose adequate measures / mechanisms to secure this funding?		The project is co-financed between UNEP/GEF, UNDP and Rwanda government However, where additional funding may be required, a strategy for financing is not explicitly addressed in the ProDoc.	Section 7: Budget
Are there any financial risks that may jeopardize sustenance of project results and onward progress towards impact?		Sustainability is highly dependent on linkage with other programmes and initiatives, replication and up-scaling, and uptake in policies, etc., all of which imply availability of funds. The project also aims to build key adaptive capacity and pilot adaptation, including financial interventions. Though not mentioned in the ProDoc, there are certain financial risks associated with these approaches.	
Does the project design adequately describe the institutional frameworks, governance structures and processes, policies, sub-regional agreements, legaland accountability frameworks etc. required to sustain project results?		Yes. The project is very exhaustive in describing the institutional framework. The Decision making and organisation flowchart (Appendix 10) is simple and clear. Linkage with specific agencies and institutions is described, as a strategy to sustain project results.	Sections 2.4 and 4, Appendix10
Does the project design identify environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits?		The design does not explicitly identify these environmental factors but recognizes that even if the most stringent mitigation measures were put in place today, the impact of climate change would continue beyond this Century. Climate change could have severe and large scale impacts that could wipe out project benefits. Further, the project recognizes the inherent uncertainty as regards rainfall, and the implications for ecosystems and livelihoods.	Section 2.2 -Threats, etc. Section 2.5 -Global significance, 3.1 Project rationale, etc.
Does the project design foresee adequate measures to catalyze behavioural changes in terms of use and application by the relevant stakeholders of (e.g.):	i) technologies and approaches show-cased by the demonstration projects;	The project includes pilot demonstration sites for adaptation with the involvement of local communities and organizations. Increased use of early warning and disaster preparedness is expected to lead to positive attitude towards adaptation options among stakeholders.	Section 3.3 - Project components and expected results Appendix 4 - Results Framework
	ii) strategic programmes and plans developed	Among the project activities are: creation of functional EWS, preparation and implementation of disaster management plans and climate resilient landuse master plans, communication and awareness strategy.	Section 3.3 - Project components and expected results

Evaluation criteria		Evaluation Comments	ProDoc reference
	iii) assessment, monitoring and management systems established at a national and sub-regional level	The project foresees a M&E system including Tracking Tools	Section 6 Appendices 6, 7, and 15.
Does the project design foresee adequate measures to contribute to institutional changes? [An important aspect of the catalytic role of the project is its contribution to institutional uptake or mainstreaming of project-piloted approaches in any regional or national demonstration projects]		Yes. The main focus of the project is strengthening climate change risk and flood disaster preparedness in Rwanda. Strengthening EWS, incorporating climate change risk in district development planning (disaster management plans, climate risk landuse plans), training, demonstration of adaptation interventions and awareness raising can catalyse institutional uptake, while the wide range of potential stakeholders can also contribute to adoption of adaptation interventions and mainstreaming climate change into development policies and agenda.	Sections 2.5, 2.5, 3.3, 3.8 and 5
Does the project design foresee adequate measures to contribute to policy changes (on paper and in implementation of policy)?		Yes. It is envisaged that the information produced will be used into policy setting and planning at national and the district level- preparation and implementation of climate sensitive disaster management plans, climate resilient landuse master plan, adjusting landuse management practices. The project intent is to use information generated to integrate climate change risk and disaster preparedness into policy and planning. However, policy changes may require a longer timeframe than the duration of the project.	Section 3 – Intervention Strategy
Does the project design foresee adequate measures to contribute to sustain follow-on financing (catalytic financing) from Governments, the GEF or other donors?		UNDP and Government co-financing is foreseen, but financial sustainability is not discussed.	Sections 7.1, 7.2
Does the project design foresee adequate measures to create opportunities for particular individuals or institutions ("champions") to catalyze change (without which the project would not achieve all of its results)?		The role of REMA/MINIRENA and its "championing" role is fostered by the Project.	Section 4 and 5
Are the planned activities likely to generate the level of ownership by the main national and regional stakeholders necessary to allow for the project results to be sustained?		Overall, yes. Involvement of national and local stakeholders (including districts, NGOS and communities) in the project; enhancing EWS and disaster preparedness systems and building capacity based on the capacity needs of stakeholders are among the measures that are expected to generate ownership by the main stakeholders. However, it has to be recognised that national ownership and project sustainability are complex processes, where onward and backward steps are recurrent and no achievement is acquired once for all.	Sections 3.8, 4 and 5
Overall rating for Sustainability / Replication and Catalytic effects		**S (Satisfactory)** Availability of lessons and experiences from the demonstrations and pilots, functional EWS and disaster preparedness systems, training and technical and institutional capacity and increased awareness and information sharing should catalyze uptake of results. However, the prospects for sustainability and replication are based on a number of premises, including establishing linkages with other planned and on-going initiatives and key national and local institutions. Financial sustainability largely depends on external funding and national initiatives.	
Risk identification and Social Safeguards			
Are critical risks appropriately addressed?		A detailed risks analysis is included in the ProDoc. Critical risks are identified and mitigation measures are identified accordingly.	Section 3.5, Table 2 - risk identification and mitigation matrix
Are assumptions properly specified as		Assumptions are clearly identified in the ProDoc as factors that affect	Section 3.5 Risk

