



PROJECT IDENTIFICATION FORM (PIF).

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: Least Developed Countries Fund

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PART I: PROJECT INFORMATION

Project Title:	Strengthening Comoros resilience against climate change and variability related disaster		
Country(ies):	Union of Comoros	GEF Project ID: ¹	6912
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	5445
Other Executing Partner(s):	DGSC	Submission Date:	July 31, 2014
GEF Focal Area(s):	Climate Change	Resubmission Date:	Oct. 13, 2014
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Project Duration (Months)	60
Name of parent program:	N/A	Corporate Program: SGP <input type="checkbox"/>	
		Agency Fee (\$)	848,579

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²:

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
(select) CCA-1 (select)	LDCF	7,232,421	31,650,000
(select) CCA-2 (select)	LDCF	1,700,000	6,000,000
Total Project Cost		8,932,421	37,650,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Strengthening the adaptation and resilience capacities of most vulnerable communities in climate change and variability related disaster risks in the Comoros

Project Component	Financing Type ³	Project Outcomes	Trust Fund	(in \$)	
				GEF Project Financing	Co-financing
Strengthening institutional, policy and regulatory framework of integrated climate risks and disaster	TA	1) Systemic and institutional capacities for the long-term management and adaptation planning of disaster risks caused by CC are strengthened at local, provincial and national levels.	LDCF	2,000,000	6,500,000
Improving and strengthening knowledge and understanding of key climate drivers of natural disasters and their medium to long term influence on disasters frequency and intensity and communities vulnerability to disasters	Inv	2) knowledge and understanding of medium to long-term climate-related disaster risks and vulnerability are improved	LDCF	1,500,000	8,900,000
Sustainably Strengthening community resilience to climate induced disaster risks	Inv	3) The long term resilience of the livelihoods and assets of vulnerable communities against climate disaster risks is strengthened	LDCF	5,032,421	20,950,000
Subtotal				8,532,421	36,350,000
Project Management Cost (PMC) ⁴			LDCF	400,000	1,300,000

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the GEF Website, [Focal Area Results Framework](#) which is an Excerpt from [GEF-6 Programming Directions](#).

³ Financing type can be either investment or technical assistance.

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

	Total Project Cost	8,932,421	37,650,000
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If Multi-Trust Fund project: PMC in this table should be the total and enter trust fund PMC breakdown here ()

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	UNDP	Grants	1,650,000
Donor Agency	UNIDSR RC Integration in les Pol	Grants	1,000,000
Recipient Government	PASDTR (\$20,000,000) ICO Natural Risks Management Project (\$400,000) Qatar and Chinese (Medical facilities) (\$14,500,000) Human Resources and running costs of premises (\$100,000)	Grants	35,000,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Co-financing			37,650,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
UNDP	LDCF	Comoros	Climate change		8,932,421	848,579	9,781,000
Total GEF Resources					8,932,421	848,579	9,781,000

a) No need to fill this table if it is a single Agency, single Trust Fund, single focal area and single country project.

b) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG) ⁵

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
UNDP	LDCF	Country <input checked="" type="checkbox"/>	Climate Change	(select as applicable)	200,000	19,000	219,000
(select)	(select)	<input type="checkbox"/>	(select)	(select as applicable)			0
(select)	(select)	<input type="checkbox"/>	(select)	(select as applicable)			0
Total PPG Amount					200,000	19,000	219,000

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF upto \$1 mil; \$100k for PF up to \$3 mil; \$150k for PF up to \$6 mil; \$200k for PF up to \$10 mil; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	2(Enter number of hectares)
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	(Enter number of hectares)
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	(Enter number of freshwater basins)
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	(Enter percent of fisheries, by volume)
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	(Enter number of tons)
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	(Enter number of tons)
	Reduction of 1000 tons of Mercury	(Enter number of tons)
	Phase-out of 303.44 tons of ODP (HCFC)	(Enter number of tons)
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	(Enter number of countries)
	Functional environmental information systems are established to support decision-making in at least 10 countries	(Enter number of countries)