Evaluation criteria	Evaluation Comments	ProDoc reference
factors affecting achievement of project results that are beyond the control of the project?	achievement of project results. However it is not mentioned that they are beyond the project's control. In addition risks are analyzed and mitigation measures identified.	analysis Appendix 4 - Results Framework
Are potentially negative environmental, economic and social impacts of projects identified?	Overall, potentially negative environmental, economic and social impacts are not identified because the project is not expected to have negative impacts. However, it is mentioned in the ProDoc that Environmental Impact Assessments (EIAs) should be undertaken in accordance with Rwanda laws and regulation on EIA prior if found necessary. The ProDoc contains a description of the Global Environmental Benefits derived from reducing the vulnerability of the Gishwati ecosystem to climate change impacts (the ecosystem system regulates a stable climate across the region, protects water catchment areas and provides alternatives for community livelihoods and sustainable development.	Section 2.2 - Global significance; Section 3.11 - Environmental and social safeguards
Overall rating for Risk identification and Social Safeguards	**S (Satisfactory):** The project design includes a detailed risk analysis and identifies mitigation measures.	
Governance and Supervision Arrangements		
Is the project governance model comprehensive, clear and appropriate?	Clearly described, appropriate for a project of this nature. The ProDoc and two Annexes describes overall governance of the project	Section 4 Appendix 10 - (Organisation Chart Appendix11 (ToR)
Are roles and responsibilities clearly defined?	The execution arrangements are clear	Section 4
Are supervision / oversight arrangements clear and appropriate?	The roles and responsibilities of internal and external partners are properly specified in the ProDoc	Section 4 Institutional Framework
Overall rating for Governance and Supervision Arrangements	**HS (Highly Satisfactory)** The governance and supervision arrangements are considered adequate.	
Management, Execution and Partnership Arrangements		
Have the capacities of partner been adequately assessed?	Partners are selected based on their particular expertise and comparative advantage. They were exhaustively described.	Sections 4 and 5
Are the execution arrangements clear?	The execution arrangements are clear. The section on stakeholder participation is detailed and appoints responsibility for each activity.	Sections 4and 5
Are the roles and responsibilities of internal and external partners properly specified?	The roles and responsibilities of internal and external partners are properly specified in the project document	Sections 4 and 5
Overall rating for Management, Execution and Partnership Arrangements	**HS (Highly Satisfactory)** The management, execution and partnership arrangements described are satisfactory, taking into account all levels from global to local, which is appropriate for a project of this nature.	
Financial Planning / budgeting		
Are there any obvious deficiencies in the budgets / financial planning?	No specific deficiencies in financial planning were identified. The budget is detailed and clear. It is specified that co-financing is both in kind or cash.	Section 7 Appendix 1
Cost effectiveness of proposed resource utilization as described in project budgets and viability in respect of resource mobilization potential	Proposed resource utilization satisfactory	Appendices 1 and 4
Financial and administrative arrangements including flows of funds are clearly described	Financial and administrative arrangements, and flow of funds are described in the project document	Section 7, Appendix 1
Overall rating for Financial Planning / budgeting	**S (Satisfactory):** An adequate financing plan and detailed instructions for financial reporting and budgeting are presented.	
Monitoring		

Evaluation criteria	Evaluation Comments	ProDoc reference
Does the logical framework: • capture the key elements in the Theory of Change for the project? • have 'SMART' indicators for outcomes and objectives? • have appropriate 'means of verification' • adequately identify assumptions	In general the log frame (results framework) captures the key elements in the project's TOC but does not clearly indicate how these are expected to ultimately result in enhanced adaptive capacity. The Project Results Framework Presented in Appendix 4 includes baselines and targets, and SMART indicators for each expected outcome as end-of-project targets. The log frame includes assumptions, but there are other important assumptions/risks such as availability of financial resources for up-scaling/replicating.	Appendix 4 - Result Framework.
Are the milestones and performance indicators appropriate and sufficient to foster management towards outcomes and higher level objectives?	The proposed table in annex (Key deliverables and milestones) is not populated. Specific milestones and performance indicators are not included in the project document	Appendix. 4
Is there baseline information in relation to key performance indicators?	Yes, though they are not quantified and as precise as it should be	Appendix. 4
Has the method for the baseline data collection been explained?	No explanation is given for the method of collecting baseline data.	
Has the desired level of achievement (targets) been specified for indicators of Outcomes and are targets based on a reasoned estimate of baseline?	End targets are identified in the Results Framework. No mid-point targets.	Appendix. 4
Has the time frame for monitoring activities been specified?	The time frame for progress reporting and monitoring is specified. There is a detailed and costed M&E Plan in Appendix 7, and tracking tools in appendix 15. However, the Work Plan does not include Monitoring activities	Section 6, Appendix 7 Appendix 5 - Work plan, Appendix 15 - Tracking tools
Are the organisational arrangements for project level progress monitoring clearly specified	The time frame for progress reporting and monitoring is specified	Section 6 and Appendix 7
Has a budget been allocated for monitoring project progress in implementation against outputs and outcomes?	Appendix 7 specifies the cost of M&E. The Project Budget contains a Budget Line for Monitoring & Evaluation	Section 7 Appendices 1 and 7
Overall, is the approach to monitoring progress and performance within the project adequate?	In general, the approach reasonably follows the standard requirements of UNEP	Section 7 Appendices 1 and 7
Overall rating for Monitoring	**MS (Moderately Satisfactory)**. There are some weaknesses in the log frame and monitoring design.	
Stakeholder participation and public awareness		
Has there been adequate socio economic analysis, identification and assessment of stakeholders in project design (including key channels of communication and networks that can be used for communicating and dissemination of information)?	The UNEP ProDoc contains a stakeholder mapping exercise that describes mandates and potential roles of various ministries and organizations, as does the CEO Endorsement. The project design also recognizes the benefit of adopting a participatory approach involving local stakeholders in project activities. The ProDoc further recognizes the need for developing a robust and effective communication and awareness raising strategy in the inception period to ensure the general public is fully aware of the contribution and benefits of the project. Both the UNEP and UNDP ProDocs and the CEO Endorsements contain a descriptive section on management arrangements or project implementation arrangements (UNDP ProDoc, p 43;UNEP ProDoc, p 41)across various stakeholder groups	Sections 2.5 Stakeholder mapping and analysis Section 5 Stakeholder participation Section 3.10 Public awareness, communications and mainstreaming strategy Section 4: Institutional Framework And Implementation Arrangements
Overall rating for Stakeholder participation	**HS (Highly Satisfactory):** A stakeholder mapping and analysis was	

Evaluation criteria	Evaluation Comments	ProDoc reference
and public awareness	conducted. In addition, a communication strategy will be developed in inception phase that will provide for channels of communication and dissemination.	
Learning, Communication and outreach		
Has the project identified appropriate methods for communication with key stakeholders during the project life?	The ProDoc recognizes the crucial role of communication and provides for development of a Communication and Awareness Strategy (CAS) during the inception phase	Section 3.10 Public awareness, communications and mainstreaming strategy
Are plans in place for dissemination of results and lesson sharing.	Outcome 4 of the project is dedicated to improvement of knowledge of good practices. Output 4.1 is provides for developing a communication awareness strategy. All these are catalytic to dissemination of results. The ProDoc indicates that the project will make an explicit link to the UNEP Global Adaptation Network (GAN) and the UNDP Adaptation Learning Mechanism (ALM), international networks of practitioners and web-based platforms for sharing lessons learnt and best practices. By doing so the project makes specific contributions to the GAN and the ALM and also benefit from its resources. The ProDoc indicates that lessons learned during local level adaptation interventions will be shared with community based organizations (CBO) and Non-Government Organizations (NGO), government agencies and Ministries through the media and NCC outreach activities so that they could be replicated elsewhere in the country.	Section 3.9Replication; Section 3.10 Public awareness, communications and mainstreaming strategy Appendix 4: Results framework
Do learning, communication and outreach plans build on analysis of existing communication channels and networks used by key stakeholders?	There is no explicit indication that learning, communication and outreach plans build on analysis of existing communication channels and networks used by key stakeholders.	
Overall rating on Learning, Communication and outreach	**MS (Moderately Satisfactory):** A project outcome is dedicated to communication. The section on public awareness, communications and mainstreaming strategy is rather weak and does not state the channels of communication that will be built upon.	
Evaluation		
Is there an adequate plan for evaluation?	Yes. An independent mid-term evaluation and an independent terminal evaluation are provided for in the ProDoc.	Section 6
Has the time frame for Evaluation activities been specified?	Yes, for both.	Section 6
Is there an explicit budget provision for mid-term review and terminal evaluation?	The Project Budget contains a Budget Line for Monitoring & Evaluation	Appendix 7
Is the budget sufficient?	A total indicative cost of USD 72,000 of which USD 50,000 is for the two evaluations. Other funds for Inception Workshop, Audits, Monitoring. This is inadequate for quality evaluation.	Appendix 7
Overall rating for Evaluation	**MS (Moderately Satisfactory):** There are provisions for the mid-term and terminal evaluation, but budget is considered insufficient. The budget determines the evaluation quality to a large extent.	