PART II: PROJECT JUSTIFICATION

PROJECT OVERVIEW

A.1. PROJECT DESCRIPTION. BRIEFLY DESCRIBE: 1) THE GLOBAL ENVIRONMENTAL PROBLEMS, ROOT CAUSES AND BARRIERS THAT NEED TO BE ADDRESSED; 2) THE BASELINE SCENARIO OR ANY ASSOCIATED BASELINE PROJECTS, 3) THE PROPOSED ALTERNATIVE SCENARIO, WITH A BRIEF DESCRIPTION OF EXPECTED OUTCOMES AND COMPONENTS OF THE PROJECT, 4) INCREMENTAL/ADDITIONAL COST REASONING AND EXPECTED CONTRIBUTIONS FROM THE BASELINE, THE GEFTE, LDCF, SCCF, AND CO-FINANCING; 5) GLOBAL ENVIRONMENTAL BENEFITS (GEFTE) AND/OR ADAPTATION BENEFITS (LDCF/SCCF); AND 6) INNOVATIVENESS, SUSTAINABILITY AND POTENTIAL FOR SCALING UP.

The climate change related issue

Comoros is highly vulnerable to natural disasters (floods, cyclones, volcanic eruptions, earthquakes, and tsunami) and epidemics including cholera, dengue and chikungunya. In the last two decades Comoros, 17 natural disasters were recorded with 148 deaths and more than 400,000 people affected. The biggest disaster was in 2005 when 245,000 people were affected by a volcanic eruption. In addition, torrential rains, storms

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

and floods have affected more than 117,000 people in the last two decades. Climate projections show that the situation faced by the Comoros in recent years could worsen. According to the IPCC, through projections of Atmosphere-Ocean General Circulation Model (AOGCM), the climate change scenarios for small islands in the Indian Ocean from 2040 to 2069 indicate an increase of the average annual rainfall to 3.1% (+ or -0.45%)⁸. The sea-level rise is expected to reach 20 cm by 2050⁹. Weather and climate extreme events such as cyclones, tsunamis are also expected to increase in frequency and intensity in the future¹⁰. Therefore, it is likely that future tropical cyclones would gain intensity, that heavy rainfall and floods would be more intense during the hot season, that on the opposite droughts would be more intense during dry season and that land erosion would be exacerbated¹¹.

Among the factors of the Comorian populations' vulnerability to natural disasters one can note the following:

- Natural factors: the insularity, the rugged topography with many steep slopes, combined with the natural and soil triggered waterproofing (lava flow) stimulate the runoff strength of rainwater, causing multiple erosions and flooding and leading to destruction of villages.
- Land-use planning: housing is often temporary and under precarious and anarchical conditions. The vulnerability of some areas is more acute because of their proximity to the sea that threatens to engulf houses built too close to the eroding coast, either as a result of rainfall, tides or because of sand removal used as construction material.
- Poor transport networks: transport networks are poor and were built without taking in account climate induced disaster risks. The Union of the Comoros road network comprises 800 km of roads, of which approximately 50% is classified as in "good and fair" condition and almost 30% in "bad and very bad" by the National Roads and Road Transport Office (DNRT). In several areas the road network is either partially or totally degraded. This situation makes road networks very vulnerable and easily degraded and/or not fully operational in the event of climate induced disasters and this contributes to increased vulnerability of the Comorian communities. In disaster situation they are cut off from health infrastructure and food supply including drinking water and hardly access to emergency relief
- Weak socio-economic base of the community contributes a great deal to increase their vulnerability.

Ideal solution and the barriers to its implementation

The strengthening of the resilience of the Comorian communities to climate related natural disasters will in a long term require a profound change in the current practices of development planning and implementation. This will first require greater awareness of decision makers and a better understanding of medium to long-term climate change risks. This will also require that human settlements, community basic infrastructure and economic development infrastructure be made more resilient to disasters induced by climate change through designing and implementation of effective prevention against natural disasters and the integration of climate change and disaster risk management in the development.

The main obstacles to attain this ideal solution are:

- Limited access to The information and knowledge on disaster risks and their climate factors
- Weakness of the technical and operational capacity of the national, regional, local and sectorial institutions to plan, budget and implement in a coordinated manner the preparedness and recovery plans for climate change-related disasters.
- Weak capacity and community engagement in the prevention of disaster impacts on their livelihoods and economy.
- Poor integration of disaster risk and climate change in urban planning, development and management of land and forests and human settlements
- Non-existence of adequate regulatory and policy framework for Disaster Risks Management integrating climate change.