ANNEX VIII. PROJECT LOGICAL FRAMEWORK

Components	Activities	Outputs	Output Indicators	Outcomes	Outcome Indicators
1. Climate risk assessment and forecasting	1.1.1: Assess EWS needs and capacities at Nyabihu District and community levels targeting Bigogwe, Karago and Rambura sectors, as well as at national service provider level. 1.1.2: Develop and implement EWS strategy for Nyabihu District in the Gishwati ecosystem, targeting Bigogwe, Karago and Rambura sectors; link to UNDP's AAP activities. 1.1.3: Set up and operationalize an observatory network for agro-and hydro-meteorological forecasting in Nyabihu District of Gishwati ecosystem and relevant areas in the Nile-Congo watershed. 1.1.4: Establish targeted communication and outreach mechanisms that pilot community application of EWS information in Nyabihu District of Gishwati ecosystem; feed lessons learned into UNDP's AAP and up-scale. 1.1.5: Develop and implement capacity building plan for district and national level experts; link to UNDP's AAP activities.	1.1 Functional early warning system that enhances climate change predictions.	1.1 Percentage of interviewed persons acknowledging reception of alerts and warnings about weather and climate in project sites. 1.2 Percentage of EWS end-users rating the quality of EWS system as satisfactory. 1.3 Number of climate data observation stations established in the project sites.	Improved Early Warning System for climate change risks in Gishwati Ecosystem.	EWS that is useful to Communities developed and Forecasts disseminated to Communities
	1.2.1: Develop and test the model concept for Nyabihu District of the Gishwati ecosystem (including socio-	1.2 A Gishwati integrated hydro-meteorological logical model system that integrates climate			

Components	Activities	Outputs	Output Indicators	Outcomes	Outcome Indicators
	political, economic and eco-system considerations). 1.2.2: Provide training on climate change risk assessment (i.e. linked to UNDP's AAP) for district and national level experts. 1.2.3: Carry out Gishwati risk assessments and apply in Gishwati model; develop simple decision-making support tool. 1.2.4: Train district level decision-makers in tool application and "maintenance". 1.2.5: Up-scale lessons learned through UNDP's AAP.	change risk assessment and socio-economic parameters.			
	1.3.1: Formalize and operationalize work of EWS Task Team(s) with national and Nyabihu district level representation. 1.3.2: Establish/rehabilitate data observatories in target area. 1.3.3: Implement capacity support activities for meteorology, agro- and hydro-meteorology services and other relevant partners for (i) data management and analysis, (ii) communication, outreach, service provision and dissemination and (iii) network coordination and management (including financing).	1.3 A functional data coordination network for EWS developed through inter-agency coordination.			

Components	Activities	Outputs	Output Indicators	Outcomes	Outcome Indicators
	1.3.4: Develop a strategy to empower farmers to monitor rainfall and to foster drought preparedness.				
2. Climate Change adaptation planning and response strategy	2.1.1: Assist Nyabihu District to develop District Development Plans (DDPs) that are climate change proof based on the new Land-use Master plan of the Gishwati area. 2.1.2: Develop method for integrating CC risk, adaptation planning and mainstreaming CCA in existing plans/strategies and/or establish new instrument(s) (e.g. in land-use and settlement planning guidance and regulations for flood plains). 2.1.3: Pilot application and implementation of local-level responses i.e. relating to flood early warning in particularly vulnerable communities in river valleys. 2.1.4: Communicate and disseminate response plans and hold targeted training events for vulnerable communities on adaptation responses. 2.1.5: Promote disaster preparedness community projects e.g. on flood-proofing housing and infrastructure; moving out of high flood risk areas.	2.1 Climate change sensitive disaster management plans in place for Nyabihu District in Gishwati ecosystem and capacity enhanced to implement them.	2.1 Number of district level plans that take into consideration climate change risks.	Climate proofed district development planning in Nyabihu District.	Number of development planning and land-use plans incorporating climate change risks into their design
	2.2.1: Conduct a land suitability study and develop comprehensive and appropriate land-use plans for Gishwati pilot areas including human settlement plans with targeted local populations in the	2.2 A robust climate resilient Land-use Master Plan in place and implemented for Gishwati region			

Components	Activities	Outputs	Output Indicators	Outcomes	Outcome Indicators
	Bigogwe, Karago and Rambura sectors. 2.2.2: Establish and operationalize a multi-stakeholder participatory planning process. 2.2.3: Based on the land suitability plan and consultations, develop a climate resilient Land-use Plan for Gishwati. 2.2.4: Support land and environment institutions to fully implement policies and laws in the targeted area.				
3. Reduction in the adverse effects of floods and droughts	3.1.1: Identify and implement suitable adaptation techniques that contribute to climate change-proof the targeted areas of Bigogwe, Karago and Rambura Sectors in a participatory manner with the local community. 3.1.2: Develop and implement farmers' action research and land management interventions, including participatory M&E component. 3.1.3: Support implementation of community CC adaptation measures/on-site demonstrations of climate-proofing of integrated watershed management practices in Gishwati. 3.1.4: Promote and support research base and improve information base and knowledge sharing concerning land, water conservation techniques and CCA benefits.	3.1 Climate resilient land-use management practices appropriate for Gishwati pilot areas.	3.1 Number of hectares of land rehabilitated. 3.2 Number of policy briefs based on lessons learned from the implementation of EWS and disaster response in project areas developed. 3.3 Percentage change in climate change vulnerability index of local community in pilot project sites.	**Reduction in the adverse effects of floods and droughts in the Nile-Congo crest watersheds and Gishwati** ecosystem	Percentage change in vulnerability of local community to climate risks via perception based survey (VRA)

Components	Activities	Outputs	Output Indicators	Outcomes	Outcome Indicators
	3.2.1: Review and revise the 2008 Land Suitability Study Conduct by conducting a systematic assessment of climate change impacts and the implications for land use options (including resettlement) in Gishwati with all stakeholders, including local communities, decision-makers and technical experts. 3.2.2 Based on the assessment undertaken in Activity 3.2.1, determine the feasibility of alternative land use options through financial analyses and on-the-ground demonstrations where viable.	3.2 Sustainable landuse options for Gishwati region (including resettlement) developed through systematic assessment of climate change impacts on landuse practices.			
	3.3.1: Develop and implement community and Gishwati-based practitioners' capacity support program. 3.3.2: Establish and implement M&E component that tracks capacity building impacts. 3.3.3: Train decision makers, planners and field actors operating in Gishwati pilot area in CCA strategies related to water management and agricultural practices that are climate change-proof.	3.3 An effective capacity development program for communities and practitioners in Gishwati			
4. Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot	4.1.1: Develop a network of institutions (government, NGOs, CBOs) active in soil and water conservation and sustainable land management sectors to collate experiences for systematic collection of documentation of appropriate soil protection techniques.	4.1 Communication and Awareness strategy in place	4.1 Number of lessons learned codified to relate to all three project outcomes. 4.2 Number of technical documents, other printed materials, videos, and soft products (such as CDs or	**Improvement in the knowledge of good practices to reduce vulnerability to climate change based on Gishwati** pilot.	Number of lessons learned codified as relating to all three project outcomes

Components	Activities	Outputs	Output Indicators	Outcomes	Outcome Indicators
	4.1.2: Establish and operationalize a platform to serve as a local/district (and national) learning mechanism. 4.1.3: Develop communication and awareness raising strategy for targeted stakeholders and end-users. 4.1.4: Establish a community-based communication and information sharing tool (community media: radio and news papers) for climate and hazard prediction.		websites) produced Number of technical documents, other printed materials, videos, and soft products (such as CDs or websites) produced.		
	4.2.1: Undertake stakeholder specific training needs assessment. 4.2.2: Develop and implement capacity building plan and strategy for stakeholders, as well as end-users in project pilot areas.	4.2 A training plan in place and implemented to enhance uptake of lessons learned and engage stakeholders in the various project components			
	4.3.1: Develop system to codify lessons learned from project outcomes and develop strategy of how to best share these 4.3.2: Prepare and disseminate relevant policy briefing materials (based on integrated risk assessments, system model and disaster response planning from the Gishwati pilot area, as well as capacity needs assessment). 4.3.3: Regularly update content on the UNEP Global Adaptation Network (GAN) and the UNDP Adaptation Learning Mechanism (ALM).	4.3 Documentation and dissemination of lessons learned to policy makers and communities throughout the project.			

ANNEX IX. SUMMARY OF THE PROJECT'S SUCCESS IN PRODUCING PROGRAMMED OUTPUTS

Component	Expected Outcome	Outputs	Status at the end of the project
1. Climate risk assessment and forecasting	Improved Early Warning System for climate change risks in Gishwati Ecosystem.	1.1 Functional early warning system that enhances climate change predictions.	• A modern and fully functional EWS is in place and necessary human capacity and institutional mechanisms have been created to support the system. The implementation of the EWS is now on-going and delivering warnings and information to end users. • Meteo Rwanda already issues probabilistic rainfall forecast 3 times per day and send them to stakeholders. These forecasts are being sent to stakeholders and communities by mobile phone SMS. • Community Leaders and District Disaster Management Committees were trained and currently can easily interpret meteorological alerts for decision making. • 22 automatic weather stations (15 synoptic and 7 hydro-meteorological stations) installed in 17 Districts (in both the project sites and country wide).
		1.2 A Gishwati integrated hydro-meteorologicallogicalmodel system that integrates climate change risk assessment and socio-economic parameters.	• Gishwati Model including forecasting information, EWS information dissemination and outreach accomplished, tested and is operational. • Training conducted on Meteo data analysis, forecasting and early warning packaging. • Training conducted on future climate change projection and future impacts scenarios using high resolution model over Rwanda. • Training workshop conducted on monthly and seasonal forecast over Rwanda as a development of Rwanda Seasonal Forecast System to be established as a component of the Rwanda Integrated Early Warning System. • Under MoU between REMA and MIDIMAR, District level decision making and District Disaster management committees were trained and are ready to make decisions based on EWS information. • Conducted training of Meteo Rwanda staff to make maintenance of automatic weather stations. • Platform for sharing lessons learned is already in place. This is a climate change portal with LDCF window which is used to share the best practice.
		1.3 A functional data coordination network for EWS developed through inter-agency coordination.	• The Rwanda Early Warning Task Team is in place and operational. • A network of modern automated weather station established and fully operational. • Purchased and installed modern computing system for data analysis management and climate modeling. • Network coordination between REMA, Meteo Rwanda, MIDIMAR, MINALOC, Districts, Police etc. established; Information sharing and operationalization of Integrated EWS is ongoing. • Farmers empowered to monitor rainfall and foster drought preparedness by installing rain-fall stations.