⁸ Comoros NAPA, 2006

⁹ Same as above

¹⁰ Same as above

¹¹ CARE, 2011: Comorian Disaster Risks Reduction Situational Analysis

- Lack of sustainable funding mechanisms for disaster risks management

The baseline scenario

UNDP is providing support to Comoros in building institutional, systemic and individual capacities for DRM through two projects. These projects are: 1) Integrating disaster risk reduction into policies to alleviate poverty in the Union of the Comoros (2008-2014; \$700,000); 2) Capacity building in natural and climate risks management in the Union of the Comoros (2009-2014; \$990,800). This support has led to:

- i) The creation of a new institutional DRM framework through the establishment of the DGSC and its Divisions at islands level, and its operational support units namely CATI (Information Analysis and Processing Centre), and the national platform for disaster risks prevention and reduction (NPDRR). However, while the DGSC mandate is to coordinate the development and implementation of national policy on disaster risk management, the disaster risks preparedness strategies and plans, the development and dissemination of early warning products, the relief operations in case of disasters, the DGSC do not have the capacity neither access to relevant climate information to integrate the current to long term climate drivers of disaster risks in the implementation of its mandate. For example, the CATI which is supposed to collect, process and analyze all information related to the prevention and management of disaster risks and provide to the DGSN with early warning decision making and disaster risks preparedness planning information do not integrate the climate change information in the decision making support tools it provides to the DGSN.
- ii) The development of a Specific Karthala Volcano plan: this plan is a disaster relief plan and is predominantly focused on the provision of emergency services and public assistance during and immediately after a volcano eruption to save lives, reduce negative health impacts, ensure public safety and meet the basic subsistence needs of people affected. While this plan encompasses a warning system, this warning system is based on the control of current anomalies of the volcano activities and does not integrate a system for the long-term monitoring of the volcano activities that will allow to forecast in the medium to long term the risks of volcano eruptions. For this reason, the warning system can only engage the warnings when the disaster starts to happen. Additionally, the management relief plan does not integrate dispositions to identify the climate risks that could affect the efficiency of the response to the disaster and appropriate mitigation measures.
- iii) The elaboration of a specific tsunami relief plan which defines both the warning levels with safety directives to convey to the people and the roles of the different sectors in the organization and implementation of the emergency response. The Meteo Directorate depends on the regional warning bulletins from the Japan Meteorological Agency (JMA), the Pacific Tsunami Warning Center (PTWC) and their Regional Integrated Multi-Hazard Early Warning System (RIMES) office based in Thailand. Additionally, the management relief plan does not integrate climate concerns.
- iv) The Specific Cyclone plan is also a relief plan meant essentially to coordinate the emergency response and assistance in case of cyclones. It is not meant to monitor in the long term the cyclone events in order to be forewarned of the impending disaster itself so that measures that could taken to reduce the impacts of the disaster. As it is recognized that the vulnerability of coastal regions including the small islands to cyclone led flooding is expected to increase with future sea-level rise, climate induced coastal degradation and coastal development, the current plan in place is inadequate..
- v) The 2011-2016 Climate Change and Natural Disaster Risks Reduction Strategic Framework development and the DRM integration in the PRSP; this Strategic framework is organized in 3 distinct thematic pillars, notably climate change, biodiversity conservation and DRR but without any integration among the 3 pillars. This strategic framework does not offer any avenue for the integration of climate change in disaster risks management in Comoros, which in practice is undermining comprehensive response and management strategies.

Furthermore, the Indian Ocean Commission through the project “strengthening of national capacity on early warning systems and response to tsunamis in the Indian Ocean, (2011 to 2016; \$ 442,890) is also supporting the Comoros to strengthen its preparedness capacity to effectively anticipate, respond to and manage the impacts of cyclones and tsunamis, torrential rains and floods. This project is strengthening the General

Meteorology Directorate (DGM) capacity to use this information to develop and put at the disposal of the DGSN early warning products. Additionally, this project aims at strengthening the national and regional capacity in term of disaster watch and improving the coordination of the relief and recovery actions. However again, this project doesn't integrate the climate information in the monitoring of the torrential rains and floods and also dispositions to identify the climate risks that could affect the efficiency of the response to the disaster and the appropriate mitigation measures.