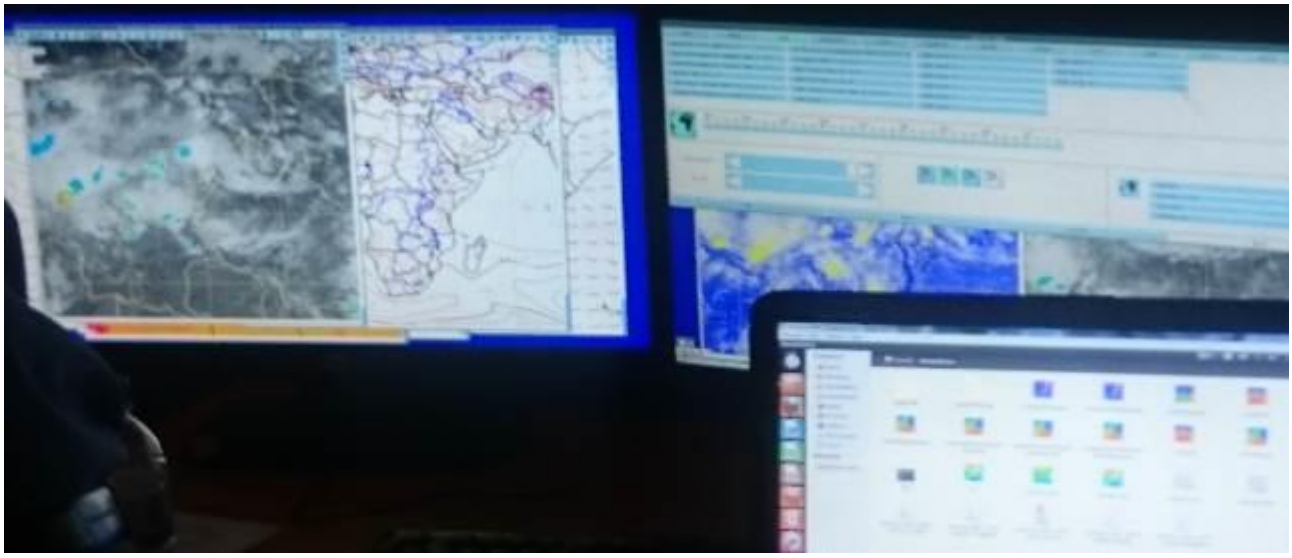
Component	Expected Outcome	Outputs	Status at the end of the project
2. Climate Change adaptation planning and response strategy	Climate proofed district development planning in Nyabihu District.	2.1 Climate change sensitive disaster management plans in place for Nyabihu District in Gishwati ecosystem and capacity enhanced to implement them.	• Joint training on mainstreaming climate change in planning conducted by the project and REMA's Climate change department/REMA). • Climate Change adaptation is integrated in the DDPs of the four pilot districts, and the 30 District in Rwanda. • Climate change adaptation guidelines for four sectors: Agriculture, Health, Energy & Infrastructure and Natural resources were developed through REMA co-financing and shared with concerned sector stakeholders through project support. • A climate change adaptation pilot project on bee keeping developed and is under implementation in collaboration with local communities. • Community leaders and District Disaster Management Committees trained to interpret meteorological alerts for decision making. • Conducted an assessment of economic impacts of the 2012 wet season flooding in Rwanda.
		2.2 A robust climate resilient Land-use Master Plan in place and implemented for Gishwati region	• Climate resilient land use master plan developed through MIDIMAR co-financing (co-financing not planned). The land use master plan categorises the Gishwati ecosystem into land for habitation, agriculture and agroforestry, exotic forestry and natural forestry. • Project funds dedicated to this activity have been reassigned to implementation of the land-use plans. • Bee keeping pilot projects were selected to be implemented by communities grouped into cooperatives. • Conducted workshops in all 30 Districts of Rwanda to prepare annual plan and five year strategic plan which includes environment and climate change activities. All the 30 Districts have included climate change activities in their new DDPs. • A participatory planning process conducted with 187 household members who were selected as beneficiaries to the beekeeping pilot project. • Elements of the landuse plan are already implemented under component 3, i.e. graded terraces, progressive terraces, agroforestry etc. The cumulative total of 1373.21 hectares were rehabilitated (under component 3 of this project). • MoU between REMA and three Districts (Nyabihu, Rubavu and Rutsiro) signed in July 2013 regarding Districts contribution to full implementation of pilot projects related to soil protection, river bank protection and agroforestry.
3. Reduction in the adverse effects of floods and droughts	Reduction in the adverse effects of floods and droughts in the Nile-Congo crest watersheds and Gishwati ecosystem	3.1 Climate resilient land-use management practices appropriate for Gishwati pilot areas.	• Trained field environmental officers and agronomists on reporting, participatory monitoring and evaluation approaches, GIS applications and Google Earth use for area mapping, and use of GPS for field data collection. • Signed MOUs with four pilot districts to implement climate change adaptation and sustainable land management practices. • Progressive and radical terraces have been installed with plantation of trees (Alnus), kikuyu grass on contours and maintained.