Two new projects supported respectively by the United Nations Office for Disaster Risk Reduction (UNISDR) and titled "Capacity building for disaster risk reduction in the Union of the Comoros" (2014-2017, \$ 1,109,202) and by the UNDP/BCPR – "phase 2 of the Capacity building in natural and climate risks management project" (2014-2016; \$600,000) will support: i) the strengthening of the capacity of DGSN for long-term DR monitoring and early warning, capacity building of the key institution in DRM mainstreaming in sectorial development strategies as well as the national platform for disaster risk management (NPDRM) operational capacity for strengthening the coordination of DRM activities; ii) the development of the specific disasters (Tsunami, Cyclone, Karthala volcano, heavy rain and flood) prevention and preparedness plans; iii) the strengthening of information management systems for DRR (National Risk Observatory); iv) the strengthening of disaster risk assessment and mapping tools and capacity (GIS) and the elaboration of the country multi-hazards profile; V) the establishment of long-term dynamic DRR planning mechanisms; vi) the strengthening of the DRM regulatory framework. If these two projects will contribute to improve Comoros disasters preparedness and prevention capacity, they do not include measures to mainstream climate information in the monitoring and prevention and preparedness plans of disasters caused by increasingly frequent torrential rains and floods.. Measures such as addressing climate induced coastal erosion, integrating climate information in mangrove forest management and hill woods management could improve Comoros capacity to reduce and cope with the impacts of tsunamis, flooding from sea-level rise and lands slides which regularly occur in the country.

Furthermore, in order to improve communities' mobility, opening-up and access to socio-economic and health facilities, the Comoros government through the EU financial support is implementing a project titled "Support program for Sustainable Development of Transport in the Union of the Comoros (PADST)" (2014-2016; \$27,263) and is currently building two referral hospitals in Anjouan with the support of the Qatari cooperation (\$15 million) and in Moroni (including an infection detection laboratory) with the support of the Chinese government (\$7 million). These projects are relevant baselines initiatives contributing to strengthening Comoros preparedness and prevention capacity to the impacts of climate induced disasters. Indeed, the road networks is currently very poorly developed, easily degraded and any significant hazard makes the road network unusable, leaving the communities cut off from health infrastructure and food supply including drinking water and access to appropriate emergency relief. By strengthening the robustness of road networks to expected hazards, the PADST will contribute to increasing community mobility and access to relief. Also, the new health infrastructures mentioned above will significantly contribute to improve the level of health and medical care in case of disasters. However, for the sustainability and a better operationally of these infrastructures in case of disasters, it is necessary to identify the climate change induced risks that could negatively impact them and include mitigation responses in their design, construction and management.

Alternative Solution

Building upon the DRM baseline scenario and projects described above, the LDCF proposal aims at strengthening the Comoros adaptation capacity to control and manage the current and long-term climate drivers of disasters risks and vulnerability in Comoros. To achieve this objective, the project will pursue the achievement of the following outcomes: i) Systemic and institutional capacity for coordinated management of current and projected climate drivers of disaster risks and vulnerability are strengthened at the local, regional and national levels; ii) knowledge and understanding of actual and medium to long-term climate-related disaster risks and vulnerability for Comoros are improved; iii) The resilience of vulnerable communities' livelihoods and assets against disaster risks induced by climate change is sustainably enhanced.