Component	Expected Outcome	Outputs	Status at the end of the project
			• Graded terraces have been installed with check dams for water retention using local material (indigenous trees). • Livelihood projects (bee keeping, mushrooms, and rearing chicken) with a bias on gender and youth put in place. • A veterinary pharmacy has been constructed in Rustiro district and required equipment purchased and installed.
		3.2 Sustainable landuse options for Gishwati region (including resettlement) developed through systematic assessment of climate change impacts on landuse practices.	• Documentation of lesson learnt is in progress. • An assessment was undertaken by the project implementation unit in to documents best practices, gender considerations but also to measure the climate change vulnerability index and biophysical indicators. • The finding indicates that the vulnerability of communities to climate change impacts has shifted from 28 to 17.7. This demonstrates that the target set (achieving a vulnerability index of 18) was achieved and even surpassed.
		3.3 An effective capacity development program for communities and practitioners in Gishwati	• Awareness workshops conducted. • Project materials and manuals material produced in Kinyarwanda and the summary in English. 4000 copies of the materials have been printed and distributed printing and distribution. • Developed a 21 minutes documentary film on project achievement.
4. Knowledge of good practices to reduce vulnerability to climate change based on the Gishwati pilot	Improvement in the knowledge of good practices to reduce vulnerability to climate change based on Gishwati pilot.	4.1 Communication and Awareness strategy in place	• Developed a portal for Rwanda Climate change http://www.rema.gov.rw/climateportal. The website/portal is live and working and regularly updated. • REMA hired District Environmental Facilitators (DEFs) and are based in all 30 Districts. DEFs were trained in Environment and Climate change and act as local focal points, trainers and guides for environment and climate change. • Successfully conducted a study on Rwanda climate change communication and awareness raising strategy for targeted stakeholders and end users. • REMA and Meteo Rwanda agreed to launch an SMS platform for communication of forecast and/or alerts 3 times per day. • Finalised contract with MTN on EWs SMS - information dissemination. • Dissemination of EWs and climate information through Radio, TV and extension officers.
		4.2 A training plan in place and implemented to enhance uptake of lessons learned and engage stakeholders in the various project components	• Stakeholders needs identified in meeting held with REMA's department of climate change, Environment Education and mainstreaming. • A training module was developed with staff of this department in response to the meetings recommendations. • A training module in Kinyarwanda for trainers has been developed. • Developed beekeeping training manual. • Conducted training workshops on use of EWS for decision making including simulation exercises. The training was dedicated for local community leaders in Gishwati areas and disaster district management committees.

Component	Expected Outcome	Outputs	Status at the end of the project
		4.3 Documentation and dissemination of lessons learned to policy makers and communities throughout the project.	• A study on project lessons learned is underway and once completed it will facilitate dissemination of lessons learned. • Conducted a study to establish the climate change vulnerability index after project implementation (to assess impact of project activities on vulnerability as outlined in the project log-frame). • 4000 copies of policy briefing materials printed and distributed. • Climate change portal has been developed and this will serve as an institutional network for sharing information on on-going climate change activities, research, and lesson learned, challenges etc. • A window for the project was created on Climate change portal. • Developed a 21 minutes documentary film on project achievement. It will serve as lesson leaned for further activities addressing climate change adaptation.

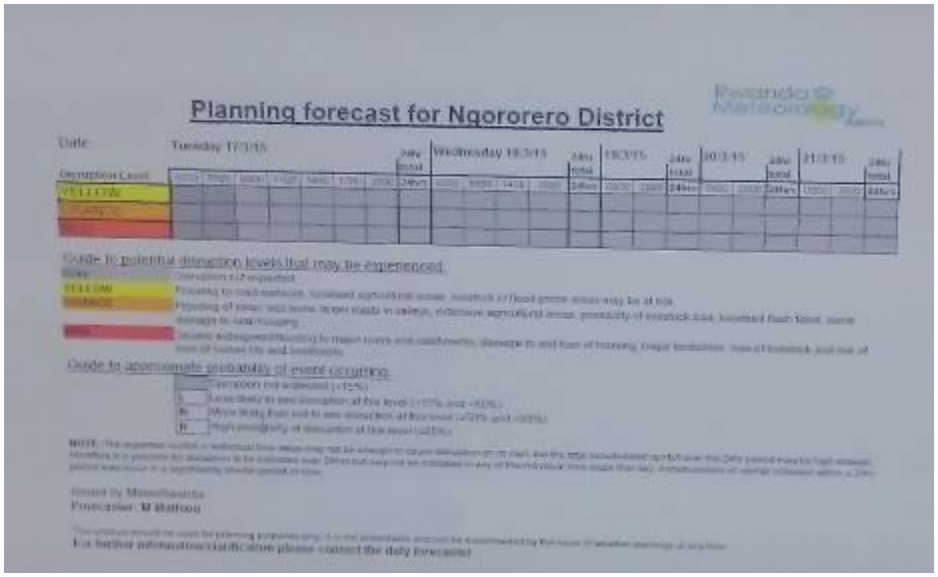
ANNEX X. LCDF RWANDA PROJECT - PICTURES

Automatic weather stations were put as part of the EWS of the LCDF project



Weather and climate monitoring at Rwanda Meteorological Agency

Farmers were trained to monitoring and recording rainfall using rain gauges as part of the EWS



Planning weather forecasts for districts are part of the EWS and adaptation decision making

Degraded land and hill slopes were rehabilitated through the establishment of graded and progressive terraces

Part of Lake Karago with clean water - Protection of watersheds was an adaptation intervention promoted by the project

ANNEX XI. CONSULTANTS' RÉSUMÉ

Revocatus Twinomuhangi, PhD - Team Leader

Revocatus Twinomuhangi holds a PhD in Environmental Management (Makerere University). He is a Uganda national working as Senior Lecturer in the Department of Geography, Geo-Informatics and Climatic Sciences at Makerere University. His main fields of expertise related to climate change involve climate change vulnerability, impact and adaptation, low carbon development, project development, implementation and evaluation. Evaluation related experience involves evaluation of the UNEP Climate Change Sub-programme and Uganda's Farm Income Enhancement and Forestry Conservation Project in Uganda.

He has been engaged as an independent consultant with many international organizations i.e. UNEP, UNDP, USAID, FAO, USAID, CDKN, WWF, EU, and Expertise France (former Adetef) in Uganda, East Africa and the African region. Currently he is currently engaged in overseeing two CDKN supported projects - the economic assessment of the impacts of climate change in Uganda and developing Intended Nationally Determined Contributions (INDCs) for Uganda. In addition he is engaged in National Adaptation Plans (NAPs) preparation for Uganda, developing a low carbon development and climate change resilient strategy for Kampala city. He was engaged in: developing the National Climate Change Policy for Uganda, integration of climate change in Uganda's Second National Development Plan (2015-2020), development of the Integrated Territorial Climate Change Plan for the Mbale region of Uganda, development of climate change adaptation strategy and action plan for WWF Uganda country Office. He is currently the Coordinator of the Makerere University Centre for Climate Change Research and Innovations and Director, Remode Consults Limited.

Gilbert Ong'isa Ouma, PhD - Supporting Consultant

Gilbert Ong'isa Ouma is Meteorologist, and is a Senior Lecturer in the Institute of Climate Change Adaptation at University of Nairobi, Kenya. He has carried out research and published on climate risk reduction and early warning as a strategy for climate change adaptation in the Greater Horn of Africa region. Has a broad experience in Participatory Action Research methodology and Climate Change Adaptation through involvement in several application-related projects working directly with vulnerable communities. Gilbert was involved in developing and piloting a framework to integrate the disaster risk and climate information for a comprehensive risk information system for United Nations International Strategy for Disaster Reduction (UNISDR), He has been engaged in: Building Resilience and Adapting to Climate Extremes and Disasters (BRACED), a Department for International Development (DFID) funded programme; IGAD Climate Prediction and Applications Centre (ICPAC) within the Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development (PREPARED) project; Community Based Climate Services (CBCS) in support of climate risk reduction and local livelihoods in Eastern Africa; Improved Drought Early Warning and Forecasting to strengthen preparedness and adaptation to droughts in Africa; Knowledge Sharing for Climate Change Adaptation in Africa - AfricaAdapt; Trainer on climate change and vulnerability and adaptation assessment in support of Eritrean Second National Communication; Integrating indigenous knowledge into climate risk reduction – Case of the Nganyi Community of Western Kenya; Integrating Vulnerability and Adaptation to Climate Change into Sustainable Development Policy Planning and Implementation - Increasing Community Resilience to Drought in Makueni District, Kenya; Strengthening Community-Based Adaptation to Climate-Sensitive Malaria in Kakamega and Kericho Districts, Western Kenya Highlands; and, assessment of vulnerability and adaptation to climate variability and climate change impacts on malaria and health in the Lake Victoria region in East Africa.