To this end the **Outcome 1**, will support the development and implementation of a climate risks management training program complementary to the BCPR and UNISDR projects capacity building activities and building on the NAP related capacity need assessment, for local authorities, mayors and other decision makers including the members of the DRM National Platform. This capacity building program aims at strengthening the capacity and skills for a coordinated integration of climate change and DRR in the policies, strategies and other development initiatives at local, regional and national level. This will include training keys technical officers on how to integrate the climate change in the prevention, mitigation and response to the impacts of the disasters (including the ones not induced by climate change such as tsunamis, cyclones). In this same perspective, the LDCF project will also fund the development and implementation of a technical and operational capacity building program (equipment, software, logistics and required training) for the DGSC and its regional and local Divisions as well as its operational units (CATI, CTA) to process, analyze and integrate in the DRM the long-term climate drivers for the climate induced disaster risks and the communities vulnerability to these risks and timely disseminate decision making support information for climate resilient development planning. Also, In order to provide policy makers and other institutional stakeholders with policy, institutional and regulatory tools essential for long-term management and prevention of climate related natural disasters, the LDCF project will support : i) the integration of climate concerns within the land-use plan developed by the IOC project for Moheli and the development of complementary climate resilient land-use plans, urban master plan and public infrastructures building standards for Grande Comores and Anjouan; ii) the integration of regulatory dispositions and incentives for supporting the enforcement of the climate resilient plans and building standards within the DRM regulatory framework (to be developed thanks to the UNISDR project); iii) the integration of medium and long term disaster risks climate drivers and adaptations options within the disaster prevention and preparedness plans (Tsunami, Khartala, Cyclone, surge storms, flooding), the POLMAR plan and the specific relief plans (supported by the UNDP baseline projects); iv) the integrated mainstreaming of climate change and DRR into the Strategy for Accelerated Growth and Sustainable Development (SCADD, 2015-2019) and its sectorial action plans as well as the regional and local development plans and related budgets. The climate risks mainstreaming process will be informed by the climate informed country multi-risk profile and the scoping of adaptation objectives and options at national and island levels, the mapping out and costing of the adaptations option and the integration of these adaptation options within sectorial plans and budgets preparation guidelines issued by the Ministry of Economics and Planning to the different sectors. This will be coordinated with the development of the Comoros climate change adaptation strategy in the framework of the NAP process. To support the implementation of the adaptations options that will come out from the scoping of adaptation objective mentioned above, the resources allocated to the outcome 1 will finance the establishment of a climate change adaptation Fund with an initial investment co-funded by UNDP and the LDCF resources and sustained by the government and its development partners. To this effect, this output will also deliver a financial resources mobilization strategy for the climate change adaptation fund.

The LDCF resources, through the **Outcome 2**, and building upon the UNDP/BCPR and IOC projects will support a number of investments to strengthen national capacity for medium and long term climate-related disasters risk identification and monitoring, and production and dissemination of early warning information. This outcome will be linked and will be supporting the Element B of the NAP process in Comoros. To this end, the resources allocated to this outcome will support the mapping of medium and long-term risks of heavy rains and sea-level rise flooding, landslides, as well as the vulnerabilities of communities, infrastructure and roads networks to these disasters. This will be completed by the modeling of climate change influence on hydro meteorological and geological hazards (heavy rains, floods, flash floods, lahar landslides, hurricanes, current flows and risks of rivers flash floods). These 2 outputs will inform the raising awareness of communities and decision makers, the scoping of the national and island level adaptation objectives and the medium to long-term management and planning of adaptation strategies for climate induced disasters risks. However in order to develop and regularly update these risks mapping and modelling, the DGM will need to strengthen its monitoring equipment and its meteorological and climatic data analysis capacities. Indeed, Comoros currently reliant on the Regional Specialized Monitoring Centre (RSMC located in Reunion) for cyclones, tsunamis and floods forecasting. However, RSMC forecast models do not take in account the island specificity of Comoros. These are global models with low resolution which do not refine forecasts. For

example, the 2012 floods caused by rains were not detected by the RSMC model according to the DGM experts. The WMO is also implementing a regional project forecasting severe weather events hosted by the South African Weather Services (SAWS). Enabling these centers to refine these forecast models to Comoros level requires that the DGM be able to provide RSMC and SAWS with national meteorological data in order to calibrate and couple the models with a digital terrain model so that they may provide Comoros specific forecasts. The UNDP/UNEP/GEF-LDCF¹² and UNDP/GEF-LDCF¹³ projects are establishing 15 automatic stations that could be a starting point to improve long-term weather monitoring allowing the DGM to provide RSMC and SAWS with required information to calibrate forecasting models in the Comoros context. However, information provided by the meteorological monitoring network need to be refined through a range of weather and climatic data applications and analysis in terms of major disaster risks Comoros is exposed to. In line with this, the project, will fund the establishment of: i) a SYNERGY station which will provide a range of applications from water resource management, long-term flood forecasting and monitoring and assessment of damages caused, to agriculture, natural resources, food security in general and particularly the evaluation of needed food relief in case of disaster or humanitarian crisis; ii) a MESIR SADIS station, which would refine forecasts and develop forecasters scorecards, and iii) 20 Limnimetres, 5 limnigraphs, 20 flow meters and 3 stereoscopes for better exploitation of rivers related flood modeling. In order to provide the DGM with necessary human capacity for efficient operation and maintenance of the equipment referred to above, the LDCF project also will support the training of 5 DGM officials in information processing relating to forecasts of cyclones, tsunamis, torrential rains, tornadoes, offshore wind and waves and coastal areas flooding, received from forecasting severe weather events centers (SAWS and others). This output will also support the training of 2 senior DGM specialists in the maintenance of equipment that will be acquired through this LDCF project and other equipment already acquired by the DGM. In order to improve the Comoros capacity to manage the impacts of the mid-to long term projected Karthala volcanic eruptions risks, the LDCF resources will support the integration of community, ecosystems and infrastructures climate change vulnerability and risks drivers in the monitoring system of Karthala magmatic activities through the financing of seven modern seismological stations, three GPS/GNSS permanent stations, two surveillance cameras and CO2 station repair. Also the LDCF will support the training of five OVK technical staff on how to integrate medium to long term climate projection information in volcanic monitoring activity.

Building upon the PADST, and the medical facilities construction projects and the adaptation options scoping in the outcome 1, the **Outcome 3** will implement investments to sustainably strengthen the Comorian communities resilience against the climate related natural disaster risks identified above. In this perspective, the LDCF will finance reforestation programs in 60% of the degraded hillsides land areas concerned by the PADST¹⁴ to promote rain water infiltration, reduce flooding risks in the lowlands and landslides risks. In addition to protecting the communities of the above areas, these investments will help protect road investments of the PADST against floods and landslides that destroy main roads or render them inoperative for a long period, thus making rescue operation difficult. The sustainability of these reforestations activities will be supported by the complementary climate resilient land-use plans, urban master plan and public infrastructures building standards the project will support under the outcome 1. Also in order to reduce storm water runoff and prevent the risk of flooding in case of torrential rains, the LDCF project will fund the construction of individual and community storm water collection and redistribution systems for the most vulnerable communities of Dimani, Oichili and Hamanvou in Grande Comore. In addition to reducing flood risk, these investments will also support the beneficiary communities to cope with shortening and disruption in time and space of rainy seasons making it difficult for appropriate farming activity (main livelihoods sources) during most of the year. In this same perspective, the LDCF project will fund the dredging of key rivers¹⁵ and the construction of protection dykes for the villages the most prone to flooding from these rivers. In order to

¹² Adapting water resource management in the Comoros to expected climate change.

¹³ Enhancing adaptive capacity for increased reliance to climate change in the agriculture sector in the Union of the Comoros

¹⁴ Bambao Hambou, Dimani, Domba and Hamahamet in Grande Comore; Vassi, and Koni Bambao Djodo, Mirontsi Ouani in Anjouan; Wanani, Siri-Ziroudani, Fomboni, Hoani, Hagnamwada in Moheli

¹⁵ (Nioumadzaha, Mistoudjé-Salimani, Kafouni, Vouvouni (Gde Comore) Chironi ((Domoni) Pagé, Mirontsi, Ntsabamwé (Mustamudu) (Anjouan), Msoutrouni (Fomboni), Dewa (Bangoma) Hoani, Nyoubegni (Djoiezi) (Moheli)

increase the emergency relief speed during climate related natural disasters, the LDCF project will fund: i) the establishment of social safety nets such as food banks, seeds and medical emergency products in 9 communities¹⁶; ii) investments without regret for the protection of the most vulnerable socio-economic community infrastructure (3 hospitals in Grande Comore including the new referral hospital to be built by the baseline projects, 3 in Anjouan and 2 Moheli, 20 schools, key markets places, and temporary accommodation areas). Areas will be identified during the preparation phase based on a number of criteria including strategic position, the number of road access towards the beneficiary villages and resilience to floods and other natural disasters. The activities funded through this outcome will focus on the high labor intensity (HLI) criteria to provide income to vulnerable young and women from beneficiary villages which they can later reinvest in alternative incomes generating activities (IGAs) to be supported by the project. In this perspective, the LDCF project will support the development of IGAs (through training and financing), alternatives to the livelihoods option contributing to the deforestation of hills in the villages targeted above. In addition to reduce the hillsides land vulnerability, these IGAs will contribute to improve the livelihoods of beneficiary communities and strengthen their resilience to natural disasters. The initial investment for these IGAs will come from the incomes earned through the HLI activities referred to above. This output will also train and provide the beneficiaries with advisers on good business management practices, and raise their awareness on the climate induced disaster risks and the main drivers of their vulnerability to disasters to facilitate their acceptance of and involvement in the implementation of the climate resilient land use plans. The actions aiming to strengthen the community resilience against climate related natural disasters mentioned above will be planned, organized and sustained through the development of village action plans for risk prevention and management in the 30 most vulnerable villages. These adaptation plans will also popularize hygiene and health practices to contain the floods related epidemic risks. These action plans will be coordinated with the adaptation options identified under the component 1 and integrated into the local development plans of the concerned regions and other relevant sectorial development strategies and planning process to promote sustainability and involvement of all development partners of these regions in the implementation of these plans.

A.2. Stakeholders. Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes ☒ /no ☐) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation:

CSOs and NGOs will be involved in the project preparation. Indeed, the vulnerability and risks assessments, the site identification, the identifications of alternatives income generating activities (IGAs) and the consultations with the government and the communities during the project preparation phase will be co-implemented with the key CSOs, NGOs and CBOs that have a long partnership experience with the Comoros communities. Among these NGOs the Comoros Red Crescent that has a long experience on supporting communities to manage disaster risks will play an important role. Additionally, during the PPG phase, the communities will be responsible, with the support of NGOs, for identifying and prioritizing the resilient IGAs alternatives to activities contributing to the deforestation of hills. For the project implementation itself, the activities for strengthening the long term resilience of communities will also involve community based organizations and NGOs. The key NGOs that will be involved and the detail of their involvement as well as of the communities in the project implementation will be determined during the project preparation.

A.3. Gender Considerations. Are gender considerations taken into account? (yes ☒ /no ☐). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

During the project preparation phase, gender based vulnerability assessments will be made in the different targeted villages and regions in order to point out the specific gender related vulnerabilities. The results of this assessment will inform the identification and development of gender-sensitive adaptation measures and strategies to be supported by this LDCF in order to address the identified gender related climate risks and vulnerabilities. These

¹⁶ 4 in Grande Comore: Fombouni, Koimbani, Mitsamiouli and Itsandra Hamanvou, 3 in Anjouan: Mustamudu, Domoni and Sima and 2 in Moheli: Fomboni Nioumachioi

adaptation strategies will be technically specified (including the required specific capacity building and financial support) and their cost-effectiveness vis-avis to alternatives approaches clearly demonstrated

A.4 Risk. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable):

Risk	Risk level	Risk mitigation measures
The Comoros socio-political context is unstable and unfavorable to national consciousness emergence on disaster risk reduction issue.	Medium	Realignment of Disaster Risks Management activities according to the situation assessment
People in the communities at risk are not ready to change their behavior in order to prevent further climate induced natural disasters and strengthen their resilience	Low	Implementation of an awareness program targeting the affected populations, results assessment and strategy adjustment if necessary
There are not enough skilled and available human resources within the national and island structures to support project initiatives and sustain the project achievements.	Medium	Adoption of a capacity development approach based on a prior assessment of capacity needs to ensure effectiveness and efficiency in prevention and reduction of disaster risk operations
Staff trained in the project leave the country	Medium	The capacity building program will include the development of a strategy to retain skilled staff.
Grassroots communities do not have adequate capacity in DRM and CC to participate more effectively.	Low	capacity building program implementation based on capacity needs assessment match the assimilation capacity and the beneficiaries reality
Natural and climate disaster management during the project implementation diverts stakeholders attention and disrupts the project work plan	Medium	Taking into account the potential risk in the project annual work plan and project management staff work plans preparation

A.5. Coordination. Outline the coordination with other relevant GEF-financed and other initiatives:

The coordination and the management arrangements will be defined in detail during the preparation phase of the project. Based on initial discussions with the Government of Comoros, the DGSC (Direction Generale de la Securite Civile) will ensure the overall coordination of the project as a national implementing agency, and in close collaboration with the General Directorate of Environment, Directorate General of Meteorology, the Karthala Volcano Observatory, and the National Directorate of Infrastructures. The Project Coordination Unit will be hosted by the DGSC. The DGSC which is the main implementing partner of the UNISDR, UNDP/BCPR, and the IOC projects will ensure of the coordination of these aforementioned projects with the outcomes 1 and 2 of the LDCF project. In the same perspective, the National Directorate of the Infrastructures which is the main implementing partners of the PADSTR for the Hospital infrastructures project and other public infrastructures will ensure the coordination of these projects with the outcome 3. The DGM which is responsible for the execution of the component 2 (meteorological investments) of the UNDP/GEF LDCF Project for Capacity-building and Resilience to Climate Change in the Agriculture sector (GEF ID : 4974) will ensure the coordination of this project with the component 2 of this LDCF. Similarly, the agriculture landscape management activities under the UNDP/GEF ID:4974, the UNDP project “Adapting water resource management in the Comoros to expected climate change (GEF ID:3857)” and the UNEP project "Building Climate Resilience through Rehabilitated Watersheds, Forests and Adaptive Livelihoods" (GEF ID: 5694) will be coordinated with the activities for the reforestation of the hillsides and the strengthening of the land use planning and management framework under this new LDCF proposal. Also, the GEF ID 3857 is supporting the rehabilitation and extension of the drinking water distribution network. The National Directorate of the Infrastructures which will be the executing partner in charge of this LDCF project works for strengthening communities’ assets resilience under the outcome 3 will make sure that these works will not impact in the durability and climate of the improved water distribution network. Furthermore, the project GEF ID 3857 will introduce local water treatment technologies, such as localized ecologically-based water purification systems. The reforestation activities planned under the

outcome 3 of this LDCF proposal will support this objective by giving priorities to the same species used under the GEF ID 3857 (if relevant) or other species that could play the same role.

DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 IS THE PROJECT CONSISTENT WITH THE NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSEMENTS UNDER RELEVANT CONVENTIONS? (YES ☒ /NO ☐). IF YES, WHICH ONES AND HOW: NAPAS, ASGM NAPs, MIAs, NBSAPs, NCS, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, ETC.:

The proposed interventions build and are closely aligned with the recommendations of the first (2003) and second (2013) national communications and the NAPA (2006). The NAPA has identified and ranked 8 priority sectors, of which early warning and disaster risks management related priorities, which this project will deal with. Indeed, the project will contribute to strengthen the capacity of Comoros to face to the current and long-term climate induced disaster risks by enhancing the political, regulatory and institutional framework of DRM, improving the knowledge and understanding of medium to long-term climate related disaster risks and vulnerability and also strengthening the climate resilience of the communities livelihoods and assets against climate induced disaster risks. These priority adaptation options and measures take into account Comoros' PAN/LCD and National Strategy and Action Plan on Biological Diversity and the National Action strategies, particularly those related to livelihood production in agricultural communities, to the protection of natural resources and the environment. Moreover, adaptation options are chosen in synergy with the Comoros SCADD and other development strategies and plans.


PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

- A. Record of Endorsement¹⁷ of GEF Operational Focal Point (S) on Behalf of the Government(s):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Ali Mohamed Soilihi	General Secretary	MINISTRY OF PRODUCTION, ENVIRONMENT, ENERGY, INDUSTRY AND CRAFTSMANSHIP	FEB 25, 2014

B. GEF Agency(ies) Certification

This request has been prepared in accordance with GEF policies¹⁸ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Adriana Dinu Executive Coordinator, UNDP/GEF		Oct. 13, 2014	Henry Rene Diouf	+251929016785	henry.rene.diouf@undp.org

- C. Additional GEF Project Agency Certification** (*Applicable Only to newly accredited GEF Project Agencies*)
For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

¹⁷ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹⁸ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF