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United Nations Development Programme
Project Document
Least Developed Country Fund (LDCF)

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Country: Union of Comoros	Implementing Partner: UNDP	Management Arrangements: National Implementation Modality (NIM)
UNDAF/Country Programme Outcome: <i>Outcome 4 – By 2019, the most vulnerable populations ensure their resilience to climate change and crises.</i>		
UNDP Strategic Plan Output: <i>insert either 1.3, 1.4, 1.5 or 2.5 see item 5 under further information in the opening section of the annotated template</i>		
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Planned start date: <i>this is defined as the expected project document signature date</i>		Planned end date: 60 months
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<p>Brief project description: <i>The Union of Comoros (Comoros) is comprised of four islands, namely Ngazidja (or Grande Comore), Mwali (Mohéli), Ndzuani (Anjouan) and Maoré (Mayotte). However, the project will only focus on three of the four islands, excluding Maoré from the project area. Comoros is a small island developing state (SIDS) with a population of ~8000 and is one of the most densely populated countries in Africa. Being a SIDS, the Comoros is characterised by limited resources and poor economic resilience. The Comorian population is predominantly dependent upon subsistence livelihoods based on traditional crops and reliant upon natural resources. Existing land use practices connected to natural resource management are poorly managed resulting in food and water insecurity. Furthermore, because of its geographical position and climatic factors, the Comoros is vulnerable to natural disasters such as tropical storms, floods, rising sea level, volcanic eruptions, earthquakes and landslides. The exposure to natural disasters coupled with human-induced pressure on natural resources gives rise to the inherent vulnerability of the Comorian population, which will be further exacerbated under changing climatic conditions.</i></p> <p><i>Climate change is likely to adversely affect the Comoros by resulting in: i) an increase in annual rainfall variation; ii) an increase in temperatures; iii) a rise in sea level (resulting in salt water intrusion and coastal erosion); and iv)</i></p>		

an increase in the frequency and severity of climatic hazards (such as tropical cyclones, droughts, episodes of heavy rainfall and flooding).

Existing conditions increase the vulnerability of local communities in the Comoros to the above-mentioned climate change effects. The topography of the islands is rugged with many steep slopes and lava flows which intensify the runoff strength of rainwater. In combination with fragile soils, the topography causes erosion and flooding and results in the destruction of villages. This is exacerbated by the unsustainable land use practices, including deforestation and expanding agriculture. Local communities living in vulnerable areas within proximity of the sea are also exposed to coastal erosion as a result of heavy rainfall, tides or sand removal. Furthermore, climate-induced disasters – including tropical cyclones and storms leading to heavy rainfall, landslides, rock falls and flooding – affect the transport networks. Local communities are often cut off from food, water and medical supplies as well as emergency services during such climate-related natural disasters.

The project objective is to strengthen the adaptive capacity of the Comorian population to manage the current disaster risks and reduce vulnerability to climate change. In so doing, the project will focus on improving early warnings and disaster risk management under changing climatic conditions. To achieve this, the following outcomes will be delivered: i) enhancing the political, regulatory and institutional framework of climate-related disaster risk management; ii) improving the knowledge and understanding of government ministries, departments and institutions of medium- to long-term climate-related natural disasters; iii) strengthening the climate resilience of the local communities' livelihoods and assets against climate-related natural disasters; and iv) increasing knowledge-sharing and awareness of climate change adaptation.

FINANCING PLAN

LDCF	USD 8,932,421
UNDP TRAC resources	USD 550,000
(1) Total Budget administered by UNDP	USD 9,482,421
PARALLEL CO-FINANCING	
Government	USD 37,319,547
National institutions	USD 611,361
(2) Total co-financing	USD 37,930,908
(3) cGrand-Total Project Financing (1)+(2)	USD 47,413,329

SIGNATURES

Signature: print name below	Agreed by Government	Date/Month/Year:
Signature: print name below	Agreed by Implementing Partner	Date/Month/Year:
Signature: print name below	Agreed by UNDP	Date/Month/Year:

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ACRONYMS AND ABBREVIATIONS

ACMAD	African Centre of Meteorological Application for Development
AFD	French Development Agency
AMAT	Adaptation Monitoring and Assessment Tool
CATI	Analytical and Information Processing Centre
CBO	Community-based Organisation
CCA	Climate change adaptation
COSEP	Centre of Relief Operations and Civil Protection
CSP	Strategic Programming Framework
CTA	Chief Technical Advisor
DGEF	Directorate General of Environment and Forests
DGSC	Directorate General of Civil Security
DIMSUR	Disaster Risk Management Sustainability and Urban Resilience Centre
DRR	Disaster Risk Reduction
DRSC	Directorate Regional of Civil Security
EWS	Early Warning Systems
FNC	First National Communication
FSP	Full Sized Project
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
IFAD	International Fund for Agricultural Development
LDC	Least Developed Country
LDCF	Least Developed Country Fund
M&E	Monitoring and Evaluation
MSP	Medium Sized Project
NAPA	National Adaptation Programme of Action
OVK	Karthala Volcanological Observatory
PA	Protected Areas
PC	Project Coordinator
PIF	Project Identification Form
PIR	GEF Project Implementation Report
PMC	Project Management Cost
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
PSC	Project Steering Committee

PTA	Project Technical Assistant
SIDS	Small Island Developing States
SNC	Second National Communication
SNRM	Sustainable Natural Resource Management
SNRRC	National Strategy for Reduction of Risks and Disasters
SSTrC	South-South and Triangular Cooperation
STAP	GEF Scientific Technical Advisory Panel
TDM	Technical Directorate of Meteorology
ToR	Terms of Reference
UNDAF	United Nations Development Assistance Framework
UNDP-GEF	UNDP Global Environmental Finance Unit
UNFPA	United Nations Population Fund

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II. DEVELOPMENT CHALLENGE

The Union of the Comoros (hereafter referred to as the Comoros) is an archipelago of volcanic islands situated off the south-east coast of Africa in the Mozambique Channel. The LDCF-financed project will be implemented on three of the islands which comprise the Comoros, namely Ngazidja (or Grande Comore), Mwali (Mohéli) and Ndzuani (Anjouan). Being a small island developing state (SIDS), the country is characterised by *inter alia*: i) geographical isolation; ii) a rapidly expanding population; iii) limited natural resources; iv) poor economic resilience; and v) vulnerability to sea level rise and natural disasters. Population density in the Comoros is high at 428 inhabitants per km² – with a total population of ~800,000¹ – making it one of the most densely populated countries in Africa. It is also one of the least developed countries in the world and ranked 169 out of 187 countries on the 2013 Human Development Index with a GDP in 2014 of \$648 million² and ~45% of the population living under the poverty line. The Comoros' economy is heavily reliant upon agriculture which contributes ~50% of the country's GDP and employs ~80% of the labour force³. The majority of the population practice subsistence livelihoods and therefore rely heavily upon natural resources. With increasing population growth comes additional pressure on the already limited natural resources. Existing practices connected to natural resource management are poorly managed and extensive deforestation for the expansion of agricultural land has negative impacts upon ecosystem services⁴. Deforestation between 1990 and 2005 has resulted in a loss of ~58% or ~7,000 hectares of the Comoros' forests⁵. This is a result of the clearing of slopes for agricultural land and cutting of trees for fuelwood for domestic purposes as well as ylang-ylang distilleries. The inherent environmental vulnerabilities of SIDS in combination with unsustainable land use practices therefore threaten food and water security, as well as the economic growth and livelihoods of local communities.

In addition to the human-induced pressure on natural resources, exposure to natural disasters increases the vulnerability of the Comorian population to climate change. Because of its geographical position and poor economic development baseline, the Comoros is vulnerable to several meteorological and geological hazards, including tropical storms, floods, drought, rising sea level, volcanic eruptions, earthquakes and landslides⁶. Over the past thirty years, there has been an increase in the frequency and severity of storms, floods and landslides. In addition, historical observations indicate fluctuations in precipitation and intervals in the dry season, as well as early and prolonged droughts which have been accompanied by an increase in temperature of 1°C⁷. During the rainy season, strong winds and tropical cyclones also affect the Comoros. These have caused extensive human and material damage. For example: i) 23 cyclones affected the Comoros from 1911-1961 – an average of 1 cyclone every 2 years; ii) 13 cyclones affected the Comoros from 1967-1976; and iii) seven cyclones from 1987. Furthermore, during April 2012, heavy rains over a period of seven days resulted in flash floods and landslides throughout the country. Moroni received 1738 mm of rain during this month which is well in excess of its average April rainfall of 267 mm. Approximately 64,000 people were affected and estimates of the damage were US\$18-20 million. Flooding also occurred in Moheli in January 2016 where 1049 people were affected including 574 school children; and in Grande Comore in February 2016 when 76 families in Moroni were affected and 22 families left homeless. In addition to flooding, landslides in 2013 and 2014 resulted in the displacement of ~6,000 people in Anjouan.

There has also been an increase in the frequency of extreme weather events in 2009, 2012 and 2013 which had a direct and negative affect on over 10% of the population. Climate forecasts and observations of current trends indicate an extension of the dry season and reduction in precipitation that will result in the: i) drying up of rivers and decrease in groundwater levels; ii) decreasing quality and quantity of water accessible to communities; iii) increasing soil erosion and degradation leading to rockfalls and landslides; and iv) decreasing agricultural productivity leading to an increase in the price of local food crops. Furthermore, higher air temperatures increase the rate of evapotranspiration which reduces the supply of groundwater. Rising sea level also threatens to salinize groundwaters. Climate change will exacerbate the inherent vulnerability of the Comoros to climate-related natural

¹ <http://www.countrymeters.info/en/Comoros>. Accessed on 10 October 2016.

² www.data.un.org/CountryProfile.aspx?crName=comoros. Accessed on 10 November 2016.

³ http://www.theodora.com/wfbcurrent/comoros/comors_economy.html. Accessed on 10 October 2016.

⁴ – including many rivers drying up during the dry season

⁵ <http://www.rainforests.mongabay.com/deforestation/archive/Comoros.htm>. Accessed on 10 October 2016.

⁶ Evidence suggests that the rising sea level will likely result in increased seismic activity and therefore more frequent earthquakes and volcanoes

⁷ Union of Comoros. 2006. *National Adaptation Programme of Action*.

disasters and non-climatic disasters such as volcanic eruptions and earthquakes to which the country is exposed through: i) an increase in air temperature of 1.4°C to 3.7°C by 2100; ii) a sea level rise of 20 cm over the next fifty years which will result in salt water intrusion; iii) annual rainfall variation between -2 % and +20 %; and iv) an increase in the frequency and intensity of climatic hazards such as tropical cyclones, droughts, episodes of heavy rainfall and flooding⁸. It is important to note that while geological hazards such as earthquakes and volcanoes are not climatic hazards, they do contribute towards local communities' increased vulnerabilities to climate change and *vice versa* climate change contributes to an increase in these communities' vulnerability to the geological hazards.

The underlying causes of vulnerability of the Comorian population to natural disasters and climate change include:

- *Poverty*: Impoverished households are vulnerable to floods, droughts, cyclones and other natural disasters because of: i) widespread reliance on natural resource-based livelihoods, which are threatened by natural disasters; ii) limited availability of alternative livelihood options; and iii) limited technical and financial capacity to develop and implement adaptation interventions.
- *Land degradation*: There is widespread degradation of natural ecosystems because of inappropriate environmental management, unsustainable harvesting of woody vegetation for woodfuel and ylang-ylang distillation and the removal of natural vegetation to support agricultural expansion. Land degradation increases the severity of the effects of floods through the reduced infiltration of rainwater into degraded soils. In addition, land degradation results in increased soil erosion – which leads to increased rockfalls and landslides.
- *Limited financial resources*: The Union of Comoros has limited capacity to finance a national response to climate change, including funding of investments in adaptation measures such as prediction, protection and management of natural disasters.

The inherent vulnerability of the Comorian population to climate change is exacerbated by an insufficient capacity to prepare, prevent and respond appropriately to climate change and climate-related disasters. In this context, the Poverty Reduction and Growth Strategy (PRGS) and Action Plan (2010-2014) recognise the environmental constraints to sustainable development and seek to promote environmental sustainability and civil security. In addition, the Comoros seeks to address the threat posed by natural disasters through strengthening the capacity for natural disaster preparedness and response. Steps to date have included the: i) development of the Climate Change and Natural Disasters Risk Reduction Strategic Programming Framework (CSP)⁹, National Strategy for Reduction of Risks and Disasters¹⁰ (SNRRRC) and a National Contingency Plan and ii) establishment of an Analytical and Information Processing Centre (CATI) as well as the Directorate General of Civil Security (DGSC) and its regional branches (DRSC)¹¹ – and the Centre of Relief Operations and Civil Protection (COSEP) – which will be instrumental in assessing the vulnerability of communities to climate hazards and improving emergency responses to such disasters. The LDCF-financed project will therefore contribute towards addressing the vulnerability of the Comoros to climate-related risks and disasters through aligning with the objectives of the National Adaptation Programme of Action (NAPA)¹². Specifically, the project will address Priority 12 entitled *Setting up an early warning and surveillance system on situations of climatic risks* through: i) enhancing the preparedness of authorities in reducing the negative effects of climate change; ii) providing early warnings and real-time information to the population to reduce human and material losses; and iii) undertaking capacity building in terms of the monitoring and management of climate risks and disaster management thereby improving the understanding thereof. Such activities are also in alignment with Sustainable Development Goal (SDG) 13: *Take urgent action to combat climate change and its impacts*.

Despite the LDCF-financed project being in alignment with various national strategies and plans – in relation to climate change and disaster risk reduction (DRR) – there are still various barriers for effective DRR and climate change adaptation (CCA) in the Comoros.

Limited technical, financial and operational capacity to plan, budget and implement disaster risk reduction measures: the limited technical capacity, skills and infrastructure restricts the ability of the Technical Directorate of

⁸IPCC. 2007. *Fourth Assessment Report (AR4): Impacts, Adaptation and Vulnerability*.

⁹ One of the pillars of the CSP is Climate Change and Adaptation which focuses on: i) improving the resilience of ecosystems and adaptation capacities; and ii) supporting *inter alia* innovative adaptation approaches.

¹⁰ Stratégie Nationale pour la Réduction des risques de Catastrophes.

¹¹ Director Regional Civil Security

¹² Union of Comoros. 2006. *National Adaptation Programme of Action*.

Meteorology (TDM) Karthala Volcanological Observatory¹³ (OVK) and DGSC and/or Director Regional Civil Security (DRSC) to assist local communities in increasing their adaptive capacity and enhancing their disaster risk preparedness. In addition, this limited capacity has – in conjunction with limited political will and orientation – contributed towards the poor integration of CCA and DRR into urban planning, development and management. Gaps in the technical capacity of government departments and institutions are partially attributable to insufficient training of staff employed in relevant departments. For example, the TDM has had limited technical training in data management and analysis. As a result, the ability to undertake climate modelling for the Comoros, prepare seasonal forecasts and issue early warnings is restricted. Technical and operational capacity is also hindered by inadequate equipment. The TDM currently uses Microsoft Excel for data management as opposed to climate specific software, which is inadequate for data treatment and analysis. In addition, there are problems with sending and receiving data which undermines the effective dissemination of timely early warnings. With regards to the operational capacity of the DGSC to respond to disasters, the communication system is incapable of handling several incoming calls at once. In the event of an emergency, the telephone line is quickly inundated with calls which makes the dissemination of information and early warnings difficult. Furthermore, local communities are often isolated during climate-related and natural disasters. This can be attributed to roads being rendered impassable – through storm surges and coastal erosion or rock falls and landslides – and the lack of emergency vehicles. The delivery of emergency supplies – including food, water and medical equipment – is therefore delayed during such emergencies which increases the vulnerability of the local communities to illnesses and diseases post-disaster. Another contributory factor to the limited technical skills of Comorian institutions is the restricted financial resources available to reduce the impacts of disasters. Although national government needs to invest in CCA and DRR measures, there are budget constraints and therefore these measures – including the development of appropriate policies and legislation integrating CCA – are often beyond the government's financial capacity.

Limited access to information and knowledge on climate change and climate-related risks and disasters and a lack of end to end vision in the production and dissemination of climate services and early warning products: as a result of the lack of institutional framework for systematic data collection and documentation, there is limited climatic, meteorological and geological hazard data available in the Comoros¹⁴. Accordingly, the provision of knowledge-based advice from the TDM, OVK and the DGSC/DRSC is limited by the quantity and quality of information available to them. In addition, there is limited transfer of knowledge or data sharing and the coordination between departments is poor. For example, climate information has not been made available to CATI for inclusion in the vulnerability maps. The mapping process has therefore been based upon historical data and topography. Consequently, the credibility of such maps and predictions based thereon is undermined. A further challenge to maintaining accurate and up-to-date data is the variable development of Comoro's infrastructure which hinders the collection and transfer of data. Inadequate telecommunications infrastructure restricts the ability to transfer data from monitoring stations. The difficulties in collecting and transferring data therefore constitute a barrier to the comprehensive and effective monitoring and use of meteorological and geological information. In turn, the dissemination of early warnings on the islands is hampered which restricts local communities from responding timeously to climate-related and natural disasters.

Weak adaptive capacity and community engagement in the prevention of climate-related disasters and the impacts thereof on their livelihoods and economy: local communities have limited knowledge of climate change. This is a result of *inter alia*: i) institutional weaknesses and policy gaps; ii) poor communication between government and local communities; and iii) limited financial resources and access to such resources (please refer to Section IV. Results and Partnerships). The Comoros has a relatively high incidence of poverty. Consequently, local communities are frequently unable to invest in adaptation practices and technologies – such as rainwater harvesting infrastructure – to cope with the effects of climate change. Moreover, local communities' unsustainable management of land resources results in ecosystem degradation which affects both food security and their livelihoods through the reduction of agricultural productivity, increased deforestation and reduced groundwater infiltration¹⁵. These effects

¹³ Observatoire Volcanologique du Karthala

¹⁴ The length of records varied between 20-30 years depending upon the location. These gaps therefore pose a challenge to the TDM when undertaking statistical analysis.

¹⁵ For example, local communities are largely unaware that the degradation of watersheds through deforestation – for fuelwood and Ylang-Ylang distilleries – and slash and burn agriculture results in increased runoff, reduced infiltration, soil erosion and siltation. They are also unaware of the link of this poor land management to increases in flooding, drought, rock falls and landslides.

render local communities increasingly susceptible to the predicted impacts of climate change. Furthermore, local communities are risk averse and their immediate concern is meeting their daily needs rather than long-term planning for changes in climatic conditions. The vulnerability of local communities is further compounded by the difficulties in transferring information to local communities because of the remote location of certain communities and low levels of education.

Although no single initiative can address all the barriers mentioned above, the LDCF-financed project will deliver complementary outcomes to contribute towards overcoming these barriers. The theory of change underpinning the design of this LDCF-financed project includes barriers discussed in Section 1 and activities that contribute to the preferred solution discussed in Section III through the delivery of outcomes 1,2,3 and 4 (the theory of change diagram is at the end of this section). In addition, the LDCF-financed project will support furthering the UNDAF, SNRRC, NAPA and SDGs. Please see Annex L for the alignment of the LDCF-financed project with the national and international priorities contained in these documents.

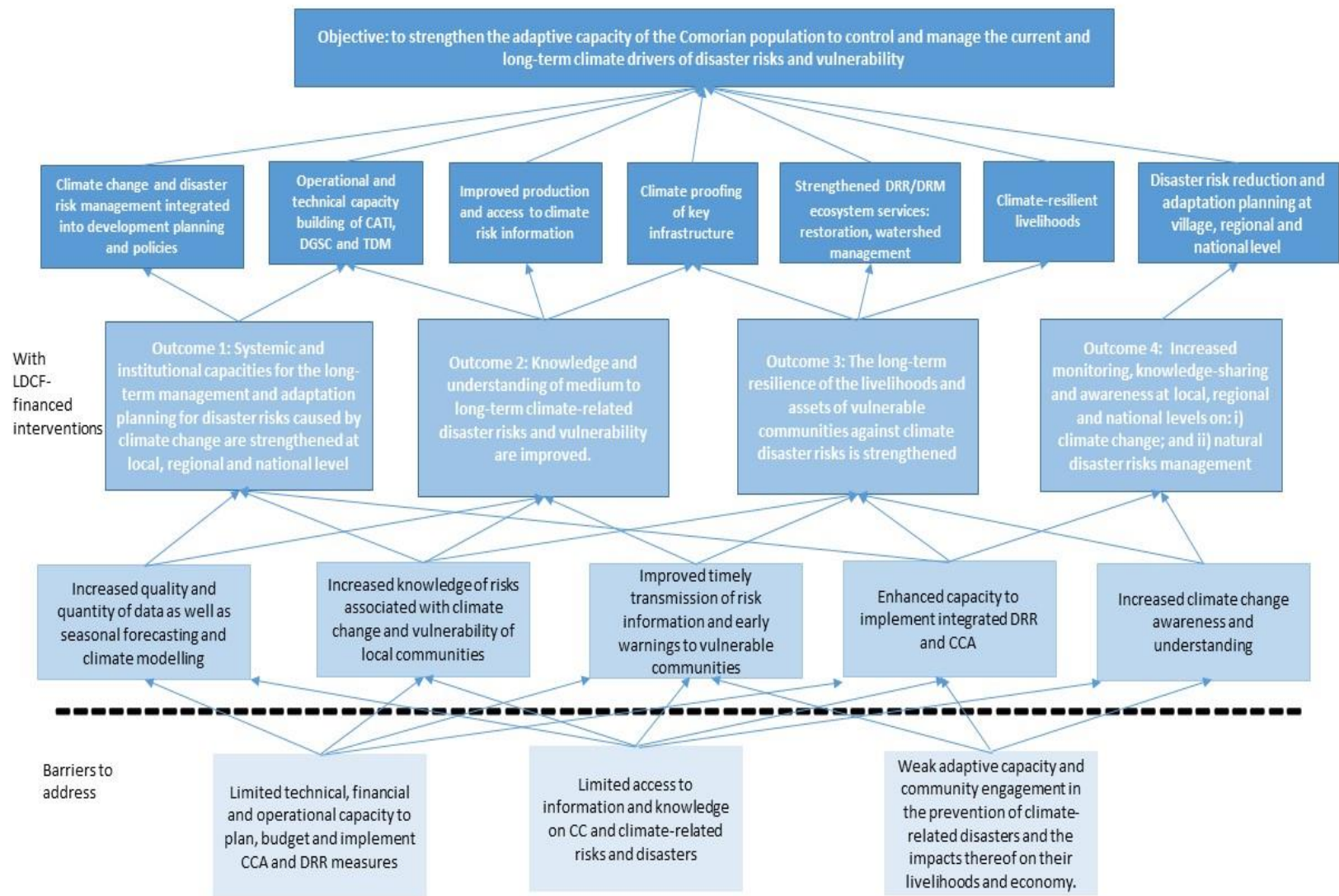


Figure 1. Theory of Change

III. STRATEGY

For countries such as the Comoros which are highly vulnerable to climate-related disasters, it is critical that coordination of disaster risk management and climate change is strengthened. The LDCF-financed project will therefore not focus solely on climate-related disasters, but will instead: i) make sure that the DRR and CCA actions are mutually beneficial; ii) assess how disaster risks – including the non-climate induced risks – could impact on the vulnerability to climate change and integrate appropriate responses in the local, regional and national CCA strategies; and iii) ensure to the extent possible that current disaster risk management strategies and investments will not increase future vulnerability and/or constrain future adaptation activities. Furthermore, the preferred solution would see strengthened local and community capacity for managing climate change and climate-related disaster risks. Such capacity would be strengthened through intensive training and capacity building, as well as by involving local authorities – including recently elected mayors – and community members in the implementation of project activities including CCA and DRR activities. This would not only generate community ownership of such interventions, but would also ensure their long-term sustainability.

Capacities at the national, regional and local level to adapt to and cope with the long-term effects of climate change are low¹⁶. The LDCF-financed project will therefore contribute towards strengthening the capacity of Comorian communities to adapt to climate change and reduce their vulnerability to climate-related disasters. In so doing, the project will address the barriers to implementing CCA solutions at the local level rather than a sectoral approach to CCA.

Systemic, institutional and individual capacities will be enhanced through policy, institutional and regulatory framework revisions which will facilitate planning for and managing the long-term effects of climate change and climate-related disasters. Consequently, the project will improve the use of climate risk information in planning processes. For example, climate information will be integrated into vulnerability and risk maps which will inform land use planning and development as well as disaster risk management. Access to and the availability of such climate information will be enhanced through improved technical and operational capacity – including skills and equipment – for the long-term monitoring of geophysical and most importantly, hydro-meteorological risks and hazards, including data analysis. The data generated and collated will be used to facilitate: i) climate modelling and seasonal forecasting by the TDM; and ii) the dissemination of timeous early warnings – including cyclone and flood warnings, as well as volcanic eruptions and other seismic activity by OVK. The information generated will therefore increase the adaptive capacity of the Comoros to climate-related disasters and inform medium- and long-term development planning.

The LDCF-financed project will implement interventions to increase the technical capacity of TDM's technical staff to monitor weather-related information and analyse data from climate modelling software. Moreover, national disaster preparedness will be enhanced by establishing reliable early warning and monitoring systems. Early warning systems (EWS) will be implemented and will supplement strengthened existing systems to decrease the vulnerability of local communities to climate-related and natural disasters. The increased availability of climate data and information will benefit the development of EWS and decrease the vulnerability of local communities to the effects of climate change. Furthermore, local communities often do not have the capacity to respond appropriately to early warnings for extreme weather events when such a warning is transmitted. Current warnings issued by the DGSC provide a lead time of ~24 hours. These lead times are considered inadequate for protecting livelihoods and/or implementing extreme weather risk reduction measures, including *inter alia*: i) moving assets to safer locations; ii) using flood control or rerouting structures to prevent flooding of property and land; and iii) implementing flood resilience measures. To improve climate forecasting and disaster risk planning in the Comoros, the technical capacity of national stakeholders will be strengthened for effective monitoring, tracking and prediction with adequate lead times of climate-related and natural disasters. Furthermore, the technical and institutional capacity of local stakeholders at intervention sites will be strengthened to establish end-to-end EWS. For hazards – such as floods – EWS based on the climate models and risk and vulnerability maps will increase the quality and quantity of data produced by the TDM thereby enhancing the monitoring and prediction of floods and other extreme events. The underlying issue of environmental degradation which has an adverse effect upon the resilience of ecosystems to

¹⁶ Union of Comoros. 2012. Second National Communication.

climate change¹⁷ will also be addressed by the LDCF-financed project. By incorporating activities which will focus on restoring both productive and protective ecosystem services the project will improve ecosystem resilience. This will subsequently improve the livelihoods of local communities who are dependent upon natural resources. Supporting livelihoods recovery options without mainstreaming the climate risks for these livelihoods is not sustainable¹⁸. Therefore, the project will introduce alternative income-generating activities which will take advantage of the opportunities provided by climate change. Furthermore, the project will consider how risk management decisions could constrain future vulnerability and adaptation. The measures will be practical and easy to implement – including construction and maintenance. In addition, such measures will be cost effective, therefore within reach of the most vulnerable local communities. These pilot interventions will test the extent to which income streams and livelihoods can be protected and improved under climate change. In order to implement such measures, the project will increase the knowledge, awareness and understanding of climate change and the benefits of implementing integrated CCA and DRR measures. Awareness-raising initiatives will include various tools such as film, radio, discussion groups and participatory risk mapping as well as simulations, which have proven effective in illiterate local communities in the Comoros¹⁹. This will facilitate effective project management, generate community ownership and ensure that the project interventions are sustainable beyond the project's lifespan. In this context, the lessons learned and best practices generated from the pilot interventions sites on each of the three islands will be used to guide future upscaling and replication activities.

The LDCF-financed project is innovative in that it will implement an integrated approach to climate change and disaster risk management rather than a sectoral approach to addressing the effects of climate. By adopting a broad approach, the project will be in a position to address the effects of climate change across multiple sectors including water, forestry, agriculture, infrastructure and civil protection simultaneously. Furthermore, the integrated approach ensures that the current effects of climate change as well as the future climate risks will be integrated into planning for and managing climate-related disasters. Additionally, the project will engage with institutions, local researchers and experts to increase local research and leadership capacity to produce knowledge products. Enhanced local research capacity will enable south-south climate adaptation collaboration between the Comoros, other SIDS and developing countries. The exchange of information will further enhance in-country expertise as well as improve climate modelling for the region²⁰. LDCF funding will also be used for financing both soft and hard infrastructure required to support the in-country generation and analysis of climate data. In turn, this information will be used to inform the long-term planning and management of the effects of climate change and climate-related disasters. The LDCF-financed project will produce direct adaptation benefits for local communities through the implementation of climate-resilient, diversified and sustainable livelihoods. These activities will provide an alternative source of income as well as improve economic productivity and food security. Through these interventions, the project will reduce the levels of poverty as well as the vulnerability of local communities to the effects of climate change. Furthermore, local communities' vulnerability to floods and droughts will be reduced through the promotion of resilient ecosystems, which can provide protective and productive ecosystem services. The implementation of CCA measures will also contribute to global environmental benefits such as preventing land degradation. Socio economic and environmental benefits will be monitored through the development of a long-term monitoring system which will build a scientific evidence base for the effectiveness of such CCA interventions in the Comoros.

¹⁷ Munang, R. & others. 2013. The role of ecosystem services in climate change adaptation and disaster risk reduction. *Current Opinion in Environmental Sustainability*. (5): 47-52.

¹⁸ United Nations Project Document. *Adapting Water Resource Management in the Comoros to expected climate change*.

¹⁹ United Nations Development Programme. *Regional Disaster Preparedness and Risk Reduction Program: Project Document*.

²⁰ Union of Comoros. 2012. *Second National Communication*.

IV. RESULTS AND PARTNERSHIPS

i. **Expected Results:** The objective of the LDCF-financed project is to strengthen the adaptive capacities and resilience of the most vulnerable communities to climate change and climate-related disaster risks in the Comoros. To achieve this objective, the project will enhance development planning and implementation of DRR and management measures as well as increase the understanding and knowledge of medium to long-term climate change risks. In promoting a participatory approach and supporting decentralised planning for climate-related DRR and management, the project will involve both men and women in the assessment, planning and implementation of on-the-ground interventions and decision-making.

The LDCF-financed project will also reduce the vulnerability of local communities on Grande Comore, Anjouan and Mohéli to climate-related natural disasters and risks through the implementation of CCA interventions. These will include climate-smart ecosystem rehabilitation and management measures as well as income-generating activities. Through baseline surveys, the environmental and socio-economic concerns of local communities were assessed. On-the-ground project activities were developed to address such concerns as well as the needs expressed by the respondents (please see Annex R for the results of the surveys). Consequently, public awareness and effective communication of information will be undertaken to encourage the maximum participation and cooperation of all stakeholders during project implementation, thereby ensuring the sustainability of the project activities.

The project objective will be achieved through four integrated and complementary outcomes presented in detail below. For details on the indicative activities associated with each output, please see Annex N: Project Outputs and Activities.

Component 1: Strengthening institutional, policy and regulatory framework of integrated climate risks and disaster

Outcome 1: *Systemic and institutional capacities for the long-term management and adaptation planning for disaster risks caused by climate change are strengthened at local, provincial and national levels. (LDCF project grant requested: \$2,391,500 and co-financing \$6,503,220)*

Without LDCF-finances (baseline situation): To date, the Comoros has taken a number of steps to strengthen their capacity for disaster risk preparedness and response, including: i) developing a National Contingency Plan; ii) establishing the DGSC which incorporates COSEP and CATI; iii) undertaking a series of vulnerability studies related to climate hazards and their impacts; iv) undertaking outreach and information dissemination at community levels; and v) establishing an EWS as well as strengthening communication systems for risk reduction, disaster management and disaster response between actors at national, island and local levels. However, climate change is not integrated into development planning. Legal and regulatory frameworks – for example the SNRRC – do not integrate climate change considerations into long-term planning. As a result, responses and management strategies are not comprehensive and tend to be rendered ineffective under changing climate conditions.

Notwithstanding the above actions, the DGSC and other relevant stakeholders do not have the requisite capacity nor access to relevant climate information to enable them to integrate climate drivers of disaster risks into the legal and regulatory framework. As per consultations with various stakeholders, the requisite financial resources – and regional budgets – for integrating climate change and disaster risk management into development planning at a local level are insufficient. In addition, the DGSC have insufficient technical capacity to integrate such climate drivers into the implementation of on-the-ground activities. For example, CATI does not integrate climate change information into the decision-making support tools it currently provides to the DGSC.

The technical capacity of DGSC, DSRC, relevant line ministries and local authorities to communicate effectively between themselves and with the general public is also restricted. As a result, early warnings and the dispatch of emergency responders is undermined. At present calls from the public requesting emergency assistance or informing the DGSC of an impending disaster are received by DGSC via telephone. As they only have one telephone line, the communication system is easily overwhelmed during disasters which means that the flow of information is restricted and therefore decision-making is hampered.

With LDCF-financed intervention (adaptation alternative): Despite the abovementioned efforts at improving disaster risk management in the Comoros, several logistical challenges were experienced during the April 2012 floods. These

included damage and disruption to infrastructure and support structures which hindered emergency relief efforts²¹. Both observed trends and climate models indicate an increase in such natural and climate-related disasters which will result in an increased need for effective emergency relief. Under Outcome 1, the project will therefore build local and national capacities for increased climate resilience, risk management and sustainable development. To do so, the project will revise the institutional framework for DRR and CCA and strengthen coordination between various stakeholders, including DGSC, DSRC, DoE and other relevant line ministries by reactivating the Risk Management Platform. Regular meetings will be held and simulations undertaken to improve coordination between the various stakeholders. In addition, policies, plans and programmes will be revised to integrate DRR and CCA and a legal framework for integrated natural and climate-related disaster response established. This will be complemented by activities under Outcome 2 which will increase the knowledge of risks and inform disaster risk management and planning.

Outcome 1 of the LDCF-financed project will focus on building the technical and operational capacity of various institutions as well as the recently elected local authorities (mayors). This will include strengthening local capacities for planning, conducting risk mapping, developing/strengthening the EWS and training. Furthermore, capacity building for local authorities will focus on integrating climate change into communal development plans. At present, contingency plans are only available at the regional level. The project will consequently focus on strengthening decentralisation measures, including: i) coordination and organisation of emergency preparedness and relief efforts at the local level; ii) supporting the sustainable management of natural resources at the local level; and iii) implementation of CCA measures – from regional to community/village level. In so doing, local authorities will be better prepared to support the resilience building of local communities to cope with climate-related disasters. In addition, civil security units – local facilities including office space for the DCGSC/DSRC – will be established in high risk areas on each of the islands for increased preparedness for a crisis. These units are essential to the goals of the LDCF-financed project to build the capacity of the DGSC/DSRC to enable them to provide effective disaster risk preparedness and response, as well as emergency relief to local communities in the event of a climate-related natural disaster. First aid and emergency supplies will be stockpiled at these units which will enable the provision of assistance during or immediately after a climate-related disaster to meet the immediate and/or short-term life preservation and basic subsistence needs of those people affected. These supplies will consequently reduce the risk of death, illness or diseases through the provision of preventative measures at community level and subsequently increase the resilience of vulnerable local communities to climate change – and extreme weather events in particular. Access to information and the provision of early warnings will also be promoted through improving communication systems and technologies for the transmission of such information between stakeholders, to and from the public.

Under Outcome 1, the LDCF-financed project will also support the identification of the climate risks that could impact or influence the efficiency of the relief actions. In so doing the project will propose adaptation strategies to prevent the impacts of these risks whilst making sure that the relief initiatives will not reinforce local communities' vulnerabilities. The project will therefore integrate climate change into the national disaster management and preparedness plans – for both climate and non-climate related disasters. These activities will be considered as part of a package of actions supported by this project for the strengthening of the integration of disaster risk management and climate change in the Comoros. Decisions and actions taken after a climate-related disaster will therefore seek to restore or improve the pre-disaster living conditions of the affected local communities, while encouraging and facilitating the necessary adjustments to reduce disaster risk. Relevant stakeholders will have the capacity to plan for, implement, monitor and evaluate CCA. The project will achieve a sustainable impact by supporting and working directly with these stakeholders to build their capacity for assessment, planning, implementation, monitoring and evaluation of integrated DRR and CCA initiatives and systems. Furthermore, the project will place a strong emphasis on ensuring that project activities work to build capacity and systems that can be sustained in the long-term by Comorian institutions. An operational emergency fund will also be established which will only be accessible for climate-related disaster relief efforts and rebuilding of infrastructure etc, once such an event has occurred. This emergency fund will be financed at the outset by UNDP with co-financing from the government. GEF resources will be used to provide technical assistance, supporting the functioning and financial sustainability of such fund, including

²¹ International Federation of Red Cross and Red Crescent Societies. 2013. *Emergency Appeal Final Report: Comoros: Flash Floods*. Available at: <http://reliefweb.int/report/comoros/comoros-flash-floods-emergency-appeal-n-mdrkm004-final-report>. Accessed on 27 July 2016.

the development of procedures for accessing and disbursing funds as well as the identification of management mechanisms and sources of supplementary funding. For further details of the activities under Outcome 1, please see Annex N: Project outputs and activities.

The outputs under Outcome 1 include:

- Output 1.1: Proposed revisions to integrate climate change and DRR into key policies, strategies and other development initiatives at local, sub-national and national levels in the civil security sector and other priority sectors.
- Output 1.2: Technical and operational capacity building programme for the General Directorate for Civil Security (DGSC), Technical Directorate of Meteorology (TDM), Karthala Volcano Observatory (OVK), Directorates of agriculture, environment, forestry, Ports and maritime authorities, and other key national institutions focusing on emergency preparedness and response to climate-related disasters.
- Output 1.3: Efficient system for transmission of early warnings for climate-related disasters implemented in the three islands.
- Output 1.4: Operational emergency fund for climate-related disasters (to be co-financed by government and the project).

Component 2: Improving and strengthening knowledge and understanding of key climate drivers of natural disasters and their medium to long-term influence on disaster frequency and intensity and local communities' vulnerability to disasters.

Outcome 2: *Knowledge and understanding of medium to long-term climate-related disaster risks and vulnerability are improved. (LDCF project grant requested: \$1,476,984 and co-financing \$3,322,929)*

Without LDCF-finances (baseline situation): The Comoros has undertaken several vulnerability studies as well as mapping of coastal areas, including those undertaken during the development of the Initial National Communication and NAPA. Climate change vulnerabilities and priority issues were also reviewed and updated whilst preparing the Second National Communication (SNC). Pursuant to these studies, risk vulnerability maps have been produced for volcanoes, floods and landslides. These vulnerability maps are, however, based on historic data and topography rather than advanced climate models and are therefore not able to take future climate change risks into account. Furthermore, the vulnerability maps exclude socio-economic data. These factors subsequently undermine the accuracy and effectiveness of such maps under changing climatic conditions.

Various disaster relief plans, including the Karthala Volcanic Plan, the Tsunami Relief Plan and Cyclone Relief Plan have also been developed. These plans are focused on the provision of emergency services and public assistance during and immediately after a disaster. However, regional warning bulletins – which the disaster relief plans rely upon for information – fail to integrate current and future climate change data. For example, the Cyclone Plan has not been designed to forewarn of impending disasters for the purpose of DRR. These plans are therefore unable to identify the climate risks that affect the efficiency of the response to the disaster and appropriate mitigation measures. Consequently, the plans are inadequate in the face of changing climate conditions and will render emergency responses ineffective against future climate-related disasters. For more efficient management of natural disasters (including climate and non-climate related disasters), it is necessary to: i) plan in advance the relief actions to be taken in case of a disaster; ii) mitigate the climate risks that can affect the efficiency of the relief actions; and iii) ensure that these relief actions will not contribute to worsen vulnerability to future climate-related disasters and/or constrain future adaptation.

Three-day weather forecasts are provided by the Regional Integrated Multi-Hazard Early Warning System for the Afro-Asian Region (RIMES). This information is broadcast by national and community radios as well as by local radio stations on each of the Comorian islands. Weather forecast bulletins are disseminated daily which includes the weather forecast for the next 24 hours. However, seasonal climate outlooks are not produced. The institutional and technical capacity of various institutions to gather and analyse climate data for seasonal forecasting is restricted by inadequate software and information technology equipment. There is also no specific climate information management system set up. For example, the TDM currently utilises Microsoft Excel software to store their data rather than climate-specific software. In addition, some of the data is only available in hard copy and has not yet been digitized. The effectiveness (and potential application) of such data is therefore limited and greater storage

capacity and functionality is required. Although climate-related software (such as MAGICC/SCENGEN) was used to derive climate change scenarios for the SNC, this software has not been used since then and is now outdated. In addition, relevant institutions have limited skills for analysing climate information. For example, the TDM has insufficient trained staff. Training is therefore required for the operation and maintenance of equipment, software, analysis of data for seasonal forecasting and climate change predictions. The TDM is consequently unable at present to prepare long-term climate scenarios. Additionally, the GEF LDCF ID 4974, is implementing a plan for installing 9 automatic weather stations. However, these AWS combined with the 6 already installed by the GEF LDCF ID 3857 don't give to the national hydrometeorology sector the required density allowing for the monitoring of key weather parameters throughout the entire country. Consequently, certain critical areas of the country are not covered.

Disaster relief plans and early warnings as well as vulnerability maps are traditionally informed by research. However, there are few research activities in the Comoros that are focused upon climate change and DRR and management. Furthermore, the specific Karthala Volcanic Management Plan does not identify and integrate climate risks that could negatively affect the efficiency of the response to the disaster and appropriate mitigation measures. In light of scientific discussions indicating that an increase in temperature and consequent sea level rise may result in an increase in tectonic and seismic activity, the frequency of volcanic eruptions from Mount Karthala is likely to increase²². By excluding climate risks from the specific management plans, the population will be increasingly vulnerable to climate-related disasters as the responses will be rendered ineffective by the changing climatic conditions. DRR efforts for geological hazards will therefore be rendered ineffectual under future climate change scenarios.

With LDCF-financed intervention (adaptation alternative):

The LDCF-financed project will improve and strengthen the knowledge of meteorological hazards and how geological hazards impacts on communities' vulnerabilities to climate change, by focusing on scientific research and strengthening institutions' – such as TDM and OVK – technical capacity for observing and monitoring of such hazards. In so doing, the project will align with the recommendations in the Technology Needs Assessment to develop the scientific and technical knowledge of the requisite institutions for gathering, analysing and reporting on climate, hydrological, ocean and geological hazards²³. This will include enhancing the network of measurement stations for TDM. In addition, the project will build the capacity of institutions such as TDM and OVK on how to combine weather, water, climate and volcano monitoring data to provide tailored decision-making information to reduce communities' vulnerability to climate change. For example, the integration of volcanic information in the risk and vulnerability maps is important as ash fallout from volcanic eruptions contaminates already scarce water sources and raises health concerns for both people and livestock along with adverse effects on agriculture²⁴. Furthermore, rainfall is unable to percolate because of the ash deposits which waterproof the soil. Consequently, an increase in runoff due to changing climatic conditions combined with the ash deposits forms lahars – a form of landslide which can destroy houses and buildings. Infrastructure is also rendered unsafe because of ash induced collapses and may result in the displacement of local communities. The limited availability of arable land and fertile volcanic soils means that people are continuously settling in areas more vulnerable to volcanic eruptions and the abovementioned consequences thereof which will be exacerbated by the effects of climate change. For efficient management of climate change in the Comoros, it is therefore important to integrate information on geological hazards – such as volcanic activities into the hazard vulnerability and risk mapping. Training will be provided on timely gathering and transmission of data, data quality control and management, data analysis and use as well as broadcasting information. Technicians will also receive training on the operation and maintenance of the relevant equipment to ensure the longevity of such systems and the long-term sustainability of project interventions. The project will also support the densification of the weather, water and climate and 80 automatic rainfall stations (measuring 2 weather parameters: rainfall and temperature). Additionally, the project will support 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

²² <http://www.yalescientific.org/2015/11/icelands-volcanic-activity-to-increase-from-climate-change/> Accessed on 27 July 2016.

²³ Union of the Comoros. 2006. *Technologies needs assessment in the priority areas*.

²⁴ During the eruption of Karthala in 2005, the ash fallout covered ~75% of the island affecting ~245,000 people. Morin, J. et al. 2009. Institutional and Social Responses to Hazards Related to Karthala Volcano, Comoros. Part I. *Shima: The International Journal of Research into Island Cultures*: 3(1). Available at <http://www.shimajournal.org/issues/v3n1/f.-Morin-et-al.-Shima-v3n1-33-53.pdf>. Accessed on 27 July 2016.

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 flows monitoring data and a better flood modelling.

Furthermore, a national strategy will be developed which will review policies and identify opportunities for strengthening policy and budgetary support for the financing of equipment. The strategy will also identify supplementary sources of funding for the purchase, installation, ongoing operation and maintenance of such equipment for institutions such as TDM (Technical Directorate of Meteorology) and OVK.

The limited skills base of the Analytical and Information Processing Centre (CATI), TDM and OVK gives rise to difficulties with statistical analysis and gaps in information which results in inaccuracies with predictions. Training of technical staff will therefore be a priority within the LDCF-financed project and will focus on data analysis and management for seasonal forecasting. Access will also be provided to long-term historical data and climate-specific software systems which will facilitate the development of seasonal forecasts and predictions of climate-related disasters and the impacts of non-climate related disasters – including the climate change influence on the vulnerability to these disasters. Increased access to climate information and analysis of will inform the mapping of the most vulnerable areas to natural and climate-related disasters at the local level.

Under Outcome 2, hydrological and climate events will be monitored to inform future climate modelling as well as the development of vulnerability maps for each of the islands to climate-related disasters. These vulnerability maps will be based on actual climate data and advanced climate modelling – and will inform future development planning through mainstreaming under Outcome 1. By including climate change information in the development of vulnerability maps, the project will increase the credibility of such maps. Risk and vulnerability maps will be updated in collaboration with relevant local authorities, CBOS and CSOS in Bngui, Mvouni, Bndamadji-Mbadjini, Vouvouni-Kafouni, Noumadzaha, Salimani, Moroni, Mitsoudje (Grande Comore); Mirontsi, Mutsamudu, Mahala, Sima, Vassy, Koni Djodjo, Domoni (Anjouan); Hoani, Fomboni, Djoezi, Nioumachoua, Mlabanda, Kangani, Itsamia, and Hagnamoida (Moheli). The relevant authorities, CBOs and CSOs will receive the necessary training to develop such maps.

Research plays an important role in the ongoing quest to find solutions to climate-related risks and the challenges faced. The project will therefore build on institutions' – such as TDM, OVK and the University of Comoros – existing research capacities to strengthen their involvement in and support for research and analysis linked to CCA. In addition, the project will pursue partnerships with international research institutions and organisations to enhance the technical capacity of staff in the Comoros and facilitate the flow of information, including lessons learned and best practices between these parties. Furthermore, the LDCF-financed project will under Outcome 4 introduce opportunities for postgraduate studies in environmental science, climate change and disaster risk management which will enhance institutional capacities. In promoting and building the capacity for CCA research and training within the Comoros, the project will improve the understanding of climate risks and enhance the management thereof. For further details of the activities under Outcome 2, please see Annex N: Project outputs and activities.

The outputs under Outcome 2 include:

- Output 2.1: Upgrade risk and vulnerability assessments and maps of local communities and socio-economic infrastructure to integrate more accurate weather, water and climate information.
- Output 2.2: Climate disaster modelling and scenarios – including hydrometeorological and geological hazards.
- Output 2.3: Improved Technical Directorate of Meteorology monitoring network and capacity.
- Output 2.4 Partnership with research organisations for undertaking research projects on priority climate risks that will be identified by the risks and vulnerability assessments under the Output 2.1.
- Output 2.5: National strategy for sustainable financing of the climate disaster monitoring system and information dissemination.

Component 3: Sustainable strengthening of community resilience to climate-induced disaster risks

Outcome 3: *The long-term resilience of the livelihoods and assets of vulnerable local communities against climate disaster risks is strengthened (LDCF project grant requested: \$3,727,368 and co-financing \$25,066,327)*

Without LDCF-finances (baseline situation): The majority of households in the Comoros are reliant upon traditional crops and natural resources for their livelihoods. Few efforts have been made in the rural areas to diversify their livelihoods. Sources of income include agriculture and cash crops such as ylang-ylang and vanilla. Traditional practices including the use of plants and agroforestry are gradually being abandoned in favour of monoculture, slash and burn as well as agriculture expansion – all of which contribute to deforestation. These practices have an adverse effect on the sustainability of natural resources and as a result exacerbate land and ecosystem degradation. Furthermore, current land use and water management practices do not take climate change considerations into account and are not adapted to emerging climate conditions. Local communities have little technical knowledge, low levels of inputs, insufficient financial resources and limited access to infrastructure and markets. These are all barriers to the adoption and implementation of climate-resilient interventions. As a consequence of local communities' low adaptive capacity and the adverse effect that climate change will have upon long-term agricultural productivity, they are particularly vulnerable to the effects of climate change.

One of the major environmental problems that the Comoros faces is that of deforestation. The predominant cause of deforestation is the conversion of forests for agricultural expansion, which is also linked to a decrease in agricultural productivity and land degradation. Ylang-ylang distilleries also contribute to deforestation because their primary source of energy is fuelwood obtained from natural forests. Illegal logging is a problem – particularly in Anjouan – and is exacerbated by the limited enforcement of regulations and penalties at the local level. The removal of vegetation and deforestation have resulted in extensive degradation of slopes and the watersheds. In combination with a decrease in rainfall, these factors have resulted in a prolonged dry season in some areas – particularly on Grande Comore. Moreover, rivers on Anjouan have dried up and their flow regime modified, leading to an increase in runoff which contributes towards flooding and has had a negative effect upon the generation of hydroelectric power on the island. Irregular heavy downpours, decreased infiltration and increased runoff leads to an increase in flooding. Because of the geological characteristics of the islands – with steep slopes – the above factors result in waterlogged slopes becoming unstable and consequently landslides and rock falls occurring. These are becoming increasingly common on Anjouan as well as on Mohéli. Floods and landslides have resulted in damage to and destruction of roads and houses, as well as public infrastructure – such as the Mitsudjé District Health Care Centre on Grande Comore which was completely flooded during April 2012 – and schools – such as those in Fomboni on Mohéli. Recent evidence of such destruction can also be viewed at Mirontsi – where the road and several households were destroyed.

Key socio-economic infrastructure – such as health care centres and schools – is frequently located in the coastal zones and is thus exposed to extreme weather events such as cyclones, coastal flooding and erosion. In addition, coastal roads are threatened by coastal erosion with many roads having already been destroyed. This increases the vulnerability of local communities who are cut off during climate-related disasters and are not able to evacuate during such times or receive emergency relief. Households are also at risk of damage or destruction because of the increasing frequency and severity of such events and many local communities have already observed the effects thereof. Artificial structures have been built along the coast as well as riverbeds to support or protect human settlements and infrastructure from flooding – these include sea walls, dykes and gabion walls. However, these structures have failed to take into account future climate risks – such as increasing frequency and intensity of extreme weather events, as well as increased tidal action and sea level rise – and therefore are often breached or damaged rendering them ineffective against future disasters.

Poverty, the lack of alternative income-generating activities and limited knowledge of climate change all contribute towards the local communities' vulnerability to climate-related disasters in the Comoros. From the surveys conducted, it is evident that many of the respondents are unaware of the effects of climate change (please see Annex R for the results of the surveys). Furthermore, there has been little or no awareness-raising and training in many of the local communities assessed. The respondents have limited technical knowledge and inputs as well as a general lack of diversification options. As a result of the above factors, these local communities have limited adaptive capacity. Local communities will therefore continue to pursue unsustainable livelihood patterns that are maladapted to future climate change conditions.

With LDCF-financed intervention (adaptation alternative): The LDCF-financed project will build on the capacity-building activities and lessons learned from a range of projects and programmes that have been or are currently being implemented. These projects have demonstrated that empowerment of local communities at all stages of the

project cycle is beneficial to achieving lasting results at the local level. In this context, in addition to the research components under Outcomes 2 and 4, the project will incorporate a “training the trainers” approach within various institutions and particularly within the local authorities and civil servant units. The project will thereby ensure that these institutions are able to continue to train staff and other members of CBOs and maintain a strong capacity to support CCA and climate-smart DRR and management after the project has terminated. NGOs and CBOs will also be directly involved in: i) identifying solutions to climate-related risks and impacts; ii) implementing adaptation solutions; and iii) monitoring the effectiveness of those solutions towards achieving positive socio-economic and environmental outcomes. The project will assist targeted communities in developing Village Action Plans, which will identify site-specific priorities for adaptation. In addition, training and capacity-building programmes will be implemented to assist local authorities in integrating such Village Action Plans into local development planning processes. In addition, the project will provide support to communities and local authorities on developing and mainstreaming climate investment plans and resource mobilisation for the implementation of Village Action Plans. The targeted communities include: Plateau trelezini, Kiombani-bahani, Vouvouni-Kafouni (Grande Comore), Dimani; Jimlime, Mahale, Vassy and Koni Djodjo (Anjouan); Mlabanda, Kangani, Itsamia, Hagnamoida, Djoezi-Siziroudani, Mirngoni-Wallai, Hamba-Mirongoni (Mohéli). Where possible, the project will build on and partner with baseline initiatives being implemented by NGOs and CBOs at each of the interventions site to strengthen their awareness of climate change risks and opportunities to address climate-related impacts.

In order to address the environmental and socio-economic issues faced by the local communities, the LDCF-financed project will promote the diversification of income-generating activities among vulnerable local communities. Sustainable, climate-resilient and diversified livelihood options will be identified and implemented in target local communities that will: i) alleviate poverty, ii) increase food security; iii) promote more resilient ecosystems that can provide protective and productive ecosystem services that will buffer local communities against floods and droughts; and iv) reduce vulnerability to the effects of climate change.

In areas affected by persistent droughts on Grande Comore, rainwater collection and redistribution systems will be implemented to reduce the vulnerability of the local communities in Dimani, Oichili and Hamanvou. A combination of hard and soft infrastructure will be required to capture and store water including *inter alia* check dams and retention ponds which will create water reserves. In areas prone to flooding²⁵ climate-resilient, low-cost flood prevention measures will be implemented to protect populations and socio-economic infrastructure. Examples of such infrastructure which will be protected include the schools and health care facilities in Fomboni as well as the Mitsudje District Health Centre, which are located in flood-prone areas and along riverbanks. Studies will be undertaken to map flood prone areas and prior interventions will be analysed to determine their efficiency, sustainability and cost-effectiveness. Based on the outcomes of such assessments, appropriate low-cost flood prevention measures will be identified. Examples of such measures include *inter alia*: i) dredging targeted rivers to promote water flow; and ii) strengthening the riverbanks using both hard and soft infrastructure to reduce damage from flooding. The proposed flood-reduction measures will be complemented by reforestation interventions in Bambao, Hambou, Domba and Hamahamet (in Grande Comore), Vassi, Bambao, Koni Djojo and Mirontsi Ouani (in Anjouan) and Mlanbada, Itsamia, Kangani, Hagniomoida, Sambiya, Ndremeani, Mirongoni and Wallah (in Mohéli). By rehabilitating degraded slopes, the project will reduce the vulnerability of forest ecosystems to the effects of climate change.

Outcome 3 of the LDCF-financed project will also provide local communities with the skills, knowledge and inputs necessary to implement DRR practices that will protect their land and households from floods and landslides. For example, the reforestation activities and revegetation of slopes will assist in stabilising the slope and preventing landslides. By introducing climate-resilient and multi-purpose species of trees that provide non-timber forest products – such as vanilla and fruit trees including peaches, oranges and avocados – the project will reduce the risk of encroachment by local farmers into planted areas for agricultural purposes²⁶. Indigenous tree species that are particularly effective at stabilising soils on the banks of rivers – such as *Ficus* species – will be planted upstream from and along the riverbanks at the selected interventions sites. Lessons learned from previous projects will be

²⁵ These areas include: i) Grande Comore – Nioumadzaha, Mitsoudje-Salimani, Kafouni and Vouvouni; ii) Anjouan – Chironi, Page, Mirontsi, Ntsabamwe and Mutsamudu; and iii) Mohéli – Msoutrouni, Dewa, Hoani and Nyoubegni.

²⁶ Indigenous species will be used wherever possible.

utilised wherever possible to inform the selection of tree species and reforestation activities²⁷. Technical guidance will be provided to local communities regarding the value of forests and the benefits of Sustainable Natural Resource Management (SNRM). In addition, the project will strengthen existing and/or establish new community associations which will be responsible for SNRM and monitoring of activities. To address the effects of deforestation, alternative energy solutions will be piloted for ylang-ylang distilleries which will reduce the pressure on wood as a source of fuel. In addition, existing laws will be revised and recommendations will be provided for stricter penalties for contraventions of legislation. Police/enforcement officers and local authorities will be provided training at the local level on the revised measures and penalties. The project will also promote the establishment of a community surveillance system – this will be undertaken in conjunction with the awareness raising activities under Outcome 4. In this context, technical support and training will be provided to farmers in exchange for them acting as forest guards to protect natural resources in a participatory manner.

The LDCF-financed project will also explore and support the development of public private partnerships in the financial, housing, infrastructure and planning sectors to support the relocation of settlements from areas vulnerable to flooding and other natural and climate-related disasters. Mechanisms for relocating vulnerable local communities to less vulnerable areas through the subsidisation of low-income housing and incentive schemes will be developed and sources of supplementary funding identified. The proposed incentive scheme will be piloted in selected vulnerable areas. For further details of the activities under Outcome 3, please see Annex N: Project outputs and activities.

The outputs under Outcome 3 include:

- Output 3.1: Development of village adaptation investment and action plans informed by the risk and vulnerability assessment and maps developed under Output 2.1
- Output 3.2: Reforestation programmes on degraded hillside areas exposed to landslides and heavy rains.
- Output 3.3: Community and individual rainwater collection and redistribution systems to reduce vulnerability to droughts.
- Output 3.4: Flood prevention measures and climate-resilient, low-cost interventions for the protection of populations and socio-economic infrastructure (including health care facilities, schools and markets in flood-prone areas).
- Output 3.5: Income-generating activities in the selected intervention sites to sustain the reforestation interventions.
- Output 3.6: Proposed revisions to existing legislation including penalty provisions and training of civil security – including police units and forests guards – for protection of natural resources especially forests.
- Output 3.7: Measures to promote ecologically sound housing and settlements that are resilient to climate disasters

Component 4: Knowledge management, monitoring and evaluation

Outcome 4: *Increased monitoring, knowledge sharing and awareness at local, regional and national levels on: i) climate change; and ii) natural disaster risk management (LDCF project grant requested: \$936,569 and co-financing \$3,588,432)*

Without LDCF-finances (baseline situation): From the surveys conducted, it is evident that local communities have limited understanding and knowledge of climate change (please see Annex R for results of the surveys). Furthermore, few of the respondents interviewed have received training thereon. Stakeholder awareness of existing tools for DRR including EWS is also weak and the low level of awareness on climate change amongst local communities exacerbates their vulnerability to climate-related disasters. The UNEP evaluation of the Comoros' implementation of the NAPA found that awareness-raising faces several challenges – including low levels of literacy and dispersion of the population across the islands – which make printed materials an unsuitable option²⁸. Other challenges to awareness

²⁷ For example, the LDCF-financed project will consult with the UNDP project “*Adapting water resource management in the Comoros to expected climate change*”. Particular attention will be paid to the restoration protocols developed by the project for different tree species and the success rates for different tree species planted.

²⁸ UNEP.2007. *Final Evaluation of the National Adaptation Programme of Action: Country Report: Comoros*.

raising and the dissemination of information include limited access to data and information as well as the media and public sources of information.

Environmental education and materials have been introduced at primary schools to counteract the low levels of awareness. One of the knock-on effects thereof is that children are passing on and sharing their knowledge on environmental issues with family members which has indirectly increased the level of awareness of some households. However, this indirect method is not a sufficient means of information dissemination. The current curriculum also does not include climate change. Furthermore, there is no academic curriculum at a higher level for studies on the environment, climate change and DRR. In order to pursue tertiary studies in these fields, students are required to travel abroad and often do not return to the Comoros because they obtain work elsewhere. The limited expertise and number of specialists in climate change and DRR therefore undermines the climate variability assessments and mapping that has been undertaken to date. Without proper information generation and analysis by trained specialists, the accuracy of certain predictions and forecasts is uncertain.

The gender aspect of climate change is also not well understood nor comprehensively taken into account in development planning in the Comoros. Although many of the respondents to the baseline surveys undertaken recognise women as being more vulnerable to climate change than men, there are few gender-responsive provisions in the legal and regulatory frameworks which take into consideration the effects of climate change on women (please see Annex R for results of the surveys). Traditionally, women are excluded from decision-making processes, including those that have a direct effect upon their livelihoods – such as emergency responses and relief plans in local communities. The exclusion of women from such decisions undermines their effectiveness in disaster situations and increases their vulnerability to climate change. Furthermore, such exclusion overlooks a valuable source of traditional knowledge and coping strategies as women are usually the ones responsible for making sure that the household has sufficient water and food, even in crisis situations.

With LDCF-financed intervention (adaptation alternative): Under Outcome 4, the LDCF-financed project will focus on knowledge development including *inter alia* education, training, research and information dissemination. In this context, Comorian environmental education materials will be revised to include integrated DRR and CCA and distributed to all primary schools. At the tertiary level, a two-year Master's programme on DRR and CCA will be developed in conjunction with partner academic institutions in the region²⁹ and piloted at the University of Comoros. The main focus of the programme will be on improving knowledge on DRR taking into account the long-term impacts of climate change. In addition, the programme will develop the skills necessary to use and generate climate information to define and respond to complex climate-induced disasters. Furthermore, the programme will promote knowledge transfer and the dissemination of information between research institutions throughout Africa, as well as between research institutions and civil society. Public awareness-raising through education and knowledge dissemination will be undertaken to improve the population's participation in preparedness programmes. A focus of Outcome 4 will be understanding the information needs of vulnerable local communities. It is therefore important to identify effective mechanisms for the dissemination of information to local communities where members of the community are illiterate. Oral transmission of information is consequently a very important means of raising awareness and communication in the Comoros. Examples of such means may include radio and television programmes, drama and discussion groups³⁰.

Outcome 4 will focus on developing a community-based approach to climate-related disaster risk management. Appropriate governance structures will be promoted and encouraged to ensure the full participation of men and more particularly women in decision-making that affects them. Furthermore, the implementation approach for achieving climate-resilient income-generating activities at the selected project intervention sites (under Outcome 3) strongly encourages and supports partnerships between the public and private sectors. The project will therefore identify and support the establishment/strengthening of community associations. These grassroots organisations will be integral to the success of CCA measures and will be included in the training activities under Outcome 3. The training will therefore include local authorities, village and religious leaders, NGOs and CBOs such as environmental,

²⁹ The Masters' Programme will be implemented in collaboration with the University of Reunion and the Technical Centre for Disaster Risk Management, Sustainability and Urban Resilience in Southern Africa (DIMSUR) in Maputo.

³⁰ The use of discussion groups in the Disaster Preparedness and Risk Reduction Programme proved to be rather successful as an awareness-raising tool.

youth and women's associations. In addition, community mechanisms will be identified to engage women's participation and involve local women's organisations in the mobilisation of women. Community workshops and training sessions will also be gender responsive and will be held at a time suitable for women so as not to disrupt livelihood patterns. Gender sensitivity training will also be undertaken and information dissemination will take place through the use of visual and oral communication tools. Workshop facilitators should also encourage women to share experiences and ideas. In so doing, the project will ensure that the role of women in local communities and households will be taken into consideration in long-term development planning.

Outcome 4 also includes the development and implementation of a long-term monitoring and evaluation programme which will take place throughout the duration of the project. The purpose of such monitoring is to ensure that the intended objectives are being met. Where intended project goals are not being met, the activities can then be modified. Long-term monitoring and evaluation (M&E) also provides an opportunity for feedback on whether the project design was appropriate. The results of such M&E provide lessons learned as well as best practices which will inform future projects and programmes for the Comoros – and other SIDS. Monitoring activities will also ensure that there is gender-balanced participation in the design and implementation of the project's activities and that gender equality is achieved within each outcome. For further details of the activities under Outcome 4, please see Annex N: Project outputs and activities.

The outputs under Outcome 4 include:

- Output 4.1: Public awareness-raising campaigns and information programmes conducted in the Grande Comore, Anjouan and Mohéli using various forms of media (including print, radio etc.).
- Output 4.2: Long-term monitoring and evaluation programme including the codification and dissemination of lessons learned and best practices from the project and other similar ones
- Output 4.3: Environmental education programmes – with a particular focus on climate change and DRR– at primary schools and the University of Comoros.
- Output 4.4: A gender strategy developed and implemented, which includes capacity-building and enhancing the participation of women in planning, selecting and implementing climate change and DRR measures.

ii. Partnerships:

Table 1: Baseline projects

Implementing and executing agency	Project title	Budget (USD)	Funds	Period	Main components	Link with the LDCF project
National Directorate for Infrastructure	Project from the 11 th FED	36 816 327	BAD BEI ³¹	2014 - 2020	<ul style="list-style-type: none"> Rehabilitation of 48 km of road (RN2, Moroni to Fombouni) Rehabilitation of 23 km of road (RN23, Sima to Moya) 	The LDCF-financed project is aligned with the Directorate of Infrastructures' objectives to strengthen the durability of roads in the areas of Bambo and Hambou (Grande Comore); and in Sima (Anjouan). In these municipalities, the project also plans reforestation activities to reduce landslides and floods.
University of Comoros	Masters' Programme ³²	88 435	UDC	2 years	Training of agents to start a professional career in institutions working on disaster risk management, climate change adaptation, resilience and sustainable development.	The LDCF-financed project plans to create a Master's Programme on Climate Change and Disaster Risk Management that will be co-financed by the University of the Comoros and the LDCF-financed project
OVK	Technical support to monitor Karthala volcano	130 000	USGS	1 year	Acquisition of monitoring stations for Karthala volcano	The LDCF-financed project will provide additional equipment for monitoring the activities of the Karthala volcano to support the USGS and IPGP. The technical and operational support of the project will enable OVK to better monitor the activities and predict the impacts of the Khartala volcano in local communities vulnerable to climate related disasters and other climate change impacts
		130 000	IPGP	2016 - 2019	Technical support missions to monitor Karthala volcano	
DGSC	Operational support	503 220	DGSC	2017 - 2018	Operational support	The LDCF-financed project is aligned with the objectives of the DGSC, the mandate of which is to coordinate <i>inter alia</i> : i) the development and implementation of national policy on disaster risk management; ii) the disaster preparedness strategies and plans; iii) the development and dissemination of early warnings; and iv) relief operations in cases of natural disasters. In particular, Component 1 of the project will contribute towards capacity building and institutional strengthening which will facilitate the integration of climate change and disaster risk reduction into long-term development planning. In addition, Component 2 of the LDCF-financed project will build on the early warning systems currently in place through increasing access to climate data and models which will enhance the DGSC's decision-making abilities. Component 4 of the project will also build on the DGSC's current training and awareness programmes and will ensure that information on climate change risks, disaster risk reduction measures and early warnings are widely disseminated amongst local communities on the three islands.
TDM	Operational support	262 929	Meteorology	2017 - 2018	Operational support and training	The LDCF-financed project is aligned with the TDM's objectives to monitor hydrometeorological events and provide local communities and decision makers tailored climate information and early warnings for the management of climate related disasters. Component 2 of the project, which focuses on improving and

³¹ European Bank of Investment

³² Master's Programme in Disaster Risk Management, Climate Change, Environment and Sustainable Development

						strengthening knowledge of climate change and vulnerability of the local communities, will benefit the TDM.
TOTAL		\$37,930,929				

Partner projects

Implementing Partner	Title	Budget (US\$)	Period	Project description	How the proposed project will align
GEF/UNEP	Building Climate Resilience through Rehabilitated Watersheds, Forests and Adaptive Livelihoods	5,140,000	2017-2020	The objective of this UNEP project is to build the resilience of local communities in the Comoros to climate change through the rehabilitation of degraded watersheds. Climate-resilient species will be used to reforest degraded watersheds and anti-erosion measures will also be implemented. The project will also establish community conservation zones and develop technical and institutional capacity for sustainable forest and watershed management. Alternative and sustainable livelihoods will be introduced in rural areas to contribute towards ensuring diversified and resilient livelihoods with minimal impact on ecosystem services, as well as to ensure the long-term sustainability of the watershed rehabilitation.	The UNEP project will generate evidence on climate change risks on the functioning of watersheds and will develop experience in management strategies and adaptation solutions. The LDCF project is in alignment with the objectives of the UNEP project and will build on the activities of the project which are limited to one site per island. In sharing lessons learned, the LDCF and UNEP projects can both benefit from knowledge and experiences gained thereby proving cost-effective. There will also be an overlap between the projects in terms of resilience-building activities within some of the watersheds. Coordination of reforestation activities particularly in these watersheds is important to ensure that there is no duplication of activities. Formal coordination processes will be established at project inception so that complementarity between the projects and their activities is ensured and that lessons learned and experiences are shared by all parties.
GEF/UNDP	Development of a national network of terrestrial and marine protected areas representative of the Comoros' unique natural heritage and co-managed with local village communities (PA project)	4,746,000	2014–2019	The objective of the PA project is to establish an expanded and functional system of protected areas in the Union of Comoros to conserve the country's marine and terrestrial biodiversity. Comoros' biodiversity is highly impacted by human activities and consequently terrestrial ecosystems are under a considerable degree of pressure. The PA project is a UNDP/GEF-funded initiative and implemented through the Ministry of Production, Energy, Environment, Industry and Handicraft. The two components of the PA project are: i) strengthening the PA system through expansion and capacity building at all levels, including a legal framework and enabling investment environment for PAs; and ii) site-level PA operationalisation.	The LDCF-financed project is in alignment with the PA project and its first component that aims to strengthen the PA system through expansion and capacity building at all levels. Component 1 of the proposed project specifically addresses capacity building and strengthening of existing institutions. By implementing reforestation programmes, the LDCF project will contribute towards decreasing deforestation and consequently protecting natural resources and ecosystems from further degradation. In addition, the activities under Component 3 of the LDCF project including capacity building, training, awareness-raising and educational activities will build on the activities already undertaken by the PA project and expand upon the dissemination of such activities.
GEF/UNDP	Enhancing adaptive capacity for increased	8,990,490	2014–2018	The CRCCA is implemented under the UNDP and funded through GEF/LDCF. The objective of the CRCCA is to strengthen the capacity, tools and technology of the Union of the Comoros to reduce the vulnerability of agricultural	Cooperation with this project will occur through the Implementing Agency (UNDP), in particular coordination between Steering Committees and Project Management Unit meetings. Linkages will be

	reliance to climate change in the agriculture sector in the Union of the Comoros (CRCCA)			production systems to climate change and climate variability on Grande Comoro, Anjouan and Mohéli. The three outcomes of the CRCCA focus on: i) strengthening the strategic framework and adaptive capacity for agricultural support and management institutions; ii) strengthening the existing national meteorological service to improve data being recorded at selected sites; and iii) improving climate change resilient agricultural approaches and partnerships between agricultural support organisations.	developed to ensure synergy and cooperation, as well as the sharing of methods and lessons learned. These synergies will enable the LDCF project to build on this project's outcomes – mainly the strengthening of existing national meteorological services – to enhance early warning systems.
UNOPS	Implementation of integrated management of water resources and sewage in the Small Island Developing States of the Atlantic and Indian Ocean (GIRE PEID AOI)			The Global Environmental Facility (GEF) has funded a full-sized project to support 6 participating SIDS of which the Comoros is one. The UNOPS project seeks to accelerate progress on integrated water resources management, water use efficiency plans, water supply and sanitation development goals for the protection and utilisation of groundwater and surface water in the participating countries. It will specifically support the implementation of demonstration activities on integrated water resources management (IWRM) and water use efficiency (WUE) to address priority issues at the national level with potential for replication across the region and in other SIDS regions. The four components of the project are: i) development and implementation of targeted demonstrations in IWRM and WUE; ii) IWRM and WUE monitoring and indicators framework; iii) policy, legislative and institutional reforms and capacity building for IWRM and WUE; and iv) knowledge exchange, best practices, replication and stakeholder involvement.	The LDCF-financed project is in alignment with the objectives of the UNOPS project. In particular, the LDCF project will build on several on the components and outcomes of the UNOPS project. For example, water shed management as well as water supply, use and efficiency demonstrations (under Component 1 of the UNOPs) will inform both reforestation activities and the sustainable use of natural resources under Component 3. Furthermore, groundwater assessments will inform the rainwater harvesting interventions. Component 4 of the UNOPS project will identify best practices and lessons learned in water management and use technologies and include strategies to deal with droughts. The LDCF project will build on these lessons learned to ensure that there is no duplication of efforts and that the most cost-effective interventions are implemented. In addition, the gender audits, analysis and training undertaken by the UNOPs will inform Component 4 of the LDCF project thereby enhancing gender mainstreaming and the equitable access of men and women to water, food security and environmental sustainability. Formal coordination processes will be established at project inception so that complementarity between the projects and their activities is ensured and that lessons learned and experiences are shared by all parties. The LDCF project will benefit the UNOPS project as well as other SIDS by providing additional sites at which demonstration activities can be facilitated as well as generating and disseminating additional knowledge products.
AMCC	Support Programme for the Union of the Comoros strengthening	3,000,000	2015-2019	The AMCC project contributes towards mainstreaming climate change in plans, projects and strategies for planning, coordination and monitoring. In so doing, the project will strengthen the resilience of the country to climate change, with a particular focus on the transport	The LDCF-financed project is in alignment with the objectives of the AMCC project. Component 1 of the LDCF-financed project will contribute towards the mainstreaming of climate change into development policies and planning, as well as improving

	resilience to climate change			sector. The project has three components: i) increased dissemination and data sharing of information on climate change; ii) increased capacity of key stakeholders and integration of climate change into strategies, plans and policies; and iii) enhanced resilience of vulnerable populations to climate change through the implementation of local pilot actions	information databases and coordination between stakeholders. In so doing, the project will also contribute towards enhancing the technical capacity of stakeholders. Components 2 and 3 of the LDCF-financed project will contribute towards enhancing the resilience of vulnerable populations through the development of risk and vulnerability maps as well as implementing on-the-ground interventions (including reforestation, rainwater collection and harvesting, flood prevention and income-generating activities).
National Directorate of Infrastructure	Periodic road maintenance work in Anjouan (PADST2)	11 602 721	2017 - 2018	<p>Periodic maintenance of 57 km of road:</p> <ul style="list-style-type: none"> • Panda to Nioumadzaha; • Ivani to Mbeni; • Koimbani to Chomoni and • Chomoni to Dimani. • Maintenance of 37 km of road: • Domoni to Maramani; and • Maramani Moya Chikoni to Sima • Maintenance of 27 km of road in Mohéli: • Fomboni to Miringoni 	The LDCF-financed project is aligned with the Directorate of Infrastructures' objectives to strengthen the durability of the roads in the areas of Koimbani and Fombouni (Grande Comore); Vassy, Koni Djodjo, Domoni, and Sima (Anjouan); Hoani, Fomboni Hamba, and Miringoni (Mohéli). The climate related disasters, particularly landslides and floods, are among the key risks that threaten the sustainability of the roads in these areas. In these municipalities, the project plans reforestation activities to reduce landslides and floods.
Community Development Support Fund (FADC)	Social Security Network project (PFSS)	6 000 000	4 years (July 2015 – June 2019)	FADC's overall objective is to provide technical and financial support to local communities in the socio-economic development of the Comoros. The purpose of the PFSS project is to increase access to social services' safety nets and nutrition in the poorest local communities. The project has three components. The first component relates to productive safety nets and responses to natural disasters, which will be executed by the FADC. Agricultural support and anti-erosion activities (including reforestation and composting) will be implemented to increase productivity. Cash for work programmes including high intensity labour will be used to re-establish a situation after a disaster and improve the productive environment of the poorest local communities. Component 2 of the project will be implemented by UNICEF and is a community nutrition program. The third component of the project focuses on economic productivity safety nets and infrastructure including agricultural infrastructure. Small agricultural work is currently being implemented in Anjouan and Mohéli. In addition, income generating activities will also be implemented.	The LDCF-financed project is aligned with the objectives of the FADC project and will provide further support to the socio-economic development of local communities in the Comoros. Under Component 1 of the LDCF-financed project, the regulatory framework for integrated climate change and DRR will inform long-term management and adaptation planning for climate-related and natural disasters. In so doing, the project will inform and enhance responses to natural disasters, specifically productive safety nets. Furthermore, on-the-ground interventions under Component 3 of the LDCF-financed project will further support the activities undertaken by the FADC. Specifically, the income-generating activities will contribute towards socio-economic development (including <i>inter alia</i> poverty reduction and nutrition) in the municipalities of Trelezini, Diboini and Dimani (Grande Comoros); Koni and Djodjo (Anjouan) and Kangani, Hagnamoida, Mlabanda, and Hamba (Mohéli).
UNICEF (Educate a Child)	Formal Education for Out-Of-School	3 274 045	2014 - 2017	<ul style="list-style-type: none"> • School construction and rehabilitation • Procurement and delivery of primary school supplies • Teacher training • Social mobilization campaigns 	The objective of the OOSC project is to increase access to primary education for children in marginalised local communities. Component four of the project – in particular the public awareness raising and training

	Children (OOSC) in Comoros				programmes and the environmental education programmes – will provide support to the OOSC project in raising community-awareness, capacity building and the mobilisation of local communities to educate children in the project intervention sites. Furthermore, the LDCF-financed project will build on the activities of the OOSC by providing training and educational materials on environmental education with a particular focus on climate change and disaster risk reduction. These activities will contribute towards increasing the awareness and understanding of climate change and disaster risk reduction and thereby decrease the vulnerability of local communities towards natural and climate-related disasters.
French Development Agency (AFD)	Formal Education for Out-Of-School Children (OOSC) in Comoros	5 700 000	2016 - 2017	The AFD project seeks to improve access to drinking water for the local community in Domoni by: i) establishing a drinking water supply network (identify and capture a source of water and treat the raw water for drinking purposes); and ii) implementing a public water service. Projects implemented by the AFD have not only enabled people to access drinking water but have also established network management bodies.	The objectives of the AFD project are to enhance the availability of drinking water in the Domoni region through the identification of sources of water. The LDCF-financed project is therefore aligned with the objectives of the AFD project and will build on the AFD project's activities through implementing reforestation activities in the Domoni region under Component 3. By reforesting degraded areas, the project will enhance water infiltration – consequently improving groundwater supplies – and the availability of water. As a result, the LDCF project's activities will directly benefit the AFD project.
General Directorate for Environment and Forests / IFAD	New subsistence means for food security in five island states of the Indian Ocean off the East and South-East coasts of Africa	172 385	2015 – 2017 (Phase 1) 2017 – 2019 (Phase 2)	<ol style="list-style-type: none"> 1. Technology transfer for improved beekeeping and pollination services 2. Implementation of techniques to improve added value, biological certification and market access 3. Capacity building for partner institutions to improve legal frameworks for a sustainable development of beekeeping activities 	The LDCF-financed project is aligned with the objectives of the Social Security Network, New Subsistence means and income security project in four island states of the Indian Ocean (Mauritius, Madagascar, Comoros and Seychelles) and in Zanzibar (United Republic of Tanzania) from IFAD's portfolio, 'Beekeeping'. IFAD's project plans to implement technology transfer and techniques for improved added value, and strengthening of institutional capacities in the municipalities of Mlabanda, Kangani, Sirziroudani, Wallah (Mohéli); Mironsty (Anjouan); and Moroni (Grande Comore). Component 3 of the LDCF-financed project will support the IFAD project through the implementation of long-term measures to support climate-resilient livelihoods and assist vulnerable local communities in adapting to climate change and the increase in climate-related disasters. By implementing restoration programmes, the LDCF-financed project will benefit the "Beekeeping" initiatives of the IFAD project. In addition, the

					introduction of income-generating activities in conjunction with public awareness activities will support the objectives of the IFAD project.
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iii. **Stakeholder engagement:** The project design process involved consultations with a wide range of stakeholder groups and participatory vulnerability assessments with local communities – details of the stakeholder participation during the PPG phase are provided in Annex M. During project implementation, the project team will support broad participation from all relevant stakeholders to ensure that implementation approaches are well targeted to meet ‘end users’ needs and to establish strong ownership of project outcomes by national partners and beneficiaries. A strong emphasis will be placed on consultation with vulnerable local communities to assess their needs and to assess the impact of project support in meeting those needs. The participatory decentralised approach to project implementation will help to ensure that each island, and region within that island has ownership of the adaptation process. The detail of those stakeholders and their roles and responsibilities are detailed in the table below.

Table 3. Key project stakeholders including responsibilities.

Stakeholders	Role and responsibilities in project implementation
Ministries and related agencies	
National Platform for Disaster Risk Prevention and Reduction – Ministry of Home Affairs	<ul style="list-style-type: none"> • Elaboration of the policy, strategy, action plan and law related to PGRC-CC. • Coordination of RRC-related activities
DGSC	<p>DGSC holds a national mandate to coordinate disaster risk management related activities. As such, DGCS will:</p> <ul style="list-style-type: none"> • be a partner in the project implementation; • coordinate, supervise, and monitor the technical and financial aspects of all the project activities; • be the National Director for the project, in charge of chairing the Project’s Steering Committee; • provide appropriate working space and services for the project management team, including water, electricity and internet access; and • be responsible for the technical and financial reports to submit to UNDP and integrate lessons learned into knowledge sharing networks.
DRSC	<ul style="list-style-type: none"> • Supervise and coordinate island activities. • Project focal point on the islands. • Implement activities within its jurisdiction on the islands. • Implement activities related to information, education and sensitization on the islands. • Member of the Project Steering Committee.
CATI/	<ul style="list-style-type: none"> • Implementation of a national database on disaster. • Participate in the elaboration of vulnerability maps.
Director General for the Environment and Forests (DGEF) / MPPEIA	<ul style="list-style-type: none"> • Provide technical support to the project. • Special partner for reforestation activities on the degraded slopes in the areas most exposed to landslides and heavy rainfalls. • Implement activities related to information, education, and sensitization on climate change impacts. • Provide support to the implementation of IGAs. • Member of the Project Steering Committee.
OVK	<ul style="list-style-type: none"> • Provide technical support and advise on the implementation of activities that are relevant to OVK. • Provide technical support and advise on activities related to geological events. • Assist with data collection to support the development of climate scenario and modelling of geological event risks. • Contribute to activities related to building knowledge on climate change impacts, frequency and intensity of climate disasters for mid to long term, and community vulnerability. • Member of the Project Steering Committee.
TDM	<ul style="list-style-type: none"> • Provide technical support and advise on climate modelling activities for hydro meteorological events.

	<ul style="list-style-type: none"> • Support data collection to develop climate scenario for 2050 and 2100, and on modelling future hydro meteorological and geological risks; • Implementation of activities related to capacity building for surveillance, forecasts and alert system for climate change related hydro meteorological events. • Member of the Project Steering Committee;
CRCO	<ul style="list-style-type: none"> • Implementation of awareness-raising activities within the local communities. • Member of the Project Steering Committee
Directorate for urbanism and land management / Ministry of Land Management, Infrastructures, Habitat and Urbanism	<ul style="list-style-type: none"> • Provide technical support and advise on flood mitigation activities and low-cost interventions to protect socio-economic infrastructures. • Implementation of structural mitigation activities. • Member of the Project Steering Committee.
Research and training Institutions	
University of Comoros - Faculty of Science	<ul style="list-style-type: none"> • Implementation of activities related to the Masters programme on Environment, Climate Change and Disaster Risk Management. • Participate in training and knowledge building activities on the impacts of climate change. • Member of the Project Steering Committee.
National Centre of Ocean Data and Information in the Comoros	<ul style="list-style-type: none"> • Provide technical support and advice. • Implementation of activities related to strengthening capacities to monitor climate change related oceanographic events.
Rural Centre for Economic Development (CRDE) (Mibani, Mledjele, Fomboni in Mwali, Bamba and Bougweni in Ndzuan, Simboussa, Serehini, Sembenoi in Ngazidja	<ul style="list-style-type: none"> • Implementation of reforestation activities. • Provide technical support for IGAs. • Contribute to awareness campaigns for reforestation in the project intervention sectors
General Commissioner for Planning	<ul style="list-style-type: none"> • Supervise the mainstreaming of CC into development policies and plans • Partner in mobilising financial partners for emergency fund • Partner to define a management mechanism for the emergency fund. • Member of the Project Steering Committee.
National Directorate for Gender	<ul style="list-style-type: none"> • Provide technical support and advice for activities related to gender promotion and equity. • Implementation partner of the strategy to support gender integration into the project activities. • Member of the Project Steering Committee.
Associations, CBOs, NGOs	
<p>In Ngazidja : associations ULANGA, AIDE, Comoflora, Groupe d'Intervention pour le Développement Durable, Association pour les Amis du Karthala, la Jeune Chambre Internationale, et autres</p> <p>In Mwali: associations ULANGA, Association d'Innovation et de Recherche pour le Développement, la Maison de l'écotourisme, Moidjio, et autres</p> <p>In Ndzuan: Action Comoros Anjouan, Organisation pour la Gestion Intégrée des Ressources Naturelles à Ndzuan, Dahari, etc.</p>	<ul style="list-style-type: none"> • Provide technical support and advice. • Implementation of community sensitization and awareness-raising activities on climate change impacts. • Assist in the implementation of reforestation activities on the degraded slopes in the areas most exposed to landslides and heavy rainfalls. • Contribution to the awareness-raising, training and mobilisation of local communities during the project's lifetime. • Participate in the capacity building activities for community actors on reforestation and IGAs. • Sharing and dissemination of best practices for reforestation and IGAs.
SCOOT movement	<ul style="list-style-type: none"> • Provide support to local communities for the implementation of activities.
Media	
National and local radio and television channels broadcasting in the targeted regions, including electronic newspapers. Printed press includes: Ulanga Ngazidja, Al-Watwan, la Gazette, Archipel, Journal La	<ul style="list-style-type: none"> • Contribute to awareness-raising and information campaigns on the project's main issues, e.g. climate change impacts and disaster risks for the country. • Dissemination of the project's main interventions for climate risk reduction.

Tribune, Bulletin Mavouna (CEFADER), Albalade, l'Observateur	<ul style="list-style-type: none"> • Dissemination of information related to the project's progress and key outcomes, dissemination of job offers, incentives for the public to participate in the project's large-scale activities, e.g. reforestation of the drainage basin. • Broadcasting of programmes, environmental and climate shows and thematic articles
Village communities in the project intervention sites	
Community actors	<ul style="list-style-type: none"> • Key actors and beneficiaries of the project's activities. • Participate in information and awareness-raising activities in the project intervention areas. • Participate in the identification, development and implementation of IGAs. • Participate in the identification and participatory assessment of the threats on community activities (including deforestation) and the establishment of surveillance stations in Karthala
Community thought leaders: Grand dignitaries, religious chiefs (Iman, Hatubes), women leading female associations and groups	<ul style="list-style-type: none"> • Dissemination of information to the population, including legislative provisions, penalties for cutting trees and the disposal of solid waste in rivers. • Participate in the development of an Early warning system and dissemination of early warnings.
Mayors of the municipalities in the project's intervention sites	<ul style="list-style-type: none"> • Provide support for the establishment of civil service units. • Facilitate land allocation for the civil service units and emergency relief storage units. • Participate in water management activities. • Participate in community awareness-raising activities, particularly on early warnings.
EDA (Electricity of Anjouan / hydroelectricity producer) MAMWE (Madji Na Mwedje Ya Comoros) Water and Electricity in the Comoros	<ul style="list-style-type: none"> • Contribute to reforestation activities and the establishment of community and individual systems for rainfall water harvesting.
The Directorates responsible for the Environment on each island: the Directorate of Environment and Forest on Mwali, the Directorate of Environment on Ndzuani, the Regional Directorate of Environment and Forest on Ngazidja	<ul style="list-style-type: none"> • Planning and implementation of the project's interventions at the local level, including the selection of intervention sites at the local and community levels.
Commissioners: Commissioner responsible for Civil Security on each island	<ul style="list-style-type: none"> • Participate in the elaboration of the policy, strategy, action plan and law related to the PGRC-CC on the islands; • Participate in the coordination of activities related to RRC on the islands

iv. **Mainstreaming gender:** The effects of natural and climate-related disasters as well the social impacts thereof – which includes post-disaster recovery and reconstruction, policy formulation and lessons learned – are gender biased. Climate change is expected to have a disproportionate impact on women³³. Disasters exacerbate poverty and result in the previously poor being pushed into destitution. Loss of housing, income generating assets, livestock, crops and cropland, safe water supplies and sanitation facilities are all gendered impacts following a disaster. Resource loss following a disaster affects men and women differently. The Comoros's commitment to gender equality is incorporated in the Poverty Reduction and Growth Strategy Paper (PRGSP) and the Gender Policy Frameworks as well as within the United Nations Development Assistance Framework (UNDAF). The design of the LDCF-financed project has therefore placed a strong emphasis on ensuring effective consultation with men and women and on understanding the different climate change issues and concerns of both men and women. In this context, consultations were held at both national level with the Department of Gender and Social Protection³⁴ and at the local level with female members of local communities to properly identify women's needs and concerns under

³³ Denton F. 2002. Climate change vulnerability, impacts, and adaptation: Why does gender matter? *Gender & Development* 10(2): 10–20.

³⁴ Within the Ministry of Health, Solidarity, Social Cohesion and Gender

changing climate conditions (For further details of the surveys undertaken with local community members, please see Annex S).

From the results of the surveys undertaken, it is evident that the involvement of women in decision-making is limited. Women's involvement in and responsibility for bringing home money to support the household is also limited with the exception of certain local communities – particularly in the Grande Comore where women are more actively involved in income-generating activities. Their activities and influence are predominantly limited to taking care of the household, which increases their vulnerability to climate change and extreme weather events. Women are generally not involved in community decision-making which includes evacuation planning and because they are responsible for the safety of the children, sick and elderly their ability to evacuate timeously is hampered. In addition, they are not involved in the decision as to when to evacuate and therefore are reliant upon the effective transfer and dissemination of such information. This reliance upon the communication and transfer of early warnings and evacuations therefore hampers their ability to ensure their own safety.

Other issues raised by the women which will be exacerbated by the effects of climate change include insufficient access to food, water and electricity as well as financial resources. The lack of money and income-generating activities means that women are unable to buy food. A decrease in the availability of food at the market results in an increase in food prices and many women complained about the lack of variety in their diets due to limited access to proteins such as meat. In addition to a decline in the availability of food, women indicated that access to water is also decreasing with many households reliant upon retention ponds and wells. With the predicted effects of climate change women will be required to travel increasing distances to find accessible water. As temperatures increase and rainfall patterns change – drying up many sources of water – these distances will increase. This physical labour becomes increasingly difficult for the women in the local communities and represents an opportunity cost in terms of time and labour. It is therefore evident from the surveys conducted that Comorian households are already experiencing the effects of climate change. Gender integration into national policies is central to CCA and DRR. Although the Comoros has demonstrated its commitment to gender equality³⁵, it has become evident through consultations during the PPG phase that woman's organisations and gender appropriate actions are not represented in the national disaster planning processes in the Comoros. At present, the Comorian Government has reported little progress on the integration of gender sensitive vulnerability assessments into planning and development decisions. Moreover – as indicated in the gender surveys – women are generally not involved in community decision-making, including evacuation plans and decisions. Through Component 4 of the proposed project, a gender strategy will be developed and implemented. This strategy will include gender sensitive capacity-building and will enhance women's participation in planning, selecting and implementing CCA and DRR measures. Furthermore, under Output 4.4, recommendations will be made for the revision of the National Policy on Gender Equality to include gender sensitive adaptation responses to natural and climate-related disasters. The project will provide support to women to carry out their responsibilities in their traditional areas of authority, such as managing the household, taking care of the children and their education. In addition, the development of the gender strategy will encourage both women and men to take on non-traditional gender roles, for example sharing labour in the domestic sphere. In so doing, the project will seek to secure male support for the project activities that uphold women's rights and promote empowerment. This will allow women more time to take on more strategic roles and get involved in decision-making processes. Furthermore, mechanisms will be established that enable both men and women to provide feedback on all project activities and the appropriateness and success thereof.

The LDCF-financed project's implementation approach places a strong emphasis on: i) contributing towards gender equality; ii) ensuring effective participation by women in project activities under Outcomes 3 and 4; iii) mainstreaming women's development needs and concerns as identified through the vulnerability assessments (Annex Q) and surveys undertaken (Annex S); and iv) ongoing assessments of the vulnerability of women and men to climate change through monitoring and evaluation (M&E) under Outcome 4.

The guidance attached in Annex P (Guidance for gender-sensitive and gender-responsive project implementation) will be further refined and finalised during the inception phase of the project to guide mainstreaming activities during implementation.

³⁵ Indicated in the PRGS and Gender Policy Frameworks, as mentioned above.

v. South-South and Triangular Cooperation (SSTrC): The exchange of knowledge, skills, resources and technical know-how between developing countries and stakeholders in the Comoros is integral to the success of the LDCF-financed project. Institutions within the Comoros, including the DGSC, TDM³⁶ and the University of Comoros³⁷ have had extensive experience in working with other institutions in the region including from Reunion, Madagascar, Seychelles, Malawi and South Africa. To date, reliance is placed upon information and forecasts generated by institutions elsewhere in the region – including Madagascar and Croissant Rouge in Reunion. The Comoros has therefore established a strong network of institutions upon which it will rely to further develop their own technical and institutional capacity. For example, with regards to capacity-building and training under Component 2, the TDM has identified the following potential training partners including *inter alia* the African Centre of Meteorological Application for Development (ACMAD) in Nigeria and RIMES in Thailand. Furthermore, under Component 4 of the project, the University of Comoros will work in close collaboration with the Disaster Risk Management Sustainability and Urban Resilience Centre in Mozambique (DIMSUR)³⁸ to develop a Master’s programme focusing on the environment, climate change and disaster risk reduction. Moreover, partnerships with research organisations and institutions will be identified (under Output 2.5) which will be involved in the long-term monitoring and management of climate risks. The outcomes of such partnerships will benefit other SIDS in responding to natural disasters and climate change and will be disseminated via international platforms (under Output 4.2).

³⁶ For example, the TDM has worked in collaboration with the University of Egypt who have provided training.

³⁷ The University of Comoros previously worked extensively with universities in Italy and Madagascar to develop and implement a Master’s programme in Biodiversity.

³⁸ Also referred to as the Centre Technique pour la Gestion des Risques et Catastrophes la durabilité et la résilience urbaine en Afrique Australe.

V. FEASIBILITY

i. Cost efficiency and effectiveness: In the development of the Comoros' NAPA, multi-criteria analyses were undertaken as part of the NAPA process in order to prioritise actions according to their potential for positive effects on economic development, social capital and environmental management. As such, the actions proposed by the NAPA are not only the most urgent and pressing but have also been assessed to be cost-effective. The LDCF-financed project aligns with the priorities of the NAPA (see Section II Development Challenge of the Project Document for further details) in order to implement necessary actions that have already been identified as cost-effective.

During the PPG phase, the following cost-effective measures were identified for the project: i) strengthening the capacity of institutions and on the ground centres to respond to climate disasters; ii) providing equipment and necessary training to better respond to climate disasters; and iii) supporting climate resilient development planning in the target local communities. These measures were identified as no-regret, tangible and cost effective as they: i) prioritise the needs of local communities in the project design; ii) optimise the spending of project funds on meeting the needs of the local communities; and iii) ensure that the project is well understood by beneficiaries to promote project success and efficient use of finances. The costs of integrated CCA and DRR interventions were determined through consultations undertaken at national level as well as at regional level with the involvement of regional administrators. Additionally, vulnerable groups – including women – were consulted during the PPG phase to ensure maximum benefits to all project beneficiaries.

The LDCF-financed project will enhance existing institutional structures, both nationally and regionally, where possible. Project implementation will be undertaken by government and local authorities, as well as established organisations – such as Croissant Rouge. This approach is believed to be particularly cost effective, as it reduces costs that would need to be spent on consultant driven implementation. Furthermore, it builds the capacity of the government system for ongoing and more widespread implementation of similar climate-sensitive development. For example, the DGSC will continue to coordinate data collection and analyses through CATI under Outcome 1. Increasing the capacity of existing agencies will reduce project costs, strengthen institutional support and increase the potential for project approaches and newly capacitated staff to be integrated into departments, ministries and institutions beyond project termination. This will contribute to an enabling environment for integrating CCA into long-term planning.

The LDCF-financed project will also pursue an active partnership with current initiatives in the Comoros, including various GEF-funded projects (refer to Section IV Table 1: Partner projects for further details of these projects). Through these partnerships, the project will build on lessons learned from past and current projects. The collaboration between projects will also ensure that cost effectiveness is included as selection criteria for appropriate adaptation interventions. Furthermore, to provide an efficient overall adaptation strategy that integrates DRR into CCA measures, both “hard” and “soft” adaptation interventions are required. Examples of the benefits of this complementary approach are well documented in international literature³⁹. Under Outcome 3, the proposed project will implement “hard” adaptation interventions such as the dredging of rivers to promote the flow of rivers and establish gabion walls in riverbeds to protect/strengthen the riverbanks. These interventions will be complemented by “soft” interventions – such as reforestation of degraded slopes and riverbanks as well as the establishment of nurseries in the target areas – also under Outcome 3. Further “soft” interventions – such as technical and institutional capacity building of national, regional and local stakeholders under Outcome 1 – will enhance the sustainability of the proposed project.

Under Outcome 3, a cost benefit analysis will be undertaken to evaluate the effectiveness of the reforested areas (Output 3.1) for the development of IGAs in the intervention sites. The economic impact of the project's activities will also be assessed under Component 4. Furthermore, a national communication strategy and action plan will be

³⁹ A shift to integrate both hard and natural infrastructure in the Yangtze River in China has resulted in the seasonal opening of embankment sluice gates. This has restored the connections between the Yangtze River, three major lakes and their associated wetlands. Whereas dams and dykes on the Yangtze River provided water for agriculture, they also caused flooding, blocked animal migrations and degraded water-purifying vegetation, leading to eutrophication and loss of water quality. The integrated approach, including ecosystem-based interventions to adaptation, has increased floodwater retention, water purification and agricultural opportunities, and has restored migration routes for spawning fish. See: Jones et al. 2012. Harnessing nature to help people adapt to climate change. Nature. Published online: 26 June 2012 | doi: 10.1038/nclimate1463.

developed under Outcome 4 (Output 4.1) along with a system for the M&E as well as upscaling of project interventions (Output 4.2). In this way, the proposed project provides for the long-term management of climate risks and the potential to replicate successful project activities and interventions throughout Grande Comore, Anjouan and Mohéli.

Benefits of the LDCF-financed project will be enhanced through training of both local communities and authorities as well as other stakeholders on the implementation and ongoing maintenance of adaptation interventions. The project therefore includes technical training within the local communities that will enhance community ownership of the project interventions through a learning by doing approach. Furthermore, by adopting a “training-the-trainers” approach, the project will be able to reach a larger proportion of the population as those that have received training will be able to pass their knowledge on and train members of their local communities. By adopting these approaches, the project reduces the costs of monitoring and maintenance. Community involvement will also promote project sustainability beyond the lifespan of the proposed project.

ii. Risk Management: As per standard UNDP requirements, the Project Coordinator will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual PIR.

Table 4: Risk Management Table

PROJECT RISKS					
Description	Type	Impact & probability	Mitigation measures	Owner	Status
The interest of the local communities in disaster risk reduction is not maintained beyond the project intervention.	Social	Lack of commitment and/or buy-in from local communities may result in limited adoption and long-term sustainability of project interventions. P= 2 I= 4	A stakeholder engagement plan will ensure that local communities are sufficiently consulted during planning and implementation. Capacity-building and training of local communities will be undertaken to communicate the benefits of adaptation interventions and involve them in implementation as well as monitoring and evaluation. Awareness raising campaigns will also be undertaken to promote integrated DRR and CCA interventions. These campaigns will highlight the importance of the proposed project interventions. Furthermore, there will be continued stakeholder consultation in accordance with the project specific communication strategy and action plan. The establishment of a communication strategy and action plan will: i) put in place procedures for consultations with stakeholders; and ii) establish information channels and networks. These will continue to exist and operate once the project has ended, thereby ensuring the long-term sustainability of the project.	Project Management Unit	No change
Local communities exposed to risk are not willing to change their behaviour to further prevent natural and climate-related disasters.	Social	Intervention measures are not properly implemented. P=2 I=4	A stakeholder engagement plan will ensure that local communities are sufficiently consulted during planning and implementation. Capacity building and training of local communities will be undertaken to communicate the benefits of adaptation interventions and involve them in implementation as well as monitoring and evaluation. Awareness-raising campaigns will also be undertaken to promote adaptation interventions. These campaigns will highlight the importance of the LDCF-financed project interventions. Furthermore, the project will adopt an ongoing learning-by-doing approach that will allow for iterative and adaptive management to prepare for dealing with natural and climate-related disasters. Lessons learned will be captured and disseminated to encourage sustainability and to reduce risks through future interventions in the Comoros. There will also be continued stakeholder consultation in accordance with the project specific communication strategy and action plan.	Project Management Unit	No change
Slash and burn agriculture increases the potential for bushfires which destroy forests.	Environmental	Bush fires result in extensive damage to crops and forests. P=4 I=4	Civil security units will be established and training and capacity-building will be undertaken to ensure that emergency response personnel and equipment are available to contain bush fires and minimise the risk posed to forest ecosystems.	DGSC/DRSC	Increasing

Extreme climatic events and climate variability.	Environmental	Current climate and seasonal variability and/or hazard events result in disruption to implementation of adaptation interventions. P=4 I=3	Updated and improved site-specific climate information, forecasting and projections will be developed. This weather forecasting will be taken into consideration when planning climate-sensitive implementation activities. Institutional capacity development and training programmes will take place focusing on changing behaviour and increasing preparedness to climate change amongst stakeholders including local authorities and local communities. Furthermore, the project will adopt an ongoing learning-by-doing approach that will allow for iterative and adaptive management to prepare for dealing with extreme weather events. Lessons learned will be captured and disseminated to encourage sustainability and to reduce risks through future interventions in the Comoros.	TDM DGSC Project Management Unit	Increasing
Insufficient competent and available human resources within national structures and disaster management on islands to support project initiatives and perpetuate these assets beyond the project.	Organisation	Planned project interventions may not be implemented effectively. Climate change may not be mainstreamed into policies and plans etc. P=2 I=3	A capacity needs assessment will be undertaken for certain stakeholders to determine: i) the existing linkages between government departments; and ii) the involvement of project stakeholders in decision-making. The results will inform training and capacity-building measures to ensure the effectiveness and efficiency of such institutions in implementing DRR and CCA interventions. Institutional and technical capacity will be developed to support coordination between stakeholders, planning and implementation of DRR and CCA activities in the Comoros. The project will also seek linkages with ongoing projects and initiatives so as to encourage synergies which will reinforce the significance of the LDCF-financed project and ensure there is no overlap with other project's activities. Training and capacity-building will be provided and the project will also promote active participation at the local level of government officials (mayors) encouraging improved civic relations.	Project Management Unit Technical committee	No change
Lack of inter-institutional data sharing or collaboration.	Organisational	Limited transfer of relevant project information amongst role players and end-users resulting in delayed or ineffective implementation of interventions. P=2 I=3	Representation of a range of stakeholders on the Technical Committee will promote collaboration and cooperation between government and other institutions. Informal knowledge sharing opportunities will be supported, such as networking events between relevant government departments/units.	Technical Committee	No change
Implemented interventions are not cost-effective.	Financial/ economic	Economic loss occurs and budget allocation to other activities is reduced. P=2 I=3	An analysis of project interventions will be undertaken before implementation to establish their cost-effectiveness and sustainability. In addition, the project will undertake an evaluation of the economic impacts of the project and its activities which will inform project implementation and future projects' activities.	Project Management Unit	Increasing

iii. Social and environmental safeguards: The UNDP environmental and social safeguards requirements have been followed in the development of the proposed project. In accordance with the UNDP Social and Environmental Screening Procedure (Annex F), the project is categorised as medium and – as outlined below – is not expected to have any negative environmental or social impacts.

The LDCF-financed project will decrease the vulnerability of the local communities to floods through improved management of rainwater. Hard interventions – including *inter alia* the dredging of rivers and constructing gabion walls – will be implemented in the sites most vulnerable to flooding. Soft interventions such as the revegetation and strengthening of riverbanks utilising indigenous and/or non-invasive species – will also be implemented to reduce the effects of flooding. Assessments will be undertaken which will inform the detailed design studies to ensure that risks posed by hard infrastructure will be mitigated so as not to adversely affect the riverine ecosystems. The on-the-ground interventions will be undertaken through a participatory process with the local communities. Therefore, members of the targeted vulnerable local communities will benefit equally from such interventions. As a result, no conflicts within the local communities are expected. Furthermore, the hard infrastructure built by the project will be designed specifically to protect community assets and lives. Sustainable natural resource use and management will also contribute positively to people's health.

Soft interventions – such as the revegetation of riverbanks and degraded slopes using indigenous and/or non-invasive species – will protect natural resources and livelihoods from the effects of climate change. Solely positive effects on habitat and biodiversity are expected from the revegetation activities. Ecosystem functioning for example will be promoted by the activities as they will focus on soil stabilisation, improve water infiltration and restore natural vegetation. Revegetated land will also be less vulnerable to degradation by intense rains. Indigenous species will also be preferred to maximise the positive effects on the environment. Furthermore, the increase in biomass resulting from revegetation will contribute towards carbon sequestration.

Although the project will benefit local communities, it is not expected that this will lead to localised population increases. Rather, it is expected that the interventions such as increased access to climate information will benefit local communities beyond the LDCF-financed project intervention sites. Consequently, no population displacement is expected as a direct or indirect result of the project.

Gender equality is a focus area of the LDCF-financed project. The project interventions will promote social equity and equality. All social consequences of the project are expected to be positive. Local communities' approval and support of the interventions will be sought prior to implementation. As the project is expected to have either no effects or positive effects on the environment and community, it is not necessary to undertake a full environmental and social review. However, Environmental Impact Assessments will be conducted prior to the construction of hard infrastructure according to the national EIA legislation.

iv. Sustainability and Scaling Up: The concept of sustainability has been a central tenet in the design and development of this LDCF-financed project. In this context, the following paragraphs describe how the sustainability of the project interventions has been promoted during the design process.

Emphasis was placed on fostering a consultative partnership-based approach to CCA and DRR between the project team, government ministries and departments, organisations, academic institutions and local communities, at the national and regional levels. A consultative approach supports the sustainability of DRR and CCA interventions beyond the duration of the project by ensuring that the long-term needs of vulnerable local communities are prioritised. Local stakeholders were consulted extensively during the PPG phase and similar consultations will be ongoing as part of the project implementation phase (see Table 3 under Section IV for further details on project stakeholders). By involving local communities, this will lead to greater ownerships and participation by such local communities. In turn this will lead to the integration of DRR and CCA, as well as sustainable natural resource management into village activities and development planning. Furthermore, the project design team engaged with relevant national stakeholders and experts to align activities with national priorities and development goals (see Annex L for further details). Close involvement of numerous institutions and departments in the project's implementation will support country ownership of the project. In addition, it will promote the maintenance of the project outputs, as well as promote the future incorporation of the project's approaches into ongoing planning and strategies.

The focus on integrated DRR and CCA planning and implementation in this LDCF-financed project will strengthen the capacity of national and local government authorities to plan, design and implement integrated DRR and CCA interventions in the short, medium and long-term. These interventions will strengthen the institutional environment for planning and implementing integrated DRR and CCA interventions both during and after the project implementation period. Planning tools such as vulnerability and risk maps – as well as Village Action Plans – developed by this project will improve the decision-making capacity of government authorities by enabling them to prioritise integrated DRR and CCA interventions in the most vulnerable local communities. Therefore, project interventions include a strong emphasis on capacity-building, training and institutional strengthening, as well as coordination between DRR and CCA activities. This will support long-term political and financial commitment of policy- and decision-makers to the project interventions.

Training and capacity-building support for key stakeholder groups and institutions will be essential to establish CCA skills, tools and systems. Given the low national capacity for CCA, technical assistance will be provided both by international and national experts and through training for staff members of key institutions. The technical assistance and capacity-building approaches under the project will include “training of trainers”. Strengthened capacity and an improved knowledge base will enable appropriate and timely responses to natural and climate-related disasters and implementation of appropriate DRR and CCA interventions within pilot local communities. These local communities will also be trained on planning, implementing and maintaining DRR and CCA interventions. As a result, local stakeholders will have the capacity to sustain project interventions after LDCF resources are terminated. Moreover, the ecological interventions implemented will provide livelihood benefits for local communities, thereby promoting continued ownership amongst these stakeholders. Furthermore, it is anticipated that the LDCF investments in strengthening the capacity of these stakeholders will support the sustainability and effectiveness of similar ongoing and future projects in the Comoros.

The strengthened capacity of ministries, departments and institutions will result in: i) improved generation and collation of information on vulnerability to climate risks and natural disasters; and ii) climate-resilient land-use planning, which will support technical staff within the DGSC and other stakeholders to apply the project approach on an ongoing basis. By providing support to DGSC and local authorities, as well implementing community-based participatory planning and vulnerability mapping, the project will improve and strengthen knowledge and understanding of medium to long-term climate-related disaster risks to local communities, infrastructure and road networks. Furthermore, the development of Village Action Plans will foster and support community and household ownership of project interventions, resulting in greater support from the project beneficiaries. Hard and soft infrastructure, including ecological interventions such as reforestation of degraded slopes, catchment-harvesting and revegetation of riverbanks – will be implemented at the community and household level. The maintenance of such interventions is relatively low cost and does not require technical skills, enabling ongoing operation and maintenance by local communities beyond project implementation.

The LDCF-financed project’s interventions will increase the availability of information and planning tools to support future integrated DRR and CCA initiatives in the Comoros. A participatory approach will be adopted through LDCF resources. By adopting a “learning by doing” approach, the project will: i) build technical capacity for DRR and CCA; ii) address climate change priorities at local and regional level while simultaneously informing national development plans and policies; and iii) promote ownership of DRR and CCA interventions amongst local and national stakeholders. For example, the involvement of local authorities and local communities – including village associations – in the development of Village Action Plans will ensure ownership of the project initiatives as well as on the job skills development for all technical staff involved. Furthermore, the direct involvement of government institutions will demonstrate the potential for integration of approaches and strategies – proposed under this project – into on-going planning processes. Whilst the promotion of ownership will support the integration of cost effective adaptation interventions into local land use and development planning as well as sectoral strategies, budgets and plans.

Importantly, the project design is also aligned with national policies, strategies and legislation for the Comoros, which will further facilitate replication and scaling up. The components of the project therefore have the potential to be scaled up in order to ensure greater aggregate impact at the regional and national level. Furthermore, the

design, implementation and testing of tools at the local level – aligned with national and regional level policy processes – will ensure that lessons learned at the local level will be up-scaled and replicated elsewhere.

Knowledge and awareness-raising activities will also be undertaken to improve the understanding of climate change among academia, NGOs and the public. In doing so, the project will strengthen the research capacities of OVK, TDM and other institutions. The knowledge that is generated through this research will inform and strengthen the evidence base for an integrated response to natural disasters and climate risks in the Comoros and consequently the design of future integrated DRR and CCA interventions in the Comoros. Furthermore, the knowledge products will promote the sustainability of project interventions. By strengthening the capacity of institutions to provide knowledge-based advice to the DGSC, the project will also increase the Comoros adaptive capacity to climate change and response to natural and climate-related disasters.

The LDCF interventions – and the benefits derived from these interventions – have been designed to be replicable in other areas of Grande Comore, Anjouan and Mohéli, as well as other SIDs and LDCs within the region. The M&E will serve as a fundamental tool in promoting sustainability and scaling up of project activities, as well as demonstrate a link between sustainable natural resource management and increased livelihoods. Furthermore, during project implementation and at the end of the project duration, the benefits of the CCA interventions and economic impacts of the project activities in the Comoros will be assessed. Lessons learned from this process will be collated and disseminated to support replication of DRR and CCA in other regions within the Comoros. In particular, pilot sites will generate evidence of the cost-effectiveness of CCA interventions, including hard and soft interventions, which will facilitate policy and budgetary adjustments. The cost-effectiveness of DRR and CCA interventions will also promote replication of these interventions amongst vulnerable local communities who do not have access to financial capital. Furthermore, best practices and lessons learned from the project will be collated and disseminated nationally to inform future programming. This will facilitate the effective replication of DRR and CCA interventions by stakeholders, such as the DGSC and DRSC, who can apply the expertise gleaned from this project, adapt it and expand it. These best practices and lessons learned will inform the scaling- up strategy that will be developed under Output 4.2 of this project.

v. Economic and/or financial analysis: Component 3 of the LDCF-financed project will produce direct socio-economic benefits for vulnerable local communities in selected interventions sites in Grande Comore, Anjouan and Mohéli through the implementation of sustained, resilient and diversified livelihoods. In addition, the project will contribute to the broader national objectives, such as water scarcity, food security, land degradation, poverty and vulnerability of Comorians to climate change. Importantly, LDCF resources will also contribute towards the achievement of SDGs 1, 2, 5, 6, 13 and 15⁴⁰. The specific focus of the project will however be on addressing the goals of SDG 13: *Take urgent action to combat climate change and its impacts* which include *inter alia* : i) strengthening the resilience and adaptive capacity of the local communities to climate-related and natural disasters; ii) integrating climate change measures into national policies, strategies and planning; iii) improving education, awareness-raising, human and institutional capacity on CCA, DRR and early warnings; and iv) promoting mechanisms for increasing the capacity for effective climate change-related planning and management in the Comoros, including a focus on women, youth and marginalised local communities.

Vulnerability to climate-related disasters will be reduced through the promotion of more resilient ecosystems that can provide protective and productive services, including against floods during severe rainfall events and droughts. This will be undertaken through the restoration and improved management of ~700 hectares of degraded hillside land areas (under Component 3). Because local communities depend on natural resources for their livelihoods, improved environmental management will reduce poverty and increase food security, thereby contributing to both MDGs and SDGs. Additionally, training local communities to sustainably use and manage natural resources in a climate-smart manner will increase their resilience to climate shocks as well as improve their livelihoods through

⁴⁰ The SDGs to which the project will contribute are as follows: 1: *End poverty in all its forms everywhere*; 2: *End hunger, achieve food security and improved nutrition and promote sustainable agriculture*; 5: *Achieve gender equality and empower all women and girls*; 6: *ensure access to water and sanitation for all*; 13: *Take urgent action to combat climate change and its impacts*; and 15: *Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss*.

greater income-generating opportunities. The project will therefore contribute to reducing poverty in Grande Comore, Anjouan and Mohéli. By strengthening and developing sustainable natural resource use and management practices, as well as reforesting the selected intervention sites, the project will contribute to: i) proactive adaptation and resilience to the impacts of climate change; and ii) enhance conservation of natural resources and the ecosystems they provide, which will contribute to generating diversified and resilient livelihoods, increasing revenue and reducing poverty.

The LDCF-financed project also has specific national benefits. These include improved understanding of the impacts of climate change on the Comoros by ministries, academic and research institutions, as well as local government. Training and capacity building will strengthen the technical capacity of government staff at local and national levels to analyse, predict and respond to climate change effects, access policy-relevant data and deliver relevant information to local communities. Furthermore, a climate information and monitoring system will be developed which will inform climate-related research, land-use and development planning, CCA and DRR interventions.

Without the LDCF-financed project, local communities and the ecosystems upon which they depend will be increasingly at risk from the impacts of climate change and unsustainable use. Progress towards poverty reduction and socio-economic development will therefore be hampered. The project will provide local government and local communities with practical tools, technologies and capacities for an integrated approach to DRR and CCA. Households will be trained to implement relevant DRR and CCA interventions. This will include the reforestation of ~700 hectares to reduce vulnerability to floods and improve the resilience of livelihoods and assets of vulnerable local communities to climate disaster risks. Approximately 600 households in Grande Comore, Anjouan and Mohéli will directly benefit from LDCF resources. It is envisioned that these community members will participate directly in the implementation of the project's activities, particularly those related to flood-prevention, reforestation and alternative income-generating activities.

In the Comoros, women living with the rural areas carry the heaviest burden in terms of providing their households with basic environmental services. For example, the scarcity of water in the Comoros makes life particularly difficult for women who are responsible for obtaining freshwater for household use from naturally occurring springs, streams and rivers or wells. The management of assets and resources by women is a central role of women in Comorian household and places great stress on them – particularly during droughts. Social factors – including the gender divisions in labour and power relations, as well as gender issues in agricultural institutions and culture result in discrimination in rights and access to resources. Although female headed households are important food producers, they are not afforded equal access to resources because of social/cultural views. As key providers in their households, women are intricately involved in environmental protection. In this context, women are responsible for transmitting value-systems to the upcoming generations. The project will therefore seek to formalise the role of women by encouraging and promoting their participation in community-based natural resource and water management systems. Participation mechanisms will ensure that communities actively involved in decision-making processes incorporate a gender perspective, i.e. gender balanced community groups are established for the implementation of CCA interventions and other project interventions. A particular focus of the LDCF project will therefore be on awareness and training of women's associations, as well as the production of gender-sensitive educational materials. The involvement of the National and Regional Directorates of Gender and Social Protection during project implementation will ensure that gender issues are appropriately addressed and that women and particularly female-headed households are: i) involved in all decision-making processes, particularly the identification of drought and flood prone areas, and the development of Village Action Plan plans; ii) encouraged and assisted to get involved in alternative income-generating livelihoods (to be implemented under Component 3) to assist them in securing their food requirements; and iv) mainstream gender issues into community-based decision-making and planning, national development plans and sectoral legislation. In so doing, the LDCF project will build the capacity of women to adapt to climate change. For example, alternative livelihoods and community structures will be implemented and CBOs strengthened to provide equal adaptation benefits for both women and men. Income generating activities will therefore be gender sensitive, locally appropriate, socially acceptable, technically viable and increase the resilience of local communities. Gender aspects will play an important role in the design of the IGAs, considering the economic role of women in the household. The design and timing of project activities will also take into consideration the daily and overall yearly workload of women so that they have the time to participate in project activities. CCA interventions and IGA that will promote and empower women include *alia*: i)

establishing and maintaining nurseries of fruit and other beneficial tree species - which will supply the reforestation programme; ii) revegetation of steep slopes and riverbanks; iii) apiculture; iv) sustainable harvesting of vanilla; v) improved agriculture; and vi) agroforestry. Moreover, gender and youth action groups will be consulted when public awareness campaigns are designed and training courses on environmental issues are organised. Training manuals in the local language will also be developed and information materials disseminated, which can be easily understood by women in the villages. These consultations will ensure that information reaches female stakeholders within their networks and that they also benefit from the best practices and lessons learned during project implementation.

Within the surrounding areas, the project will generate indirect benefits to an estimated ~15,000 people through *inter alia*: i) reduced vulnerability to extreme weather events such as flooding; ii) improved agricultural productivity through reduced erosion and loss of fertility of soil; and iii) improved quantity and quality of water as a result of both hard and soft infrastructure as well as ecological interventions. Additionally, improved EWS will improve the capacity of local communities to respond to climate-related and natural disasters. A functional EWS will help to prevent loss of life, injuries and damage to property by warning people timeously of impending extreme weather events.

Additional national and local benefits are the enhanced capacities in planning and executing projects, undertaking M&E and empowering local communities to take charge of their own livelihoods. The immediate benefits of the project will be that government institutions, NGOs and vulnerable local communities have increased adaptive capacity as they: i) are more aware of the linkages between disaster preparedness and response and climate resilience; and ii) acquire the necessary skills to apply an integrated DRR and CCA approach. This increased capacity will also support long-term benefits by promoting CCA beyond the project implementation period. The improvement of the knowledge base applicable will result in better decision-making and innovation in terms of DRR and CCA. In addition, improved knowledge and access to technologies will result in a reduction in local communities' vulnerability to climate-related and natural disasters and the enhanced adaptive capacity of local communities.

VI. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): SDG 13 – Take urgent action to combat climate change and its impacts					
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: UNDAF Outcome 4: by 2019, the most vulnerable populations ensure their resilience to climate change and crises					
This project will be linked to the following output of the UNDP Strategic Plan: Output 1.4: Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented.					
	Objective and Outcome Indicators (no more than a total of 15 -16 indicators)	Baseline⁴¹	Mid-term Target⁴²	End of Project Target	Assumptions⁴³
Project objective: Strengthening the adaptation and resilience capacities of most vulnerable communities in climate change and variability related disaster risks in the Comoros.	<i>Indicator 1: # of direct project beneficiaries (disaggregated by gender). (AMAT Indicator 1)</i>	To be validated during year one of project implementation.	5,000 of which at least 3,000 are female.	15,000 of which at least 10,000 are female.	All households in the target area are committed to participating in the project activities and taking up adopting climate resilient income-generating activities.
Outcome⁴⁴ 1: Systemic and institutional capacities for the long-term management and adaptation planning for disaster risks caused by CC are strengthened at local, provincial and national levels.	<p><i>Indicator 2:</i> Technical and institutional capacity of local, provincial and national authorities (including DGSC/DRSC, TDM, OVK and local mayors) to effectively manage climate-related and natural disasters.</p> <p>Capacity scorecard assessment of the technical officials within local, provincial and national level.</p> <p>The following criteria will be used:</p> <ol style="list-style-type: none"> 1) Ability to analyse data (from weather stations, regional bulletins, research institutions etc.) and disseminate early warnings to vulnerable local communities timely. 2) Capacity to assess climate risks under the predicted conditions of climate change (given the necessary tools such as climate models and scenarios). 3) Capacity to develop and effectively implement integrated DRR and CCA 	Currently, there is low capacity within local, provincial and national authorities to assess climate risks as well as develop integrated DRR and CCA interventions. Score = 2	LDCF-financed interventions are implemented to increase the technical and institutional capacity of local, provincial and national authorities to plan and manage climate-related and natural disasters. Score = 3 or higher	Local, provincial and national authorities have the technical and institutional capacity to assess climate risks as well as implement risk management and reduction interventions to decrease the vulnerability of local communities at the intervention sites. Score = 4 or higher	<p>Government and public institutions have sufficient financing and human resource capacity to support the continuation of successful project interventions.</p> <p>Trainees leave training with improved capacity.</p> <p>Recommendations for policies, plans and strategies will be accepted and mainstreamed.</p>

⁴¹ Baseline, mid-term and end of project target levels must be expressed in the same neutral unit of analysis as the corresponding indicator. Baseline is the current/original status or condition and need to be quantified. The baseline must be established before the project document is submitted to the GEF for final approval. The baseline values will be used to measure the success of the project through implementation monitoring and evaluation.

⁴² Target is the change in the baseline value that will be achieved by the mid-term review and then again by the terminal evaluation.

⁴³ Risks must be outlined in the Feasibility section of this project document.

⁴⁴ Outcomes are short to medium term results that the project makes a contribution towards, and that are designed to help achieve the longer term objective. Achievement of outcomes will be influenced both by project outputs and additional factors that may be outside the direct control of the project.

	<p>interventions to decrease the vulnerability of local communities in the intervention sites.</p> <p>The scorecard rating is as follows:</p> <ol style="list-style-type: none"> 1) No capacity or very limited capacity at the individual level and within the respective government institution. 2) Partially developed capacity at the individual level. 3) Partially developed capacity at the individual level and within the respective government institution. 4) Fully developed and demonstrated capacity at the individual level. 5) Fully developed and demonstrated capacity at the individual level and within the respected government institutions. 				
Outcome 2: Knowledge and understanding of medium to long-term climate-related disaster risks and vulnerability are improved	<i>Indicator 3:</i> Risk and Vulnerability maps developed for local communities at project interventions sites	0 risk and vulnerability maps for local communities at project intervention sites (to be verified during year one of project implementation)	10 risk and vulnerability maps to be developed for local communities at project intervention sites (target to be verified during year one of project implementation)	20 risk and vulnerability maps to be developed for local communities at project intervention sites (target to be verified during year one of project implementation)	Public institutions, NGOs and resource users will be willing to adopt a partnership approach and work collaboratively to plan and implement risk and vulnerability maps and climate change adaptation interventions at the project intervention sites.
Outcome 3: The long-term resilience of the livelihoods and assets of vulnerable local communities against climate disaster risks is strengthened.	<i>Indicator 4:</i> Type and extent of assets strengthened and/or better managed to withstand the effects of climate change (ha of land/km of coast/km of roads/other) (AMAT Indicator 2)	0	<ul style="list-style-type: none"> • 300 ha of land reforested; • 6km of roads protected from landslides in Anjouan and Mohéli at project intervention sites including (targets to be verified during year one of project implementation) • 1000m of flood prevention measures (such as river dredging, gabion walls or restoration) implemented along river banks in Grande 	<ul style="list-style-type: none"> • 700 ha of land reforested; • 20 km of roads protected from landslides in Anjouan and Mohéli at project intervention sites including (targets to be verified during year one of project implementation) • 2500m of flood prevention measures (such as river dredging, gabion walls or 	Both government (and local communities) are committed to adopting climate-resilient technologies and practices. Resilient technologies and practices will include reforestation activities in various sites on all three islands. A multi-stakeholder approach will be used to guide climate-smart ecosystem restoration.

			Comore and Anjouan at project interventions sites (targets to be verified during year one of project implementation)	restoration) implemented along river banks in Grande Comore and Anjouan at project interventions sites (targets to be verified during year one of project implementation)	
	<i>Indicator 5: Population benefiting from the adoption of diversified, climate-resilient livelihood options (number of people/% female) (AMAT Indicator 2)</i>	0	250 households of which 100 are female-headed households (target to be verified during year one of project implementation)	600 households of which 300 are female-headed households (target to be verified during year one of project implementation)	Trainees leave with training capacity. Staff will apply outcomes of climate-related research.
Outcome 4: Increased monitoring, knowledge-sharing and awareness at national and sub-national levels on: i) climate change; and ii) natural disaster risk management.	<i>Indicator 6: Public awareness activities carried out and population reached. (Yes/no/percentage of population/% female) (adapted from AMAT Indicator 5)</i>	0	40% of population of which 25% are female (target to be verified during year one of project implementation)	70% of population of which 45% are female (target to be verified during year one of project implementation)	Involvement in the design and implementation of project interventions and ongoing communication in the expected benefits of income-generating activities will result in long-term support of the project and adoption of new knowledge, skills and practices.

VII. MONITORING AND EVALUATION (M&E) PLAN

The project results as outlined in the project results framework will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results. Supported by Component/Outcome Four: Knowledge Management and M&E, the project monitoring and evaluation plan will also facilitate learning and ensure knowledge is shared and widely disseminated to support the scaling up and replication of project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](#) and [UNDP Evaluation Policy](#). While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the [GEF M&E policy](#) and other relevant GEF policies⁴⁵.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF Tracking Tools) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.⁴⁶

M&E Oversight and monitoring responsibilities:

Project Coordinator: The Project Coordinator is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Coordinator will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Coordinator will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

The Project Coordinator will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project Coordinator will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy, KM strategy etc.) occur on a regular basis.

Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

Project Implementing Partner: The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

⁴⁵ See https://www.thegef.org/gef/policies_guidelines

⁴⁶ See https://www.thegef.org/gef/gef_agencies

UNDP Country Office: The UNDP Country Office will support the Project Coordinator as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Coordinator.

The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

Audit: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.⁴⁷

Additional GEF monitoring and reporting requirements:

Inception Workshop and Report: A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:

- a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;
- b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
- d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;
- e) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender strategy; the knowledge management strategy, and other relevant strategies;
- f) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- g) Plan and schedule Project Board meetings and finalize the first-year annual work plan.

The Project Coordinator will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

GEF Project Implementation Report (PIR): The Project Coordinator, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Coordinator will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

⁴⁷ See guidance here: <https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx>

The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

GEF Focal Area Tracking Tools: The following GEF Tracking Tool(s) will be used to monitor global environmental benefit results: LDCF Adaption Monitoring and Assessment Tool (AMAT). The baseline/CEO Endorsement GEF Focal Area Tracking Tool(s) – submitted as Annex D to this project document – will be updated by the Project Coordinator and the Monitoring and Evaluation Expert (not the evaluation consultants hired to undertake the MTR or the TE) and shared with the mid-term review consultants and terminal evaluation consultants before the required review/evaluation missions take place. The updated GEF Tracking Tool(s) will be submitted to the GEF along with the completed Mid-term Review report and Terminal Evaluation report.

Independent Mid-term Review (MTR): An independent mid-term review process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the [UNDP Evaluation Resource Center \(ERC\)](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Coordinator will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the [UNDP Evaluation Resource Center](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publicly available in English on the UNDP ERC.

The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.

Final Report: The project's terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be

discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Table 5: Mandatory GEF M&E Requirements and M&E Budget:

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ⁴⁸ (US\$)		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office	USD 10,000		Within two months of project document signature
Inception Report	Project Manager	None	None	Within two weeks of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework	Project Manager	Per year: USD 4,000		Annually
GEF Project Implementation Report (PIR)	Project Manager and UNDP Country Office and UNDP-GEF team	None	None	Annually
NIM Audit as per UNDP audit policies	UNDP Country Office	Per year: USD 4,000		Annually or other frequency as per UNDP Audit policies
Lessons learned and knowledge generation	Project Manager	None		Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager UNDP CO	None		On-going
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	None for time of project manager, and UNDP CO		Costs associated with missions, workshops, BPPS expertise etc. can be charged to the project budget.
Project Board meetings	Project Board UNDP Country Office Project Manager	Per year: USD 4,000		At a minimum annually
Supervision missions	UNDP Country Office	None ⁴⁹		Annually
Oversight missions	UNDP-GEF team	None		Troubleshooting as needed
GEF Secretariat learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None		To be determined.
Mid-term GEF Tracking Tool to be updated	Project Manager M&E Specialist	USD 10,000		Before mid-term review mission takes place.
Independent Mid-term Review (MTR) and management response	UNDP Country Office and Project team and UNDP-GEF team	USD 35,000		Between 2 nd and 3 rd PIR.

⁴⁸ Excluding project team staff time and UNDP staff time and travel expenses.

⁴⁹ The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ⁴⁸ (US\$)		Time frame
		GEF grant	Co-financing	
Terminal GEF Tracking Tool to be updated	Project Manager M&E Specialist	USD 10,000		Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response	UNDP Country Office and Project team and UNDP-GEF team	USD 35,000		At least three months before operational closure
Translation of MTR and TE reports into English	UNDP Country Office	<i>USD 10,000</i>		As required. <i>GEF will only accept reports in English.</i>
TOTAL indicative COST Excluding project team staff time, and UNDP staff and travel expenses		USD 170,000		

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism: The project will be implemented following UNDP's national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Comoros, and the Country Programme.

The **Implementing Partner** for this project is the DGSC of the Ministry of Interior. The Implementing Partner will work closely with the DGM, OVK and DGEF and is responsible for ensuring the government's contribution to the project and working with the project management team and Project Board to achieve the intended results. The Implementing Partner is responsible and accountable for managing this project, including the M&E of project interventions, achieving project outcomes, and for the effective use of UNDP resources. In this context, the Implementing Partner will be responsible for processing the requests for disbursements of government funding and production of financial reports, in compliance with the rules and procedures of UNDP. Technical and financial oversight will be provided by UNDP, via the CO and the UNDP-GEF team based in Addis Ababa and will actively monitor implementation of the project according to UNDP and GEF regulations and procedures. The Implementing Partner will also be responsible for promoting and supporting the effective coordination of the project with other national partner agencies, initiatives and baseline projects and for ensuring that lessons learned from the project are incorporated into new climate change initiatives, to support sustainability and replicability of project outcomes.

The project organisation structure is set out in Figure 2 below:

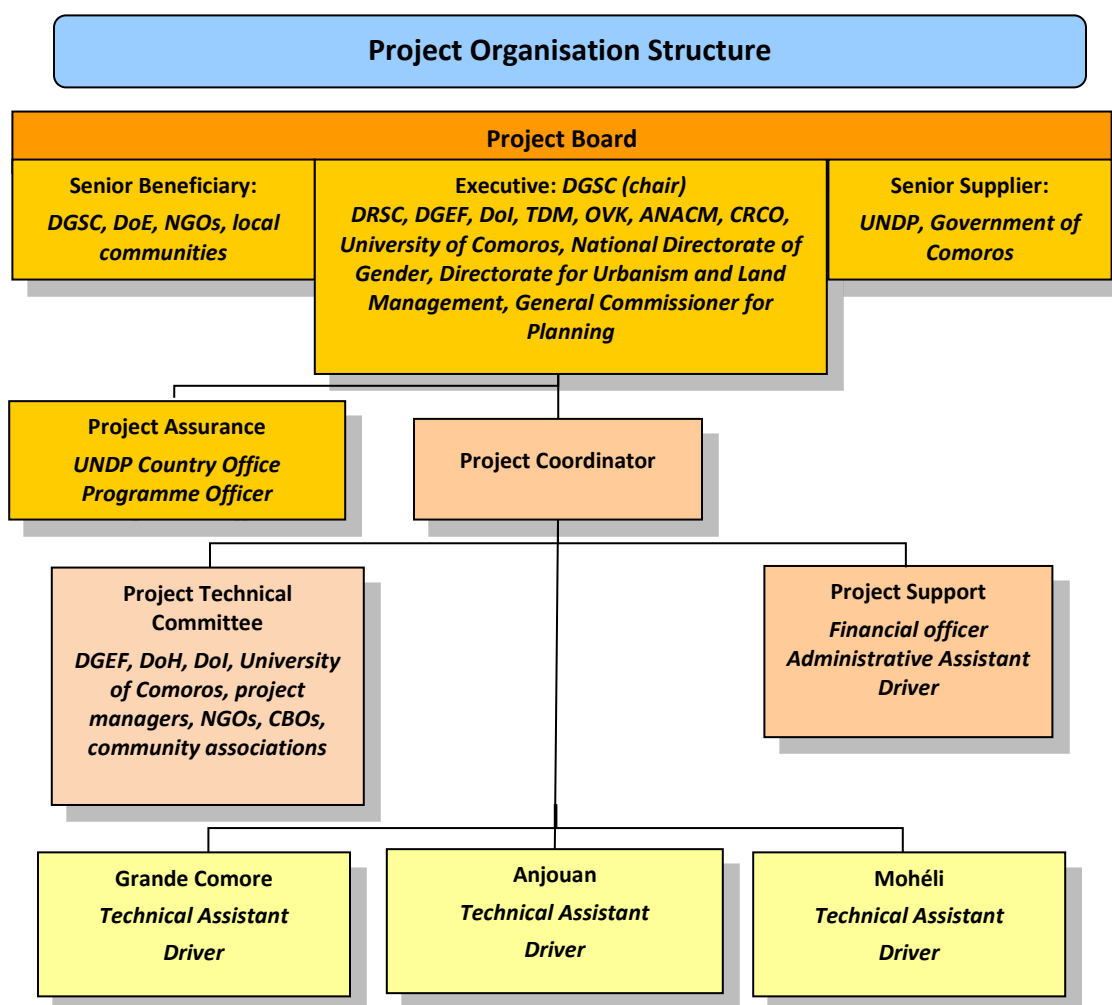


Figure 2: Project Organisation Structure

The **Project Board** (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project Coordinator (PC), including recommendation for UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager. The terms of reference for the Project Board are contained in Annex E. The Project Board is comprised of the following individuals:

- Executive: individual representing the project ownerships to chair the group, e.g. representative of the DGSC.
- Senior Supplier: individual or group representing the interests of the parties concerned which provide funding for specific cost sharing projects and/or technical expertise to the project. The Senior Supplier's primary function within the Project Board is to provide guidance regarding the technical feasibility of the project, e.g. representatives of UNDP.
- Senior Beneficiary: individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Project Board is to ensure the realization of project results from the perspective of project beneficiaries, e.g. local mayors of target interventions sites.
- The Project assurance role support the Project Board's Executive by carrying out objective and independent project oversight and monitoring functions. The PC and Project Assurance roles should never be held by the same individual for the same project.

The **Project Coordinator** will run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. The PC function will end when the final project terminal evaluation report and corresponding management response, and other documentation required by the GEF and UNDP, has been completed and submitted to UNDP (including operational closure of the project). Responsibilities of the PC will include daily project management, on-going monitoring and reporting of the extent to which project activities and Outputs are being implemented according to agreed time frames and budget – towards achieving intended Outcomes. The PC will divide their time equally between the islands of the Union of Comoros and will be responsible for ensuring the smooth running of project capacity building and support activities on each island. The PC will co-ordinate the Project Management Unit (PMU) which will also include support staff whose role is to provide project administration, management and technical support to the PC and broader project team and consultants. A secretary/accountant will also be hired by the project to support the PC. Funds have been allocated within the project management budget for the purchase of vehicles for project activities. In addition, they will work closely with the CTA as well as with all other project staff and project partners and will be supported by technical assistants (TA) on each island. Meetings with the technical committee, including baseline and partner projects and agencies will be held quarterly to ensure effective coordination and partnership building. The PC will also ensure that all interventions are designed and implemented using gender-sensitive tools and approaches.

Technical Assistants (TAs) will be allocated to each island and will be contracted under the project to support the PC and Implementing Partners in the effective implementation of the project on each of the islands. They will be based within the DRSC on each island but will travel regularly to project sites supporting the implementation of initiatives at project sites. The TAs will be responsible for: i) ensuring effective liaison between the PC, CTA, DGSC/DRSC, DoE and NGOs at project sites, as well as with all key stakeholder organisations and baseline/partner initiatives at project sites; ii) supporting logistical arrangements for island workshops and meetings; and iii) ensuring effective arrangements are in place to enable consultants and project staff to undertake their work effectively on the island, especially at project sites.

An International **Chief Technical Advisor (CTA)** will be recruited. He/she will be hired for: i) two years full time; and ii) one year part time (six months split over three years). The CTA will be strongly involved during the first year to

provide strategic overall advice and technical support to the PC, helping to guide project implementation, to ensure that it follows the key principles laid out in this project document and supporting the effective delivery of project outputs and outcomes in line with the ToRs. In addition, the CTA will assist the PC in the establishment of efficient project management, monitoring and evaluation systems. The CTA will also provide capacity building and advisory support to key implementing organisations and beneficiary/target groups and will divide time equally between the three islands of Grande Comore, Mohéli and Anjouan. Furthermore, the CTA will provide advice on and input to progress reports, presentations, work plans, budgets and bid evaluations.

The **project assurance** roll will be provided by the UNDP Country Office. He/she will have the responsibility for overseeing the implementation of the project, and will be responsible for monitoring the implementation and achievement of the project outputs, and ensuring the proper use of UNDP/GEF funds. The UNDP CO will ensure that project activities are being conducted in partnership with key stakeholders, in line with the approach outlined in this Project Document and in adherence with annual work plans/budgets. In addition, the UNDP CO will ensure that the project complies with UNDP and GEF monitoring, evaluation and reporting requirements. UNDP CO will be responsible for: i) providing financial and audit services to the project; ii) recruitment and contracting of project staff; iii) overseeing financial expenditures against project budgets approved by the Project Board; iv) appointment of independent financial auditors; and v) ensuring that all activities, including procurement and financial services, are carried out in strict compliance with UNDP and GEF procedures. Additional quality assurance will be provided by the UNDP Regional Technical Advisor as needed.

Governance role for project target groups: The project will focus on the development of climate-resilient and diverse income-generating activities at the community level. Implementation of project outcomes will enable local communities to: i) enhance their understanding and awareness of the impacts of climate change on livelihoods and natural resources, as well as natural and climate-related disasters; ii) introduce sustainable natural resources management practices to ensure the long-term sustainability of ecosystem goods and services; and iii) undertake community-based participatory planning and develop Village Action Plans for restoring, sustaining and enhancing the productive capacity and climate-resilience of the project intervention sites.

Community-based planning exercises will be undertaken develop vulnerability maps for local communities. In addition, community consultations will also be undertaken to prioritise climate and non-climate related risks through synthesising community observations, traditional knowledge and scientific knowledge obtained. Community members will be trained to undertake self-capacity assessments as well as household data collection and relevant community institutions will be strengthened. To facilitate the uptake of project objectives, existing structures at the local community level – including women’s, youth and environmental associations – will be strengthened. These groups will also assist the coordination of local level participation in community level development planning.

Intensive training will be provided to stakeholders including local authorities, NGOs, CBOs and community members throughout the project areas focusing on: i) the benefits of integrated CCA and DRR as well as sustainable natural resource use and management; ii) community-based land use and risk planning that involves all stakeholders; and iii) skills required in conflict resolutions, negotiations and dialogue. Furthermore, user friendly knowledge products will be developed at the outset of the implementation phase, which will outline stakeholders’ participation throughout the project’s duration. Refer to Section III. Stakeholder Engagement for further details on the involvement of stakeholders during the project implementation phase.

UNDP Direct Project Services as requested by Government (if any): As requested by the Government of Comoros, the UNDP CO will provide the following support services for the implementation of this project, and recover the actual direct and indirect costs incurred by the CO in delivering such services as stipulated in the Letter of Agreement (LoA) between the Government of Comoros and UNDP and following the Universal Prices List:

- Payments, disbursements and other financial transactions;
- recruitment of staff, project personnel and consultants;
- procurement of services and equipment, including disposals;
- organization of training activities, conferences and workshops, including fellowships;
- travel authorisation, Government clearances ticketing and travel arrangements;
- shipment, custom clearance and vehicle registration.

The micro assessment of implementation partners for the implementation of programmes that will benefit from the financial support of the agencies of the United Nations system applying HACT has shown that DGSC is a significant risk partner. In this context, the project management method recommended is direct payment.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information:

In order to accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy⁵⁰ and the GEF policy on public involvement⁵¹.

Project management: As part of the co-financing support from the DGSC, office space will be made available in Moroni within the DGSC and in the offices of the DRSC on Anjouan and Mohéli. The project will coordinate with other ongoing projects in the Comoros to exchange lessons and experiences to enhance the quality of implementation of the LDCF-financed project.

⁵⁰ See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

⁵¹ See https://www.thegef.org/gef/policies_guidelines

IX. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is USD 47,113,329. This is financed through a GEF grant of USD 8,932,421 and USD 38,108,908 in parallel co-financing. UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Parallel co-financing: The actual realization of project co-financing will be monitored during the *mid-term review* and terminal evaluation process and will be reported to the GEF. The planned parallel co-financing will be used as follows:

Co-financing source	Co-financing type	Co-financing amount	Planned Activities/Outputs	Risks	Risk Mitigation Measures
GEF	Grant	\$8,932,421	All of the Components	N/A	N/A
UNDP	Grant	\$250,000	All of the Components	More pressing challenges emerge for UNDP to support the government on other development issues and funds for environmental interventions get redirected.	At the beginning of the planning year, co-financing for GEF funded project will be set aside and allocated to the projects as appropriate.
National Directorate for Infrastructure	In kind	\$36,816,327	Component 1 Infrastructure development	Weak commitment and engagement.	The Project Coordinator will assess the effectiveness of the stakeholder management plan and will mobilise civil society in support of the project.
University of Comoros	Grants	\$88,432	Component 4 Staff, office space		
OVK	In kind	\$260,000	Component 2 Infrastructure development, capacity building		
DGSC	In kind	\$503,220	Component 1 Staff, office space, infrastructure development, capacity building		
TDM	In kind	\$262,929	Component 2 Infrastructure development, capacity building		The Project Coordinator will work with the respective development partner organisations to look for mutual solutions to mitigate the impact on project results.

Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the UNDP-GEF team as these are considered major amendments by the GEF: a) Budget re-allocations among components in the project with amounts involving 10% of the total project grant or more; b) Introduction of new budget items/or components that exceed 5% of original GEF allocation.

Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Refund to Donor: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP.⁵² On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-GEF Executive Coordinator.

Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

Financial completion: The project will be financially closed when the following conditions have been met: a) The project is operationally completed or has been cancelled; b) The Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

⁵² see <https://info.undp.org/global/popp/ppm/Pages/Closing-a-Project.aspx>

X. TOTAL BUDGET AND WORK PLAN

Guidance to project developer: This table must be completed using a separate excel file and then be copied here. All sub-totals and totals must tally. All figures must be “numeric value”, not “text”.

CEO endorsement template: The TBWP table of the ProDoc needs to be align with Tables B and D

Total Budget and Work Plan			
Atlas ⁵³ Proposal or Award ID:	00103394	Atlas Primary Output Project ID:	00105390
Atlas Proposal or Award Title:	Renforcement de la résilience		
Atlas Business Unit	COM10		
Project Title	Strengthening Comoros resilience against climate change and variability related disaster		
UNDP-GEF PIMS No.	5445		
Implementing Partner	Direction Générale de la Sécurité Civile (DGSC) – Ministry of Interior		

GEF Component/Atlas Activity	Responsible Party/ ⁵⁴ (Atlas Implementing Agent)	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
COMPONENT/ OUTCOME 1: <i>(as per the results framework)</i>	Party 1	62160	LDCF	71200	International Consultants	85,000	0	0	0	0	85,000	1a
				71300	Local Consultants	26,100	25,000	25,000	25,000	25,000	126,100	1b
				72100	Contract. Services - Companies	170,000	15,000	2,000	2,000	2,000	191,000	1c
				75700	Training, workshops and conferences	116,265	58,135	0	0	0	174,400	1d
				72400	Communication and audio visual equipment	113,000	0	0	0	0	113,000	1e
				71600	Travel	3,500	3,500	0	0	0	7,000	1f

⁵³ See separate guidance on how to enter the TBWP into Atlas

⁵⁴ Only the responsible parties to be created as Atlas Implementing Agent as part of the COAs should be entered here. Sub-level responsible parties reporting directly to NIM Implementing Partners should not entered here. For example, if under NIM, UNOPS signs LOA with the IP to manage component 2, and a department of Ministry X will manage component 3, this means that UNOPS will be listed as the responsible party under component 2\). The rest of the components will list the IP as the responsible party.

				72300	Materials and goods	815,534	376,966	0	0	0	1,192,500	1g
				74200	Audio Visual and Print. Prod. Costs	2,500	0	0	0	0	2,500	1h
				72300	Materials and Goods	100,000	100,000	100,000	100,000	100,000	500,000	1i
					sub-total GEF	1,431,899	578,601	127,000	127,000	127,000	2,391,500	
					Total Outcome 1	1,431,899	578,601	127,000	127,000	127,000	2,391,500	
COMPONENT/ OUTCOME 2: <i>(as per the results framework)</i>	Party 1	62160	LDCF	71300	Local Consultants	25,400	32,600	20,000	20,000	20,000	118,000	2a
				71600	Travel	43,000	0	0	0	0	43,000	2b
				72100	Contract. Services - Companies	201,300	141,300	53,835	15,000	10,000	421,435	2c
				72400	Communication and audio visual equipment	95,607	0	0	0	0	95,607	2d
				72800	Information technology equipment	342,949	50,000	0	0	0	392,949	2e
				75700	Training, workshops and conferences	139,773	50,000	0	0	0	189,773	2f
				74200	Audio visual and Print. Prod. Costs	10,000	10,000	0	0	0	20,000	2g
				72500	Supplies	1,000	1,000	1,000	1,000	1,000	5,000	2h
				72600	Grant	30,000	30,000	30,000	30,000	30,000	150,000	2i
				72200	Equipment and furniture	21,220	0	0	0	0	21,220	2j
				71200	International Consultant	20,000	0	0	0	0	20,000	2k
					sub-total GEF	930,249	314,900	104,835	66,000	61,000	1,476,984	
	Party 2		UNDP	72300	Materials and goods	300,000					300,000	2l
					Sub-total UNDP	300,000					300,000	

					Total Outcome 2	1,230,249	314,900	104,835	66,000	61,000	1,776,984	
COMPONENT/ OUTCOME 3: <i>(as per the results framework)</i>	Party 1	62160	LDCF	71200	International Consultants	129,630	119,630	74,630	74,630	74,630	473,150	3a
				71300	Local Consultants	170,252	105,752	74,952	74,952	74,952	500,860	3b
				72100	Contract. Services - Companies	23,110	23,110	19,080	2,550	2,550	156,500	3c
				75700	Training, workshop and Conferences	59,500	45,000	32,000	10,000	10,000	156,500	3d
				72300	Materials and goods	490,540	1,135,918	800,000	100,000	0	2,526,458	3e
					sub-total GEF	873,032	1,429,410	1,000,662	262,132	162,132	3,727,368	
	Party 2		UNDP	71200	International Consultants	0	0	25,000	25,000	25,000	75,000	3f
				75700	Training, workshop and Conferences	6,000	6,000	6,000	6,000	6,000	30,000	3g
				71600	Travel	130,000	10,000	0	0	0	140,000	3h
				74500	Miscellaneous	1,000	1,000	1,000	1,000	1,000	5,000	3i
					Sub-total UNDP	137,000	17,000	32,000	32,000	32,000	250,000	
					Total Outcome 3	1,010,032	1,446,410	1,032,662	294,132	194,132	3,977,368	
COMPONENT/ OUTCOME 4: KM and M&E <i>(as per the results framework)</i>	Party 1	62160	LDCF	71200	International Consultants	30,000	7,000	0	0	0	37,000	4a
				71300	Local Consultants	60,260	45,859	31,459	31,459	31,459	200,496	4b
				72100	Contract. Services - Companies	5,400	101,400	96,000	0	0	202,800	4c
				75700	Training, workshops and conferences	90,740	53,160	30,000	20,000	15,000	208,900	4d
				74100	Professional services	60,246	10,246	51,492	16,492	51,492	189,968	4e

				74200	Audio Visual and Print. Prod. Costs	35,000	35,900	0	0	0	70,900	4f
				74500	Miscellaneous	5,301	5,301	5,301	5,301	5,301	26,505	4g
					sub-total GEF	286,947	258,866	214,252	73,252	103,252	936,569	
					Total Outcome 4	286,947	258,866	214,252	73,252	103,252	936,569	
PROJECT MANAGEMENT	Party 1	62160	LDCF	71300	Local Consultants	9,421	9,421	9,421	9,421	9,421	47,105	PM1
				74596	Direct Project Costs	70,659	70,659	70,659	70,659	70,659	353,295	PM2
					sub-total	80,000	80,000	80,000	80,000	80,000	400,000	
					Total Management	80,000	80,000	80,000	80,000	80,000	400,000	
		GEF Total				3,602,127	2,661,777	1,526,749	608,384	533,384	8,932,421	
		UNDP Total				437,000	17,000	32,000	32,000	32,000	550,000	
		PROJECT TOTAL				4,039,127	2,678,777	1,558,749	640,384	565,384	9,482,421	

Summary of Funds:

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Total
GEF	3,602,127	2,661,777	1,526,749	608,384	533,384	8,932,421
UNDP	437,000	17,000	32,000	32,000	32,000	550,000
TOTAL	4,039,127	2,678,777	1,558,749	640,384	565,384	9,482,421

Budget notes	Description
1a	International Consultant(s) to: i) provide training to authorities on the integration of CC and DRR into policies and strategies at sub-national and national level: \$20,000 total; ii) integrate CC and DRR into strategies, plans and legislation in the civil security and infrastructure sectors: \$15,000; iii) promote the integration of CC and DRR into the SCA2D and Plan of Action: \$15,000; and iv) develop a legislative and regulatory framework for Disaster Risk Management in the Comoros: 2 months at \$12,500 (\$25,000 total). International Consultant to undertake a capacity assessment and prepare capacity development plans for DGSC, CATI and CTA: \$10,000.
1b	National Consultant(s) to: i) assist International Consultant in providing training to authorities on the integration of CC and DRR into policies and strategies at sub-national and national level: 5 consultants at \$1,800/month for 1 month each (\$9,000 total); and ii) assist international consultant integrate CC and DRR into strategies, plans and legislation in the civil security and infrastructure sectors: 1 month at \$3,500/month (\$3,500 total). National Consultant (with legal expertise) to assist international legal consultant to develop a legislative and regulatory framework for Disaster Risk Management in the Comoros: 3 months at \$10,000 total. National Consultant(s) to: i) develop procedures and conditions for accessing the Operational Emergency Fund for climate-related disasters: 1 month at \$1,800/month (\$1,800 total); and ii) develop legislation for the disbursement and utilisation of funds from the Operational Emergency Fund: 1 month at \$1,800/month (\$1,800 total). National Coordinator's salary: \$1,666.66/month/5 years.
1c	Contractual Services – international assessment bureau to prepare land management plans that include CC/DRR related aspects: \$90,000 total. Contractual Services – establishment of civil security units in collaboration with Mayotte's social protection services: \$15,000 total. Contractual Services – undertake an assessment of coordination capacities on RRC by CADRI (capacity for DRR initiative): \$30,000 total. Contractual Services – develop communication system for the transfer and exchange of information between OVK, TDM and DGSC/DRSC: \$25,000 total. Contractual Services – technical and logistical support to: i) develop a legislative and regulatory framework: \$10,000; ii) implement a capacity-building plan: \$7,500; iii) provide training to local authorities and community groups on each island on disaster risk management: \$7,500; and iv) develop and implement procedures for the assessment and disbursement of emergency funds: \$2,500. Contractual Services – partnership agreement with OCHA (including travel and DSA): \$3,500.
1d	Training workshops for authorities on: i) the integration of CC and DRR into policies and strategies at sub-national and national level: \$10,000 total; ii) the integration of CC and DRR into land-use plans for the Grande Comore and Anjouan: \$7,500 total; and iii) the development of a legislative and regulatory framework for Disaster Risk Management in the Comoros: \$5,500. Targeted outreach to increase the awareness and understanding of the draft legislative and regulatory framework for Disaster Risk Management in the Comoros: \$2,500 total. Training to be undertaken in accordance with capacity-building plan for CATI and CTA: \$70,900. Training of civil security units in partnership with Mayotte's social protection services at targeted intervention sites: \$25,000 total. Study trip for DGSC staff to Reunion: \$20,000 total. Training workshops for local authorities and community groups on disaster risk management and implementing a joint management system to facilitate coordinated responses to natural and climate-related disasters: \$25,000 total National training workshop on the conditions and procedures for the disbursement and utilisation of the Operational Emergency Fund for climate-related disasters: \$3,600 total. Awareness-raising regarding the conditions and procedures for the utilisation of the Operational Emergency Fund for climate-related disasters: \$4,000.
1e	Purchase and installation of telecommunications equipment including: i) telephone switchboard and phone lines (3 in Grande Comore, 2 in Anjouan and 2 in Mohéli); ii) 3 computers; iii) 3 scanners, 30 megaphones and alert flags; and iv) radio communication systems, including VHF radios: (\$113,000 total).
1f	Travel expenses (including flights and DSA) for the expert providing training to CATI staff: \$3,500 total (expert to be paid by OCHA) Travel expenses (including flights and DSA) for the expert providing training to local authorities and community groups on disaster risk management and implementation of joint management systems to facilitate coordination of responses to natural and climate-related disasters: \$3,500 total (expert to be paid by OCHA).
1g	Materials and equipment for the establishment of the first-aid and emergency relief stores: 4 sites in Grande Comore, 2 in Anjouan and 2 in Mohéli (\$250,000 total). Emergency (medical aid) kits for emergency preparedness and response: \$180,000 total. Materials and equipment for the establishment of civil security units: 4 sites in Grande Comore, 2 in Anjouan and 2 in Mohéli (\$332,500 total).

	Emergency response equipment for the DGSC/DRSC (including 10 off-road medical ambulances, 10 shell mattresses, 200 mobilisation splints, 200 cervical and chest splints, 100 cervical collars, 1000 firefighter suits – coats and pants, 1000 firefighter polo shirts, 1000 firefighter T-Shirt, 1000 Rangers firefighter, 1000 waistbands, 1000 belts, 1000 GM sockets, 1000 intervention helmets, 1000 red caps, 1000 water-proof coats, 1000 intervention coats) (\$430,000 total).
1h	Printing of legislation for submission and validation to the Government of Comoros: \$2,500 total.
1i	Procurement and storage of pharmaceutical products and food aid to be used in emergency situations for communities affected by climate-related disasters: \$500,000 total.
2a	National Consultant to facilitate community-based participatory planning and the development of Village Action Plans: 4 months at \$1,800/month (\$7,200 total). National Consultant(s) (with legal experience) to: i) review policies and identify opportunities for strengthening policy support for financing of equipment; ii) assist in development of national strategy; iii) assist IC in development of PPP; iv) identify sources of supplementary funding: 6 months at \$1,800/month (\$10,800 total). Finance and Administrative Officer's salary: \$1,666.66/month./5years
2b	Field trips for data collection (including transport and DSA) for 4 people: 2 trips of 6 weeks each in Anjouan and Mohéli, 3 trips of 6 weeks for GC (\$18,000 total). Travel expenses for CATI to develop risk and vulnerability maps (\$10,000 total). Travel expenses for research trips for OVK (\$15,000).
2c	Contractual Services –provide technical and logistical support to: i) train local authorities, CBOs and CSOs on each island on risk and vulnerability maps (\$5,000); and ii) train local authorities, CBOs and CSOs on each island to produce risk and vulnerability maps (\$10,000). Contractual Services – partner with a regional meteorological institute to develop a climate scenario from 2050-2100: \$150,000 total. Contractual Services – partner with an international institute to develop a model of the future hydrometeorological and geological hazards based on the climate scenario: \$150,000 total. Contractual Services – undertake an assessment of institutional and technical needs of TDM: \$30,000 total. Contractual Services – provide technical and logistical support to install, operate and maintain seismological equipment: \$66,435 total.
2d	Purchase of audio visual equipment including: i) 4 cameras at \$600 each; ii) 4 video projectors at \$600 each. Purchase of drones for use in aerial surveying of islands: (\$90,807 total).
2e	Equipment provided to TDM including <i>inter alia</i> climate appropriate software: \$59,000 total. Purchase and installation of equipment for DGSC, including: i) 4 desk computers; ii) 5 laptops; iii) 4 convertors; iv) 4 colour printers; v) 4 photocopiers; vi) 5 hard drives; and vii) 4 scanners (\$21,184 total) Purchase and installation of 16 Two parameter (P&T) rainfall stations (\$34,987 total) Purchase and installation of 5 automatic stations (\$277,778 total)
2f	Training of local authorities, CBOs etc. on the development of local risk and vulnerability maps: \$50,000 total. Training of local communities on community-based participatory planning and the development of Village Action Plans for the implementation of on-the-ground interventions: \$20,000 total. Provide training to TDM officers and senior staff on information processing related to disaster forecasts, including: i) operational hydrometeorology; ii) teledetection; iii) SIG; iv) modelling of hydrometeorological risks; v) concepts and methods for climate forecasting; vi) realisation of video media for weather forecasts and early warnings; vii) seasonal forecasting; and viii) SGBD climate software (\$56,773 total) Provide training to OVK technical staff in development of maps and models with a multi-hazard approach integrating hydrometeorological and geological hazards, taking into account the climate scenarios (\$53, 000 total) Workshops and meetings for development of Public Private Partnership and validation of national strategy (\$10,000 total).
2g	Printing of training manuals: \$15,000 total. Printing of satellite photographs for the development of risk and vulnerability maps: \$5,000 total.
2h	Supplies for the development of: i) risk maps of the medium and long-term risks of heavy rains, flooding and landslide for 2 years: \$1,000 x 2 (\$2,000); and ii) vulnerability maps for local communities, infrastructure and road networks to heavy rains, flooding and landslides for three years: \$1,000 total x 3 (\$ 3,000).
2i	Research grants for NGOs or students to do research on climate change and climate risks (1 research project per institution – OVK, TDM and DGSC): \$150,000 total. These grants will be released following UNDP MCG policies.
2j	Purchase of office equipment and furniture including: i) 100 conference chairs; ii) 6 desks; iii) 3 conference tables; iv) 4 closets; v) 4 cupboards and furniture stocks; and vi) 5 desk chairs) (\$21,220 total).
2k	International Consultant to assist with the development of Public Private Partnership: \$20,000 total.

2l	Purchase and installation of equipment for OVK including inter alia: i) wide band seismological stations; ii) short duration seismological stations; iii) GPS/GNSS stations; iv) surveillance cameras; v) Co2 stations; vi) drum seismograph; vii) servers and high resolution screens; viii) batteries; ix) inverter/charger; and x) solar panels (\$300,000 total)
3a	<p>International Consultant(s) to: i) undertake a national analysis of vulnerability to floods; and ii) identify the most sustainable flood prevention interventions based on international experiences – including both hard and soft infrastructure – to reduce vulnerability: \$30, 000 total. International consultant to assist with the development of Village Action Plans: \$20,000 total.</p> <p>International Consultant to: promote the establishment of Public Private Partnerships: \$20,000 total.</p> <p>International Consultant – Chief Technical Advisor (CTA): 2 years’ full time and three years’ part time at \$500/day (100 days/year during Years 1 and 2 and 50days/year during Years 3-5), including travel (4 trips/year during Years 1 and 2, and 2 trips/year during Years 3-5 of 15 days each) and DSA (\$248,150 total). Flights at \$2000 each and DSA of \$215/day.</p>
3b	<p>National Consultant(s) to: i) assess efficiency and sustainability of prior community interventions to increase water availability: \$2,500 total; and ii) develop community-based water management systems in targeted local communities: \$10,000 total.</p> <p>National Consultant(s) to: i) assist International Consultant in undertaking a national analysis of vulnerability to floods; and ii) identify and select the flood prevention measures based on the Village Action Plans and the national analysis of vulnerability to floods (\$10,000 total).</p> <p>National Consultant(s) to assist with the development of: i) awareness-raising activities; ii) Village Action Plans; and iii) Climate Investment Plans (\$20,000 total)</p> <p>National Consultant(s) to assist with the capacity building programme for local authorities for mainstreaming Village Action Plans into development planning and budgetary processes: 6 months at \$1,800/month (\$10,800 total) National Consultant(s) to: establish emergency response plans for selected hospitals, schools and markets: 2 months at \$1,800/month</p> <p>National Consultant(s) to undertake EIAs (where required) for selected flood prevention measures: \$35,000 total.</p> <p>National Consultant(s) to: i) undertake a cost-benefit analysis for the development of income-generating activities in the selected intervention sites: 2 months at \$1,800/month (\$3,600 total); and ii) identify and pilot alternative sources of energy for ylang-ylang distilleries: 6 months at \$1,800/month (\$10,800 total).</p> <p>National Consultant(s) to: i) undertake awareness-raising on the existence of legislation and penalty provisions regulating natural resource use management: 3 months at \$1,800/month (\$5,400 total); ii) develop and implement training programmes for local authorities – including DGSC/DRSC and police – on law enforcement measures and penalties: 2 months at \$1,800/month (\$3,600 total); and iii) propose revisions to legislation – including stricter penalty provisions in the event of non-compliance with legislation regarding the protection of natural resources: 2 months at \$1,800/month (\$3,600 total).</p> <p>National Consultant(s) to assist International Consultant with: i) promoting the establishment of Public Private Partnership; ii) identifying mechanisms for subsidising low-income housing; iii) defining conditions and procedures for accessing subsidies; iv) identifying sources of supplementary funding; and v) assessing barriers for upscaling ecologically sound housing. (\$7,200 total).</p> <p>National Consultants – Technical Advisors (TAs): 1 TA/island at 5 years’ full time at \$2082/month for five years (\$374,760 total).</p>
3c	<p>Contractual Services – provide technical and logistical support to: i) establish nurseries on each island; and ii) implement reforestation programmes (\$5,000 total).</p> <p>Contractual Services – strengthen and/or establish new community associations for the sustainable management of natural resources in the selected intervention sites: \$30,000 total.</p> <p>Contractual Services – undertake: i) a design study: \$8,000 for the design and implementation of rainwater reservoirs.</p> <p>Contractual services – field agents to assist in the establishment of emergency response plans for selected hospitals, schools and markets: \$2,000.</p> <p>Contractual Services – provide technical and logistical support to municipalities, police and civil protection services to promote community surveillance systems (\$5,400 total).</p> <p>Contractual Services – provide technical and logistical support in the demonstration of affordable and ecologically sound housing settlement: \$20,000</p>
3d	<p>Raising awareness of DGSC staff regarding the emergency response plans established for selected hospitals, schools and markets: \$5,000 total.</p> <p>Meetings with local communities regarding the selection of priority interventions based on the results of the cost-benefit analysis, Village Action Plans and the interventions of partner projects: \$10,000.</p> <p>Training of local communities on the implementation of income-generating activities: \$50,000 total.</p> <p>Undertake awareness-raising campaign on the existence of legislation and penalty provision regulating natural resource and management: \$36,000 total (including transport, DSA and communication materials).</p> <p>Training workshop for DGSC/DRSC staff and police on law enforcement measures and penalties: \$3,000/island (\$9,000 total).</p> <p>Training of local communities on the establishment of community surveillance system for the monitoring of illegal activities: \$4,000/island (\$12,000 total).</p> <p>Training of local communities on the development and implementation of Village Action and Investment Plans: \$15,000 (including materials and travel)</p> <p>Training of local authorities on the mainstreaming of Village Action and Investment Plans and resource mobilisation: \$5,000/island (\$19,500 total including travel).</p>

3e	<p>Development of nurseries on each island: \$20,000/island (\$60,000 total).</p> <p>Reforestation of targeted intervention sites in Grande Comore, Anjouan and Mohéli: ~640 hectares at \$900/hectare (\$573,566 total).</p> <p>Construction of rain water reservoirs in targeted intervention sites in Grande Comore and Anjouan: \$212,000 total.</p> <p>Implementation of selected flood-prevention measures – including both hard and soft infrastructure – in targeted intervention sites in Grande Comore, Anjouan and Mohéli: \$990,000 total.</p> <p>Implementation of selected flood-prevention measures to protect selected socio-economic infrastructure: \$50,000 total.</p> <p>Provision of materials for the implementation of income-generating activities – including <i>inter alia</i> apiculture, nurseries for fruit and other beneficial tree species, as well as agroforestry: \$500,000 total.</p> <p>Provision of materials and equipment for piloting alternative sources of energy to fuelwood in ylang-ylang distilleries in selected sites: \$39,200 total.</p> <p>Provision of materials and equipment for demonstration of ecologically sound housing: \$100,000 total.</p>
3f	International Consultant to undertake gender appropriate training on good business and management practices, as well as innovative leadership in decision-making: \$75,000 total.
3g	<p>Project Steering Committee meetings: bi-annual meetings at \$2,000/meeting (\$20,000 total).</p> <p>Technical Committee meetings: quarterly meetings at \$500/meeting (\$10,000 total).</p>
3h	<p>Vehicles: 1 vehicle per island and 1 for the PC at \$30,000/car (\$120,000 total).</p> <p>Travel (including flights) for the PC: \$20,000 total.</p>
3i	Miscellaneous (\$5,000 total)
4a	<p>International Gender Consultant to: i) develop a gender strategy – in collaboration with the National and Regional Directorates of Gender and Social Protection – to ensure women’s needs and interests are represented in the design and implementation of project activities: \$13,000 (\$13,000 total).</p> <p>International Consultant to develop a discussion forum on gender issues: \$24,000 total.</p>
4b	<p>National Consultant(s) to develop and implement a national communication strategy: 2 months at \$1,800/month (\$3,600 total).</p> <p>National Consultant(s) to develop and implement a project specific communication strategy: 2 months/year at \$1,800/month (\$18,000 total).</p> <p>National Consultant(s) to develop and implement an awareness-raising campaign for local communities and relevant stakeholders: 2 months at \$1,800/month (\$3,600 total)</p> <p>National Consultant(s) to develop and implement a system for monitoring and evaluation of interventions for the management of long-term climate risks: 2 months/year at \$1,800/month (\$3,600 total).</p> <p>National Consultant(s) to: i) revise the existing environmental education manuals: 6 months at \$1,800/month (\$10,800 total); and ii) evaluate the effectiveness of existing environmental education programmes: 2 months at \$1,800/month (\$3,600 total).</p> <p>National Consultant(s) to: i) assist the international gender consultant in developing a gender strategy – in collaboration with the National and Regional Directorates of Gender and Social Protection: 1 month at \$1,800/month (\$1,800 total); ii) create a discussion forum to facilitate dialogue on gender issues between stakeholders: 1 month at \$1,800/month (\$1,800 total); iii) assist the international gender consultant in undertaking gender appropriate training: 1 month at \$1,800/month (\$1,800 total); iv) undertake targeted awareness-raising and outreach campaigns to increase women’s participation in project design and implementation of project activities as well as decision-making processes: 1 month at \$1,800/month (\$1,800 total); v) propose revisions to the National Policy on Gender Equality: 1 month at \$1,800/month (\$1,800 total); and vi) document lessons learned on the experiences and coping strategies of women and men to climate change and the implications for future project and program design: 1 month at \$1,800/month (\$1,800 total).</p> <p>Administrative Assistant’s salary: \$950/month/5years.</p> <p>Chauffeurs’ salary: \$417.90/month (1 per island and 1 for PC, 4 total)/5years.</p>
4c	<p>Contractual Services – development, validation and piloting of a Master’s Programme on the environment, CC and DRR at the University of Comoros. The programme will be implemented for one class of students over a two-year period: \$192,000.</p> <p>Contractual Services – revise existing environmental education manual: 6 months at \$1,800/month (\$10,500 total).</p>
4d	<p>Validation workshop and communication tools for the development and implementation of a national communication strategy and action plan: \$19,400.</p> <p>Training workshops for local communities and relevant stakeholders on: i) the effects of CC and DRR based on the action plan; ii) sustainable natural resource use and management of reforested and planted areas; iii) the long-term effects of slash and burn agriculture and forest fires; iv) lessons learned and best practices based on the action plan; v) legal provisions (including penalties) regarding deforestation and the discharge of waste into rivers. Workshops will be undertaken on each island at \$4,000 per island (\$12,000 total).</p> <p>Training of DGSC, OVK and TDM staff for monitoring and evaluation of interventions for the management of long-term climate risks: \$7,500.</p> <p>Workshop with project partners to develop a strategy for scaling up and replication successful project activities throughout the Comoros: \$2,500.</p> <p>Training of 15 beneficiaries per school (503 schools) for 3 days each: \$100,000.</p>

	<p>National validation workshop for the development of a gender strategy: \$7,500.</p> <p>Meetings/workshops with local communities to facilitate dialogue on gender issues: \$10,000.</p> <p>Training workshops on good business and management practices, as well as innovative leadership in decision-making: \$7,500.</p> <p>Awareness-raising campaign to increase women's participation in the design and implementation of project activities, as well as decision-making processes: \$30,000.</p> <p>National validation workshop to discuss revisions to the National Policy on Gender Equality in order to address the vulnerability of women to climate-related disasters and promote interventions to increase their adaptive capacity to the effects of climate change: \$12,500.</p>
4e	<p>Independent consultant to undertake Terminal Evaluation: \$35,000.</p> <p>Independent consultant to undertake Mid-term Review: \$35,000.</p> <p>Independent consultant to undertake Baseline Assessment: \$40,000.</p> <p>Annual audits to be undertaken at \$4,000/audit. (\$20,000 total)</p> <p>Inception Workshop to be undertaken: \$10,000.</p> <p>Monitoring and Evaluation expert: \$2,082/month for 24 months (\$49,968 total).</p>
4f	<p>Production of communication materials: \$8,000.</p> <p>TV and radio programmes and material: \$12,900.</p> <p>Printing of environmental education manuals (6 classes x 503 schools = 3018 manuals total) (15 teachers per school): \$30,000.</p> <p>Printing of environmental education posters (4024 (8x503): \$20,000.</p>
4g	Insurance, bank charges (including admin fees) and other sundries for the project coordinating unit.
PM1	Communication Assistant (785.05 USD/month)
PM2	UNDP support services (payment processing, purchases, recruitments, contracts, etc.)

XI. LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA [or other appropriate governing agreement] and all CPAP provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried; and
- assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm> This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

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XII. MANDATORY ANNEXES

- A. Multi year Workplan
- B. Monitoring Plan
- C. Evaluation Plan
- D. GEF Tracking Tool (s) at baseline
- E. Terms of Reference for Project Board, Project Manager, Chief Technical Advisor and other positions as appropriate
- F. UNDP Social and Environmental Screening Template (SESP)
- G. Environmental and Social Management Plan (ESMP) for moderate and high risk projects only
- H. UNDP Project Quality Assurance Report
- I. UNDP Risk Log
- J. Results of the capacity assessment of the project implementing partner and HACT micro assessment (to be completed by UNDP Country Office)

ANNEX A: Multi Year Work Plan

Task	Responsible Party	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1.1: Proposed revisions to integrate CC and DRR into policies, strategies and other development initiatives at local, regional and national levels in the civil security sector and other priority sectors.	DGSC/DRSC																				
Output 1.2: Technical and operational capacity building programme for DGSC and DRSC and operational units (CATI, CTA) climate resilient development planning	DGSC/DRSC																				
Output 1.3: Efficient system for transmission of early warnings for climate-related disasters is implemented in the three islands.	DGSC/DRSC, TDM, OVK																				
Output 1.4: Operational emergency fund for climate-related disasters (to be co-financed by government and the project).	DGSC/DRSC																				
Output 2.1: Upgrade risk and vulnerability assessments and maps of local communities and socio-economic to integrate more accurate weather, water and climate information.	DGSC/DRSC, CATI, local communities																				
Output 2.2: CC modelling and scenarios – including hydro meteorological and geological hazards.	TDM																				
Output 2.3: Improved TDM meteorological monitoring network	TDM																				
Output 2.4 Partnership with research organisations for undertaking research projects on climate risks	DGSC, TDM, OVK																				

Output 2.5 National strategy for sustainable financing of the climate disaster monitoring system and information dissemination																				
Output 3.1: Development of village adaptation investment and action plans informed by the risk and vulnerability assessments and maps developed under Output 2.1.																				
Output 3.2: Reforestation programmes on degraded hillside land areas exposed to landslides and heavy rains	DGSC/DRSC, DGEF, NGOs, CBOs, local authorities and local communities																			
Output 3.3: Community and individual rainwater collection and redistribution systems to reduce vulnerability to droughts.	DGSC/DRSC, DGEF, NGOs, CBOs, local authorities and local communities																			
Output 3.4: Flood prevention measures and climate-resilient, low-cost interventions for the protection of populations and socio-economic infrastructure	DGSC/DRSC, DGEF, DOI, NGOs, CBOs, local authorities and local communities																			
Output 3.5: IGAs in the selected intervention sites to sustain the reforestation interventions.	DGSC/DRSC, DGEF, NGOs, CBOs, local authorities and local communities																			
Output 3.6: Proposed revisions to existing legislation including penalty provisions and training of civil security personnel – including police and forest guards – for protection of natural resources especially forests.	DGSC/DRSC																			
Output 3.7: Measures to promote ecologically sound housing and settlements that are resilient to climate disasters.																				
Output 4.1: Public awareness-raising campaigns and training programmes conducted in the Grande Comoros, Anjouan and Moheli using all forms of media (including print, radio etc.)	DGSC/DRSC, DGEF, University of Comoros, NGOs, CBOs, local authorities and local communities																			

Output 4.2: Long-term monitoring and evaluation programme	DGSC/DRSC, local authorities and local communities																					
Output 4.3: Environmental education programmes – with a particular focus on CC and DRR – at primary schools and the University of Comoros	DGSC/DRSC, DGEF, University of Comoros, NGOs, CBOs, local authorities and local communities																					
Output 4.4: A gender strategy developed and implemented, which includes capacity-building and enhancing the participation of women in planning, selecting and implementing CC and DRR measures.	National Directorate of Gender																					

ANNEX B: Monitoring Plan: The Project Manager will collect results data according to the following monitoring plan.

Monitoring	Indicators	Description	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
Project objective from the results framework	Indicator 1	Number of direct project beneficiaries (disaggregated by gender). (AMAT Indicator 1)	Consultation process Survey of local communities	Annually	Project Coordinator	Survey Results Coordinator report	All households in the target area are committed to participating in the project activities and taking up adopting climate resilient income-generating activities.
Project Outcome 1	Indicator 1	Institutional arrangements to lead, coordinate and support the integration of climate change adaptation into relevant policies, plans and associated processes. (AMAT Indicator 11)	As above	Annually	Project Coordinator	Survey Results Coordinator Report	Government and public institutions have sufficient financing and human resource capacity to support the continuation of successful project interventions. Trainees leave training with improved capacity. Recommendations for policies, plans and strategies will be accepted and mainstreamed.
Project Outcome 2	Indicator 1	Risk and Vulnerability maps developed for local communities at project interventions sites	Consultation process – including local authorities and local communities and CBOs – to develop risk and vulnerability maps.	Annually	Project Coordinator	Risk and vulnerability maps. Aerial surveys. Flooding analysis. Records of consultation process. Coordinator Report.	Public institutions, NGOs and resource users will be willing to adopt a partnership approach and work collaboratively to plan and implement risk and vulnerability maps and climate change adaptation interventions at the project intervention sites.
Project Outcome 3	Indicator 1	Type and extent of assets strengthened and/or better managed to withstand the effects of climate change (ha of land / km of coast / km of roads/other) (AMAT Indicator 2)	Survey of project intervention areas, including land and road networks in targeted intervention sites.	Annually	Project Coordinator	Survey results Project Coordinator report	Both government (and local communities) are committed to adopting climate-resilient technologies and practices. Resilient technologies and practices will include reforestation activities in various sites on all three islands. A multi-stakeholder

							approach will be used to guide climate-smart ecosystem restoration.
	Indicator 2	Population benefiting from the adoption of diversified, climate-resilient livelihood options (number of people/% female) (AMAT Indicator 2)	Survey of local communities. Consultation process.	Annually	Project coordinator	Survey results Coordinator Report	Trainees leave with training capacity. Staff will apply outcomes of climate-related research.
Project Outcome 4	Indicator 1	Public awareness activities carried out and population reached. (Yes/no/percentage of population/% female) (adapted from AMAT Indicator 5)	Survey of local communities. Consultation process.	Annually	Project Coordinator	Survey results Coordinator Report	Involvement in the design and implementation of project interventions and ongoing communication in the expected benefits of income-generating activities will result in long-term support of the project and adoption of new knowledge, skills and practices.
Mid-term GEF Tracking Tool (if FSP project only)	N/A	N/A	Standard GEF Tracking Tool available at www.thegef.org Baseline GEF Tracking Tool included in Annex.	After 2 nd PIR submitted to GEF	<i>For example, national university; project consultant but not evaluator</i>	Completed GEF Tracking Tool	<i>List assumptions and risks to collecting the GEF TT data</i>
Terminal GEF Tracking Tool	N/A	N/A	Standard GEF Tracking Tool available at www.thegef.org Baseline GEF Tracking Tool included in Annex.	After final PIR submitted to GEF	<i>For example, national university; project consultant but not evaluator</i>	Completed GEF Tracking Tool	<i>List assumptions and risks to collecting the GEF TT data</i>
Mid-term Review (if FSP project only)	N/A	N/A	To be outlined in MTR inception report	Submitted to GEF same year as 3 rd PIR	Independent evaluator	Completed MTR	
Environmental and Social risks and management plans, as relevant.	N/A	N/A	Updated SESP and management plans	Annually	Project Manager UNDP CO	Updated SESP	

ANNEX C: Evaluation Plan

Evaluation Title	Planned start date Month/year	Planned end date Month/year	Included in the Country Office Evaluation Plan	Budget for consultants ⁵⁵	Other budget (i.e. travel, site visits etc...)	Budget for translation
Mid-term evaluation			Yes	USD 35,000	N/A	USD 5,000
Terminal Evaluation	After terminal PIR	To be submitted to GEF within three months of operational closure	Yes	USD 35,000	N/A	USD5,000
Total evaluation budget				USD 80,000		

ANNEX D: GEF Tracking Tool at baseline
[Separate attachment]

⁵⁵ The budget will vary depending on the number of consultants required (for full size projects should be two consultants); the number of project sites to be visited; and other travel related costs. Average # total working days per consultant not including travel is between 22-25 working days.

ANNEX E: TERMS OF REFERENCE

Terms of Reference for Project Steering Committee (PSC)

Background

The PSC will be responsible for undertaking management-related and technical decisions for the project in accordance with this ToR and providing guidance and direction for the project when required. Tasks of the PSC will include *inter alia* approval of project plans, Annual Work Plans (AWPs) and revisions by UNDP and the DGSC. The committee will ensure a continued cohesion between the project and the mandate of the DGSC. It will also provide additional linkages and interactions with high-level policy components within the Government. The PSC will approve the responsibilities of the PC and intervene when conflicts within the project and between project members arise.

Scope of Work

Specific responsibilities of the PSC are as follows:

- Setting a strategic direction, reinforcing government leadership of the programme and coordinating all interventions.
- Providing guidance and agreeing on possible countermeasures/management actions to address specific risks.
- Approving the work plans prepared by the PC (prior to approval by UNEP and UNDP).
- Conducting regular meetings to review the progress of LDCF resources and providing direction and recommendations to ensure that the agreed deliverables are produced to a satisfactory standard.
- Reviewing and approving all activities that are supported by the project based on the project objectives, work plan and availability of funding.
- Providing technical advice to create synergy and uniformity between supported activities, policies and alignment projects.
- Monitoring and evaluation of programme activities through periodic meetings and occasional site visits.
- Receiving reports on all activities supported by the programme to serve as an additional basis for monitoring and assessing LDCF resources' performance and delivery.

General Terms of Reference for the Chief Technical Adviser (CTA)

Scope of work

The CTA will provide technical guidance on the implementation of the project to the PM.

Responsibilities

- Provide quality assurance and technical review of project outputs.
- Undertake technical review of project outputs (e.g. studies and assessments).
- Write ToRs for technical consultancies with the PC (including policy revisions when necessary).
- Supervise the work of national and international consultants.
- Assist in monitoring the technical quality of project M&E systems (including AWPs, indicators and targets).
- Conduct the financial, administrative reporting and the PIR.
- Provide advice on best suitable approaches and methodologies for achieving project targets and objectives.
- Provide a technical supervisory function to the work carried out by national and international consultants hired by the project.
- Assist in knowledge management, communications and awareness-raising.
- Facilitate the development of strategic regional and international partnerships for the exchange of skills and information related to climate change adaptation.

Qualifications

- At least an advanced post-graduate at or above MSc. level in CCA or a related discipline such as disaster risk reduction, environmental management, natural resources management, agriculture and water resources management.
- A minimum of 5 years' experience in a senior technical lead position with planning and management of environmental and/or natural resources management programmes in developing countries.
- A minimum of 5 years in a senior technical position involved in institutional strengthening and capacity building.
- Previous similar experiences in provision of technical support to complex projects.
- Experience from southern Africa would be an advantage.
- Good communication and computer skills.
- Fluent in English and French, including writing and communication skills.

The CTA will report to the chair of the PSC. The CTA will cooperate with the PC to ensure the availability of information on progress and performance in the implementation of the project. In the performance of his/her duties, the CTA will work in close collaboration with TM, and update him/her on the project's progress. Additionally, in consultation with the TM, the CTA will take responsibility for decision-making and implementation of the project.

Terms of Reference for Project Coordinator (PC)

Scope of Work

The Project Coordinator will be recruited on a full-time basis to coordinate the implementation of LDCF resources. He/she will be accountable for *inter alia*: i) the quality, timeliness and effectiveness of the interventions carried out; and ii) the use of project funds⁵⁶. The PC will report to the PSC.

Responsibilities

- Head the PMU.
- Report to the PSC regarding project progress.
- Oversee and manage project implementation, monitor work progress, and ensure timely delivery of outputs in accordance with GEF and UNDP guidelines.
- Ensure timely preparation of detailed AWP and budgets for approval by PSC.
- Organise the PSC meetings.
- Deliver quarterly progress reports to the UNDP Task Manager and UNDP.
- Provide on-the-ground information for UNDP progress reports.
- Provide technical support to the project, including measures to address challenges to project implementation.
- Supervise, coordinate and facilitate the work of the Project Financial Officer and Project Technical Assistant (PTA) as well as the Technical Assistants (TA) and the technical committee (including national and international experts).
- Participate in training activities, report writing and facilitation of expert activities that are relevant to the PC's area of expertise.
- Establish linkages and networks with the ongoing activities of other government and non-government agencies.
- Liaise and coordinate with UNDP TM on a regular basis.

Qualifications

- Master's degree in environment, natural resources management, DRR or a closely related field.

⁵⁶ The Executing Agency is also accountable for the use of LDCF project funds.

- A minimum of 10 years' relevant work experience including at least 6 years' experience as a lead project manager in relevant sectors.
- Demonstrated solid knowledge of adaptation to climate change, disaster risk reduction, ecological restoration and sustainable exploitation of natural resources.
- Experience in the public participation development process associated with environment and sustainable development is an asset.
- Experience in working and collaborating within governments is an asset as well as experience in GEF projects.
- Fluent in French and English including writing and communication skills.

Reporting

The PC will work closely with the PSC and the UNDP TM to ensure the availability of information on progress and performance regarding the implementation of the project. The PC will deliver progress reports on a monthly basis to the TM and the UNDP CO. These reports will include: i) status of activities; and ii) challenges encountered on the ground during project execution.

Terms of Reference of the Project Financial Officer (PFO)

Scope of work

The PFAA will be nationally recruited and report to the PC. The PFO will be familiar with both UNEP and UNDP financial administration procedures and financial reporting requirements. He or she will produce the necessary financial reports for UNDP and directly support the PC with administrative tasks.

Responsibilities

- Standardise the finance and accounting systems of the project while maintaining compatibility with the government and UNDPs financial accounting procedures.
- Prepare revisions of the budget and assist in the preparation of the AWP.
- Comply and verify budget and accounting data by researching files, calculating costs and estimating anticipated expenditures from readily available information sources.
- Prepare status reports, progress reports and other financial reports.
- Process all types of payment requests for settlement purposes including quarterly advances to the partners upon joint review.
- Prepare periodic accounting records by recording receipts, disbursements (ledgers, cashbooks, vouchers, etc.) and reconciling data for recurring or financial reports and assist in preparation of annual procurement plans.
- Undertake project financial closure formalities including submission of terminal reports, transfer and disposal of equipment, processing of semi-final revisions, and support professional staff in preparing the terminal assessment reports.
- Assist in the timely issuance of contracts and assurance of other eligible entitlements of the project personnel, experts, and experts by preparing annual recruitment plans.

Qualifications

- At least a post-graduate degree in accounting, financial management or a related discipline such as.
- A minimum of 5 years' experience in a senior finance position.
- Previous similar experiences working for International Organisations. Working for an UN agency would be an advantage.
- Experience with procurement processes an advantage.
- Good communication and computer skills.
- Fluent in spoken and written French and English.

Terms of Reference for the Project Technical Assistant (PTA)

Scope of work

Under the supervision of the PC, a PTA will be hired to directly support the PC with administrative tasks.

Responsibilities

- Report to the PC
- Assist the PC with PIRs, Project reports and the Project closure workshop.
- Assist the PC with the preparation of visits to the project demonstration sites.
- Assist the PC with daily administrative and logistical tasks.

Qualifications

- Bachelor degree in the field of natural resource management, environment or a related field.
- Experience working in the field of environment and sustainable development an asset.
- Experience in working and collaborating with local authorities an asset.
- Excellent knowledge of English and French including writing and communication skills.

Terms of Reference for the Technical Advisors (TA)

Scope of work

Under the supervision of the PC, Technical Advisors (TA) will be hired to coordinate and monitor implementation of activities at an island level. The TAs will be responsible for the coordination of activities within the project intervention sites and will work closely with the PC and the M&E Specialist to manage the project effectively at local level. TAs will be hired to coordinate the activities on each of the islands.

Responsibilities

- Act as a liaison with local authorities, local communities and institutions.
- Oversee and manage project implementation, monitor work progress, and ensure timely delivery of outputs on each of the islands.
- Report to the PC and M&E Specialist regarding project progress. Reports should contain assessments of the progress of implementing activities, including reasons for delays, if any, and recommendations on necessary improvements.
- Support the PC and M&E Specialist in developing and facilitating implementation of a comprehensive monitoring and reporting system.
- Support in the preparation of detailed annual work plans and budgets for approval by PC and M&E specialist.
- Supervise, coordinate and facilitate the work of the technical staff on each of the islands.
- Provide input to management and technical reports, and other documents as described in the M&E plan for the overall project.
- Participate in the Technical Committee meetings, as well as coordinate project site visits.

Qualifications

- Bachelor degree in environment, natural resources management, DRR or a closely related field.
- A minimum of 5 years relevant work experience.
- Demonstrated solid knowledge of CCA, DRR, environment and ecological restoration.
- Experience in the public participation development process associated with environment and sustainable development an asset.
- Experience in working and collaborating with local authorities an asset.
- Fluent in English and French including writing and communication skills.

Terms of Reference for International Consultants and National Consultants

Scope of work

International consultants will collaborate with national consultants specialised in the same field. In this way, national capacity will be increased. Local expertise will be sourced where possible in place of international expertise in order to strengthen in-country capacity.

Responsibilities

- Collect data.
- Provide advice relevant to their field.
- Monitor interventions.
- Collaborate with international/national consultants.

Qualifications

Additionally, both the international and national consultants must be experts in their field. Furthermore, they should have good knowledge and understanding of the Comoros' climate change vulnerability and an appropriate MSc degree and a minimum of 5 years' experience or an appropriate bachelor's degree and 10 years' experience in their field of expertise. National experts need to be fluent in spoken and written French and English.

The hiring procedures to be followed for both international and national consultants must include a transparent and competitive process based on normal procedures.

Terms of Reference for the M&E Specialist

The M&E Specialist will be responsible for the development and implementation of a M&E methodology for monitoring and evaluation of all Outputs and activities in the pilot areas using the targets and indicators as outlined in the Results Framework. In addition, the M&E specialist will provide training to various stakeholders on low-cost, user-friendly biophysical indicators and rural appraisal tools to measure the impacts of project interventions, including use of water resources, as well as the effectiveness of agricultural and livestock practices.

Responsibilities

- Develop a M&E methodology including performance targets for project interventions.
- Measure the indicators at least twice a year to evaluate the progress of the project in meeting the targets and the application of gender-disaggregated indicators.
- Report to the PSC on the performance of the project according to project and AMAT indicators.
- Participate in the production of reports.
- Provide training to community members, local authorities and DGSC/DRSC technical staff on the M&E methods and techniques.

Qualifications

- At least a Bachelor's degree in environmental management, ecosystem restoration, CCA or related field.
- A minimum of 5 years' experience in monitoring and evaluating technical projects related to climate change adaptation, ecosystem restoration or management of natural resources.
- Previous experience working with local communities.
- Good communication skills
- Fluent in spoken and written French and English.

Terms of reference for the gender specialist

The Gender Specialist will be responsible for ensuring that the project responds to the anticipated effects of climate change on women. In so doing, the specialist will be required to work closely with the local communities, project team and other specialists, particularly with regards to training to ensure that it is gender sensitive and that women and female-headed households are adequately represented during project implementation.

Responsibilities

- Undertake consultations with local communities, particularly women on their needs and interests.
- Assess and identify potential gender-differentiated impacts of the project.
- Collect sex-disaggregated baseline data that could be used to monitor potential gender impacts.
- Develop a gender strategy to ensure that women's needs and interests are integrated into the design and formulation of the project. This should include opportunities and entry points for mainstreaming gender into the project.

Qualifications

- At least a Bachelor's degree in social or natural sciences such as environmental management, ecosystem restoration, CCA or related field.
- A minimum of 5 years' experience in the field of gender equality and gender mainstreaming.
- Thorough understanding of the gender context in the Comoros and experience working with government institutions and international or national non-government institutions supporting gender and development work in environmental management, ecosystem restoration, CCA or related field.
- Previous experience working with local communities.
- Good communication skills.
- Fluent in spoken and written French and English.
-

ANNEX F: UNDP Social and Environmental Screening Template (SESP)

Project Information

Project Information	
1. Project Title	Strengthening Comoros resilience against climate change and variability related disaster
2. Project Number	5445
3. Location (Global/Region/Country)	Union of Comoros – Grande Comore, Anjouan and Mohéli

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?
<p>Briefly describe in the space below how the Project mainstreams the human-rights based approach</p> <p>The objective of the LDCF-financed project is to strengthen the adaptive capacities and resilience of the most vulnerable local communities to climate change, as well as natural and climate-related disasters in the Comoros. In doing so, the project will enhance development planning and implementation of DRR and management measures as well as increase the understanding and knowledge of medium to long-term climate change risks. Because of the nature of the LDCF-financed project, a participatory and human-rights approach is integral to the project. Importantly, the project's interventions will benefit ~15,000 people through the implementation of reforestation, rainwater collection and redistribution systems, flood prevention measures and income-generating activities. The project interventions have been developed in accordance with internationally protected human rights, in conformity with UN guidelines. To ensure that no rights or laws are infringed by the proposed interventions, these interventions were developed in consultation with representatives from several ministries. Extensive consultations were also held with the beneficiary local communities to ensure that the LDCF-financed project responds to their need.</p>
<p>Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment</p> <p>The effects of climate change are often more notable for women than men. For example, as women's domestic life in the Comoros pertains to raising children, water collection and wood harvesting, they become more burdened than men in the event of natural and climate-related disasters, such as floods. Women have to walk longer distances to access potable water and attend to children who become susceptible to water- and vector-borne diseases after floods. By increasing the adaptive capacity of women in the intervention sites – through flood prevention interventions – the burden on women in the intervention sites will be reduced.</p> <p>The outcomes of the LDCF-financed project will increase the technical, institutional and financial capacities of national and local government authorities to develop and implement flood risk reduction interventions. A gender-sensitive and gender-responsive approach has been adopted in the design of the project and will be supported during implementation phase. By promoting such an approach, the adaptive capacity and empowerment of women will be enhanced within the intervention sites.</p> <p>During the implementation phase of the project's interventions, particular attention will be given to addressing the limited adaptive capacity and vulnerability of women to natural and climate-related disaster. In particular, the LDCF-financed project will focus on empowering women through promoting their participation in decision-making processes and in accessing LDCF funds. Gender considerations will be mainstreamed into the project's activities to ensure that women are included in the selection of activities to increase their resilience and income-generation abilities, as well as the various training and capacity-building programmes. Women's user groups and female headed households will be targeted. In addition, technical support and advice will be sought from the Directorate of Gender during the project implementation period to ensure that women's needs are properly</p>

addressed. In alignment with the rights-based approach, the proposed project will identify opportunities to increase youth and female participation in the project's activities and decision-making processes. This will include: i) incorporating gender-disaggregated indicators and targets in the results framework of the proposed project, specifically at community training workshops, demonstration activities and management committees; ii) targeting of gender vulnerabilities into project interventions so that the most climate vulnerable groups within a community receive support from the proposed project; and iii) participation of stakeholders through project planning and implementation to ensure that gender considerations are appropriately mainstreamed into project activities. Under Outcome 4, a gender specialist will be appointed to assess the project's interventions and provide a roadmap for promoting a gender-responsive approach in the implementation of the interventions financed by the LDCF. Corrective action will be recommended to increase gender considerations in the design of, and the benefits expected from the project's interventions.

Briefly describe in the space below how the Project mainstreams environmental sustainability

The following interventions mainstream environmental sustainability into the LDCF-financed project: i) awareness-raising campaigns for local communities on sustainable natural resource use and management; ii) rehabilitation of riverbanks to reduce flooding; and iii) reforestation of degraded slopes to improve water infiltration. In addition, EIAs will be undertaken prior to the construction of all hard infrastructure under the LDCF-financed project. The necessary corrective actions will be implemented based on the recommendations of the EIAs to limit or minimise any negative effects on the environment.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low Risk Projects.</i>	QUESTION 3: What is the level of significance of the potential social and environmental risks? <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i>			QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
Risk Description	Impact and Probability (1-5)	Significance (Low, Moderate, High)	Comments	Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.
Risk 5: Duty-bearers do not have the capacity to meet their obligations in the Project	I = 2 P = 2	Low	The LDCF-financed project is essentially a country-driven initiative. Therefore, Comorian stakeholders – including government and local communities will be the ultimate duty-bearers. Where they have inadequate capacity to	To address this challenge, training workshops will be held with national and local government authorities to increase their understanding and expertise of the technical interventions.

			implement on-the-ground interventions the socio-economic benefits of the project will not be realised.	
Risk 1.1: Proposed project will likely have adverse impacts on habitats, ecosystems and services.	I=3 P=2	Low	Under Outcome 3 of the LDCF-financed project, several soft and hard interventions will be implemented to <i>inter alia</i> reduce flood risks at the intervention sites. These include dredging of rivers and the construction of gabion walls.	The LDCF-financed project will undertake several activities – including an assessment of prior interventions to increase water availability, an analysis of flood risks and sustainable flood prevention measures as well as EIAs – that will identify adverse impacts on habitats, ecosystems and services. In addition to these activities, design studies will be undertaken which in conjunction with the EIAs will identify measures to mitigate these risks.
Risk 1.5: Proposed project will result in the introduction of invasive alien species.	I=2 P=2	Low	Under Outcome 3 of the LDCF-financed project extensive reforestation of degraded slopes and riverbanks will take place.	Beneficial tree species will be selected. Wherever possible, indigenous species will be prioritised through the collection and harvesting of seeds.
Risk 1.6: Proposed project involves harvesting of natural forests, plantation development, or reforestation.	I=1 P=5	Low	Under Outcome 3 of the LDCF-financed project extensive reforestation of degraded slopes and riverbanks will take place.	
Risk 1.8: Proposed project will result in the extraction, diversion or containment of surface or groundwater.	I=3 P=3	Moderate	Under Outcome 3 of the LDCF-financed project, several soft and hard interventions will be implemented to <i>inter alia</i> reduce flood risks at the intervention sites. These include implementing community and individual rainwater collection and redistribution systems, such as rainwater reservoirs.	An assessment of prior interventions for increasing water availability will be undertaken to determine the efficacy and sustainability of such measures. Based on the assessment, potential adverse impacts on surface and groundwater will be identified. The design study will therefore take these impacts into account when implementing on the ground measures to reduce vulnerability to droughts.
Risk 2.2: Outcomes of the proposed project will be sensitive or vulnerable to potential impacts of climate change.	I = 3 P = 3	Moderate	Under Outcome 3 of the LDCF-financed project, several soft and hard interventions will be implemented to <i>inter alia</i> reduce flood risks at the intervention sites. These interventions could be compromised by the predicted effects of climate change in the Comoros. For example, the revegetation of degraded slopes (under	Current and future climatic variability will be taken into account when planning and implementing interventions. Furthermore, climate-resilient species will be selected under Outcome 3 for the rehabilitation of degraded slopes and riverbanks.

			Output 3.1) could be compromised by heavy rains and flooding during the planting stage.	
Risk 3.4: Failure of structural elements of the proposed project pose risks to local communities (e.g. collapse of buildings or infrastructure)	I = 4 P = 1	Low	Under Outcome 3 of the LDCF-financed project, hard interventions are proposed to <i>inter alia</i> prevent flooding of the intervention sites. These include dredging of rivers and the construction of gabion walls. The failure of these structures as a result of poor structural planning or minimal long-term maintenance would result in exposing local communities to floods.	Environmental Impact Assessments will be conducted to evaluate the possible negative impacts of the infrastructure. Based on these assessments, the design study will incorporate measures that will prevent these risks from occurring.
	QUESTION 4: What is the overall Project risk categorization?			
	Select one (see SESP for guidance)			Comments
	Low Risk	<input type="checkbox"/>		
	Moderate Risk	<input checked="" type="checkbox"/>		Seven risks have been identified, five are of low significance and two are of moderate significance.
	High Risk	<input type="checkbox"/>		
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?			
	Check all that apply			Comments
	Principle 1: Human Rights	<input checked="" type="checkbox"/>		
	Principle 2: Gender Equality and Women's Empowerment	<input type="checkbox"/>		
	1. Biodiversity Conservation and Natural Resource Management	<input checked="" type="checkbox"/>		
	2. Climate Change Mitigation and Adaptation	<input checked="" type="checkbox"/>		
	3. Community Health, Safety and Working Conditions	<input checked="" type="checkbox"/>		
	4. Cultural Heritage	<input type="checkbox"/>		
	5. Displacement and Resettlement	<input type="checkbox"/>		

	6. Indigenous Peoples	<input type="checkbox"/>	
	7. Pollution Prevention and Resource Efficiency	<input type="checkbox"/>	

Final Sign Off

Signature	Date	Description
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental <u>Risks</u>		
Principles 1: Human Rights		Answer (Yes/No)
1.	Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2.	Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ⁵⁷	No
3.	Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4.	Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5.	Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	Yes
6.	Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7.	Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8.	Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment		
1.	Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2.	Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
3.	Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4.	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	Yes

⁵⁷ Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

1.2	Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	No
1.3	Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4	Would Project activities pose risks to endangered species?	No
1.5	Would the Project pose a risk of introducing invasive alien species?	Yes
1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	Yes
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	No
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	Yes
1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11	Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? <i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	No
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant ⁵⁸ greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	Yes

⁵⁸ In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	No
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	Is there a risk that the Project would lead to forced evictions? ⁵⁹	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	<p>Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)?</p> <p><i>If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i></p>	No

⁵⁹ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	No
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

ANNEX G: Environmental and Social Management Plan for moderate and high risk projects

N/A

ANNEX H: UNDP Project Quality Assurance

[Separate attachment]

ANNEX I: UNDP Risk Log

[Separate attachment]

ANNEX J: Results of the Capacity Assessment of the project implementing partner and HACT micro-assessments

[Separate attachment]

ANNEX K: Additional Agreements



UNION DES COMORES



Unité -solidarité –Développement



**MINISTRE DEL'INTERIEUR, DE L'INFORMATION,
DE LA DECENTRALISATION, CHARGE DES
RELATIONS AVECLES INSTITUTIONS**

DIRECTION GENERALE DE LA SECURITE CIVILE

Le Directeur Général

Moroni, le 01décembre 2016

N° 016-066 /DGSC - DG

Objet : Lettre de confirmation d'engagement et de cofinancement

Nous, soussigné Colonel Ismael Mogne Daho, Directeur Général de la Sécurité Civile, atteste que notre institution contribuera au cofinancement du projet de « Renforcement de la résilience des Comores aux risques de catastrophes liées au changement et la variabilité climatiques», pour un montant évalué à \$503,220 pour la période de 2017 - 2018.

Ce montant représente les dépenses et investissements prévus dans le cadre de nos activités déjà identifiées et planifiées avec l'aide de nos partenaires, lesquelles contribueront à l'atteinte des résultats attendus du projet.

Colonel Ismael MOGNE DAHO



UNION DES COMORES

Unité – Solidarité – Développement

MINISTRE DE L'EDUCATION NATIONALE, DE L'ENSEIGNEMENT, DE LA RECHERCHE ET DES ARTS



UNIVERSITE DES COMORES

Faculté des Sciences et Techniques

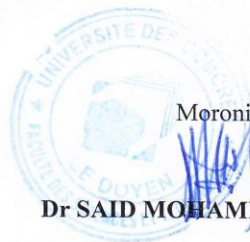
Le Doyen

N°16- 177 /UDC/FST

Objet : LETTRE DE CONFIRMATION D'ENGAGEMENT ET DE COFINANCEMENT

La présente lettre a pour but de Confirmer l'engagement de la Faculté des Sciences et Techniques de l'Université des Comores pour sa contribution au cofinancement du projet de « Renforcement de la résilience des Comores aux risques des catastrophes liées au changement et la variabilité climatiques », pour un montant s'élevant à 88432USD pour la période de 2018-2020.

En effet, ce montant représente la contribution de la Faculté des Sciences et Techniques de l'Université des Comores pour créer une formation de deux ans (Mater 1 et Master 2), pour la période universitaire 2018-2020, sur les « Changements climatiques et la Gestion des Risques et Catastrophes naturelles », Cofinancé par la Faculté des Sciences et Techniques l'Université des Comores et le projet GEF/UNDP/DGSCCLDCF.



Moroni le 19/12/2016

Dr SAID MOHAMMED Achmet

Clamer que le chemin est long ne le raccourcit pas : le raccourcir, c'est faire un pas en avant.
Université des Comores, rue de la Corniche P.B 2585 Moroni, Tel : 269 7732638
E-mail : univ-com@comorestelecom.km

UNION DES COMORES

Unité-Solidarité-Développement

**Vice-Présidence chargée du Ministère de l'Agriculture, de la Pêche, de
l'Environnement, de l'Aménagement du Territoire et de l'Urbanisme
de l'Union des Comores.**

**Secrétariat d'Etat chargé de l'Aménagement du Territoire et de
l'Urbanisme**

**DIRECTION GENERALE DE L'EQUIPEMENT ET DE L'AMENAGEMENT
DU TERRITOIRE**

LE DIRECTEUR GENERAL

N° 17/57 /MATIUH/DGEAT: الرقم

Date : Moroni, le 3 / 01 / 2017

A

Madam Adriana Dinu

Coordinateur Exécutif et Directrice

Du PNUD – FEM

New York

Objet : LETTRE DE CONFIRMATION D'ENGAGEMENT ET DE COFINANCEMENT

Madame la Directrice,

La présente a pour but de Confirmer l'engagement de la Direction Générale de l'Equipement et de l'Aménagement du Territoire à contribuer au cofinancement du projet de « Renforcement de la résilience des Comores aux risques de catastrophes liées au changement et la variabilité climatiques », pour un montant s'élevant à trente-six millions huit cent seize mille trois cent vingt-sept dollars (\$ 36, 816 327) pour la période de 2017-2018.

Ce montant de la 11^{me} Fed, représente les dépenses et investissements prévus pour la réhabilitation de 48 Km de Route (RN2, MORONI - FOUMBOUNI) et de 23 Km de route (RN23, SIMA – MOYA) avec l'appui financier de la Banque Africaine de Développement (BAD) et de la Banque Européenne d'Investissement (BEI).

Ces activités sont déjà identifiées et planifiées avec l'aide de nos partenaires, lesquelles contribueront à l'atteinte des résultats attendus du projet.


HASSANI BACAR MAECHA

UNION DES COMORES
Unité – Solidarité – Développement

Vice Présidence chargé du Ministère des Transports,
des Postes et Télécommunications, des technologies
de l'information et de la communication



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AGENCE NATIONALE DE L'AVIATION CIVILE ET DE LA METEOROLOGIE

LE DIRECTEUR DE LA METEOROLOGIE

Moroni le 01 Décembre 2016

N°16- /AD-17/MTO/ANACM

Objet : LETTRE DE CONFIRMATION D'ENGAGEMENT ET DE COFINANCEMENT

Monsieur le Directeur,

La présente a pour but de Confirmer l'engagement de la Direction Technique de la Météorologie (TDM) au cofinancement du projet de « Renforcement de la résilience des Comores aux risques de catastrophes liées au changement et la variabilité climatiques », pour un montant s'élevant à \$262,929 pour la période de 2017 -2018.

Ce montant représente les dépenses et investissements prévus dans le cadre de nos activités déjà identifiées et planifiées avec l'aide de nos partenaires, lesquelles contribueront à l'atteinte des résultats attendus du projet

HAKIM YOUSOUF

**CENTRE NATIONAL DE DOCUMENTATION ET DE RECHERCHE
SCIENTIFIQUE**

Patrimoine culturel

Patrimoine naturel

Programmes de Recherche

Musée National



Archives Nationales

Bibliothèque Nationale

Réf.: 2016/115 / CNDRS

Moroni, le 7 Décembre 2016

CONFIRMATION DE COFINANCEMENT

La présente a pour but de confirmer l'engagement du CNDRS à mobiliser une enveloppe de 260000U.S\$ pour contribuer au cofinancement du projet PNUD/ GEF/ LDCF/ SCCF « *Renforcement de la résilience de l'Union des Comores face aux risques de catastrophes liés aux changements et à la variabilité climatiques* ».

Ce montant représente les dépenses et investissements prévus dans le cadre de nos activités dans les deux prochaines années avec l'appui de nos partenaires, l'Institut de Physique du Globe de Paris (IPGP) et l'institut United States Geological Survey (USGS), portant sur le développement des infrastructures et le renforcement des capacités de l'Observatoire Volcanologique du Karthala (OVK). Ces activités contribueront à l'atteinte des résultats attendus du projet plus particulièrement dans la mise en place d'un système de surveillance et d'alerte précoce face aux risques volcaniques.



Le Directeur Général

Abdallah Nouroudine

CNDRS, B.P 169, MORONI, UNION DES COMORES
Tél. : 00 (269) 773.91.02 – Fax 00 (269) 773 91 00 E-mail: cndrs@comorestelecom.km



Au service
des peuples
et des nations



321 /PNUD/ORG/130/5445

Moroni le 19 Septembre 2017

Madame la Directrice,

Objet : Lettre de cofinancement du PNUD pour le Projet « Renforcement de la résilience des Comores aux risques des catastrophes liés aux changements et variabilité climatique ».

J'ai le plaisir de confirmer l'engagement du bureau du PNUD portant cofinancement des activités décrites dans le projet cité en objet.

La contribution du PNUD est de l'ordre de 550,000 USD (Cinq cent cinquante mille dollars) en cash pendant toute la durée du projet.

En vous souhaitant bonne réception, je vous prie de croire, Madame la Directrice, l'expression de mes salutations distinguées.

Matthias Naab
présentant Résident



Madame Adriana Dinu,
Coordinateur Exécutif du PNUD-FEM
Washingt

XIII. ADDITIONAL ANNEXES

- K. Policy Context
- L. List of people consulted during project development
- M. Site maps and table of activities
- N. Guidance for gender-sensitive and gender-responsive project implementation
- O. Vulnerability Analysis
- P. Capacity Analysis
- Q. Results of surveys conducted with local communities

ANNEX L: Policy Context

The **National Environmental Policy (NEP)** was adopted in 1993. Its overarching aim is to support the sustainable management of natural resources and strengthen sectoral policies – particularly land use regulation, management of water resources and waste management. Core objectives of the NEP to which the LDCF-financed project will be in direct alignment include: i) promoting forest conservation and reforestation; and ii) supporting the sound management of natural resources.

The **Initial National Communication (INC, 2002)** was based on findings of a study undertaken by the Intergovernmental Panel on Climate Change (IPCC). This document detailed the likely climate change impacts on the Comoros, including *inter alia* increasing vulnerability to soil erosion, damage or destruction of houses and infrastructure due to flooding and an increase in frequency and intensity of storms.

The **Second National Communication (SNC, 2013)** highlights the fact that climate change adaption is currently not effectively integrated into sectoral policies. Furthermore, there is a need for technology transfer, capacity-building, research, education, training and public awareness at all levels. The SNC also recognises that there are limited regulations defining mandates, roles and responsibilities of institutions involved in supporting climate change adaptation. Opportunities to strengthen strategic capacity for CCA were identified and include: i) increasing awareness at all levels; ii) improving information systems and resources available to decision-makers; iii) improving the integration of climate change into national research and education programmes; iv) undertaking capacity building of technical officers in key sectors; and v) strengthening of climate change considerations in relevant regions and by ensuring integration of climate change into key development strategies.

The **National Adaptation Programme of Action (NAPA, 2006)** identifies the urgent and immediate needs of adaptation to climate change and associated priority activities. In addition, the NAPA identifies various sources of vulnerability, including *inter alia*: i) a fragile natural environment; ii) difficult social and economic conditions characterised by high unemployment and poverty rates; iii) inadequate institutional capabilities; iv) limited economic diversification; and v) problems relating to access to water and drinking water. Moreover, through a consultative process across all three islands the NAPA showed that the priority concern is potential climate change impacts on agriculture and water. Various options are identified in the NAPA to reduce vulnerability to climate change. Those which are of direct relevance to this project is *Priority 12: Setting up an early warning and surveillance system on situations of climatic risks*.

The **Climate Change and Natural Disasters Risk Reduction Strategic Framework (2011-2016)** is the main policy document and strategic planning tool of the government. The CSP has three thematic pillars, one of which is climate change and adaptation. Within the thematic pillar on CCA there are five key principles: i) improve ecosystem resilience and adaptability to climate change at all levels; ii) support sustainable natural resource management and the development of alternative development approaches which increase resilience to climate change; iii) assure the safety of people, goods and infrastructure against natural disasters and prepare effective response strategies; iv) support integrated governance and decentralised natural resource management and the renovation of degraded lands and reforestation; and v) establish effective synergies and partnerships at local, national and regional level.

Poverty Reduction and Growth Strategy (PRGS) seeks to guide poverty alleviation and sustainable development in the Comoros. The PRGS seeks to increase economic growth and decrease poverty with an emphasis on sustainable development and the protection of the environment. The project is in alignment with *Objective 5: Promoting environmental sustainability and civilian security* as well as *PRGS Core Strategy 6: Promote Environmental Sustainability and Civil Security*, which pertains directly to climate change. Of the six priority programs under Core Strategy 6, Program 3.6 of the PRGS is of direct relevance to this project as it addresses the impacts of climate change on health, food security, economic activity, water resources and physical infrastructure. This program seeks to build capacities to address climate change and its impacts. The LDCF-financed project is strongly aligned with the

objectives of the PRGS and will contribute towards achieving the objectives by increasing the percentage of degraded areas under restoration as well as reduce risks in connection with climate disturbances.

The **Strategy for Accelerated Growth and Sustainable Development (SCA2D, 2015-2019)** reaffirms the commitment of the authorities to pursue the achievement of the Millennium Development Goals (MDGs) in general. This new strategy lays the foundations for the government's visions of the Comoros an emerging country by 2040, respectful of human rights, the gender equality and promoting the rule of law. The SCA2D focuses on four major areas: i) economic growth acceleration, diversification and sustainability; ii) development of infrastructure to support growth; iii) improved access to basic social services and increased resilience of households; and iv) strengthening governance, institutional and human resilience.

Outcome four of the **United Nations Framework Plan for Development Assistance Framework (UNDAF, 2015-2019)** seeks to ensure that the most vulnerable populations strengthen their resilience to climate change and crises. In addition thereto, Output 8 of the **Country Programme Document (2015-2019)** is in alignment therewith and seeks to ensure that state and non-state institutions have mechanisms, tools and means to manage risks of natural disasters and strengthen resilience. In this context, the LDCF-financed project will contribute to the above objectives by providing an emergency fund, technical assistance for the establishment of emergency response plans and enhancing the capacity of state and non-state institutions in the planning and implementation of integrated DRR and CCA interventions.

In addition to the above strategies, plans and policies, the following documents are also of direct relevance to the LDCF-financed project:

- The **Emergency Relief Plan on Cyclones (2011)** defines the mandates and responsibilities of stakeholders in responding to cyclones, explains the process to be followed in the event of a cyclone and assists decision-makers before and during the emergency event.
- **Response Plan to Eruptions of Karthala Volcano (Karthala Plan)**
- **National Preparedness and Response Plan (2007)** seeks to improve to the preparedness to manage interventions during an emergency situation. This plan was revised and replaced by the **National Contingency Plan (2011)**, which is a management tool for emergency situations.

ANNEX M: List of people consulted during project development

Stakeholder consultation programme during the Inception Mission

Date and time	Stakeholders / purpose of meeting	Project team members in attendance by
<i>Grande Comore</i>		
Thursday 16 June 2016	Project team meeting	Mohamed Djouneid Youssef Mbechezi Anliyat Mze Ahmed Henry Diouf Lucille Palazy Carrie Tacon Courtney Hill
	DGSC Colonel Ismael +2 DGSC representatives	Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	OVK Marianne Madi +7 OVK/observatory representatives	Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Site visits to local communities on the outskirts of Moroni	Colonel Ismael Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
Friday 17 June 2016	CATI	Colonel Ismael Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	TDM Director of Meteorology, Madame An-Ynaya	Anliyat Mze Ahmed Lucille Palazy Carrie Tacon Courtney Hill
	TDM Technical staff at TDM	Anliyat Mze Ahmed Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Site visits to local communities to the north of Moroni	Colonel Ismael Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
<i>Anjouan</i>		

Saturday 18 June 2016	Project team meeting to discuss project components, sites and interventions	Colonel Ismael Lieutenant Madjid Youssef Mbechezi Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Site visits to local communities to the west and east from Mout Samedou to Domoni	Colonel Ismael Lieutenant Madjid Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
Sunday 19 June 2016	Site visits to local communities along southern coastline from Mout Samedou to Domoni	Colonel Ismael Lieutenant Madjid Youssef Mbechezi Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
Monday 20 June 2016	Director of Environment, Halial Attoumoni	Lieutenant Madjid Youssef Mbechezi Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Governor of Anjouan and assistants to the Governor	Colonel Ismael Lieutenant Madjid Youssef Mbechezi Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Regional Director of Gender, Madame Fathima	Lucille Palazy Carrie Tacon Courtney Hill
	Croissant Rouge Director, Abdairyman	Lucille Palazy Carrie Tacon Courtney Hill
	Site visits to local communities on the outskirts of main city	Colonel Ismael Lieutenant Madjid Youssef Mbechezi Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
Moheli		
Tuesday 21 June 2016	DRSC Captain	Natali M'madi Foundi Lucille Palazy Carrie Tacon Courtney Hill

	Director of Production CRSS/CC Project Manager	Colonel Ismael DRSC Captain Youssef Mbechezi Mohamed Djouneid Natali M'madi Foundi Lucille Palazy Carrie Tacon Courtney Hill
	Regional Director of Gender	Mohamed Djouneid Natali M'madi Foundi Lucille Palazy Carrie Tacon Courtney Hill
	Regional Director of Education, Kombo-Ahmed	Colonel Ismael DRSC Captain Natali M'madi Foundi Lucille Palazy Carrie Tacon Courtney Hill
	Regional Director of Infrastructure	Colonel Ismael DRSC Captain Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Croissant Rouge	DRSC Captain Mohamed Djouneid Natali M'madi Foundi Lucille Palazy Carrie Tacon Courtney Hill
	Youth leader organisation	Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
Wednesday 22 June 2016	Regional Director of Environment	Colonel Ismael DRSC Captain Youssef Mbechezi Mohamed Djouneid Natali M'madi Foundi Lucille Palazy Carrie Tacon Courtney Hill
	Site visits to local communities in Moheli	Colonel Ismael DRSC Captain Youssef Mbechezi Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill

	Outgoing Secretary General of Environment	Colonel Ismael DRSC Captain Youssef Mbechezi Mohamed Djourneid Lucille Palazy Carrie Tacon Courtney Hill
	Former employee of DGSC – Environmental Management	Mohamed Djourneid Lucille Palazy Carrie Tacon
<i>Return to Grande Comore</i>		
Thursday 23 June 2016	Site visits to local communities in and around Moroni	Colonel Ismael Youssef Mbechezi Mohamed Djourneid Natali M'madi Foundi Lucille Palazy Carrie Tacon Courtney Hill
	Director of Health and health representatives	Mohamed Djourneid
Friday 24 June 2016	Director of Environment, Ismael Bachirou	Mohamed Djourneid Lucille Palazy Carrie Tacon Courtney Hill
	Director of Gender and gender representatives	Mohamed Djourneid Lucille Palazy Carrie Tacon Courtney Hill
	Croissant Rouge	Mohamed Djourneid Lucille Palazy Carrie Tacon Courtney Hill
	Director of Transport/PADDST	Mohamed Djourneid Lucille Palazy Carrie Tacon Courtney Hill
Saturday 25 June 2016	Director of Education and education representative	Mohamed Djourneid Lucille Palazy Carrie Tacon Courtney Hill
	Director of Planning	Mohamed Djourneid Lucille Palazy Carrie Tacon Courtney Hill
	Dean of Science at University of Comoros Achmet Said Faculty representatives	Mohamed Djourneid Lucille Palazy Carrie Tacon Courtney Hill
	AMCC (GCCA) representatives	Mohamed Djourneid

	Jerome Courboules	Lucille Palazy Carrie Tacon Courtney Hill
Sunday 26 June 2016	Director of WHO/OMS Dr Ahamada Msa Miliva	Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
Monday 27 June 2016	UNDP debrief	Anliyat Mze Ahmed Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Director of IOC	Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	DGSC Colonel Ismael	Lucille Palazy Carrie Tacon Courtney Hill
	Deputy Resident Representative of UNDP Emma Ngouan-Anoh	Anliyat Mze Ahmed Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Director of UNICEF/WFP	Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Director of UNFPA	Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
Tuesday 28 June 2016	Presentation of mission findings and project proposal	Various stakeholders
	Commissioner of Grande Comore and representative	Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill
	Debrief meeting with UNDP	Anliyat Mze Ahmed Mohamed Djouneid Lucille Palazy Carrie Tacon Courtney Hill

Stakeholder consultation programme during the Validation Mission

Date and time	Stakeholders / purpose of meeting	Project team members in attendance
<i>Grande Comore</i>		
Wednesday 21 September 2016	Project team meeting	Mohamed Djouneid Anliyat Mze Ahmed

		Lucille Palazy Carrie Tacon
	DGSC Colonel Ismael	Mohamed Djouneid Lucille Palazy Carrie Tacon
Thursday 22 September 2016	Meeting with various stakeholders in Grande Comore Presentation of project proposal and discussion regarding site selection	Colonel Ismael Mohamed Djouneid Lucille Palazy Carrie Tacon
	Fonds D'aide Developpement Communautaire (FADC)	Mohamed Djouneid Lucille Palazy Carrie Tacon
Saturday 24 September 2016	OVK representatives	Mohamed Djouneid Lucille Palazy Carrie Tacon
	Director of Gender	Mohamed Djouneid Lucille Palazy Carrie Tacon
Monday 26 September 2016	Local Community Training Session by DGSC	Colonel Ismael Lucille Palazy Carrie Tacon
	Project team meeting	Mohamed Djouneid Anliyat Mze Ahmed Lucille Palazy Carrie Tacon
<i>Field visits to Anjouan and Mohéli</i>		
Tuesday 27 September 2016	Meeting with various stakeholders in Anjouan Presentation of project proposal and discussion regarding site selection	Youssef Mbechezi Colonel Ismael Mohamed Djouneid Lucille Palazy Carrie Tacon
	Project team meeting	Colonel Ismael Mohamed Djouneid Lucille Palazy Carrie Tacon
Wednesday 28 September 2016	Meeting with various stakeholders in Mohéli Presentation of project proposal and discussion regarding site selection	Youssef Mbechezi Colonel Ismael Mohamed Djouneid Lucille Palazy Carrie Tacon
	Governor of Mohéli Presentation of project proposal and discussion regarding site selection	Colonel Ismael Mohamed Djouneid Lucille Palazy Carrie Tacon
<i>Return to Grande Comore</i>		
Thursday 29 September 2016	TDM	Mohamed Djouneid Lucille Palazy Carrie Tacon

	Project team meeting	Anliyat Mze Ahmed Lucille Palazy Carrie Tacon
Friday 30 September 2016	Agence Francaise Developpement	Mohamed Djouneid Lucille Palazy Carrie Tacon
	International Fund for Agricultural Development	Mohamed Djouneid Lucille Palazy Carrie Tacon

ANNEX N: Project Outputs and activities

Component 1: Strengthening institutional, policy and regulatory framework of integrated climate risks and disaster

Outcome 1: Systemic and institutional capacities for the long-term management and adaptation planning for disaster risks caused by CC are strengthened at local, regional and national levels.

Output 1.1: Proposed revisions to integrate CC and DRR into policies, strategies and other development initiatives at local, regional and national levels in the civil security sector and other priority sectors.

Indicative activities under Output 1.1 include:

- 1.1.1: Training provided to authorities from priority sectors (including civil safety, environment, planning, education health, gender and infrastructure) on the integration of CC and DRR into policies and strategies at regional and national level.
- 1.1.2: Integrate CC and DRR into strategies, plans and legislation in the civil security sector (including SNRRC, contingency plans, specific risks and POLMAR plans) and infrastructure sectors (other than the road network already targeted by AMCC).
- 1.1.3: Promote the integration of CC and DRR into the SCADD and its plan of action.
- 1.1.4: Integrate CC and DRR into land-use plans for the Grande Comore, Anjouan and Mohéli.
- 1.1.5: Develop a legislative and regulatory framework for Disaster Risk Management in the Comore, and submit it to the government for adoption.

Output 1.2: Technical and operational capacity building programme for the General Directorate for Civil Security(DGSC), Technical Directorate of Meteorology (TDM), Karthala Volcano Observatory (OVK), Directorates of agriculture, environment, forestry, Ports and maritime authorities, and other key national institutions focusing on emergency preparedness and response to climate-related disasters.

Indicative activities under Output 1.2 include:

- 1.2.1: Undertake a capacity assessment of DGSC, CATI and CTA for DRR and prepare relevant institutional and individual capacity development plans for disaster preparedness and response to climate emergencies.
- 1.2.2: Implementation of the capacity development and training plan for CATI and CTA developed under Activity 1.2.1.
- 1.2.3: Contribute towards the establishment of stores for first-aid equipment at 4 sites in Grande Comore (Moroni, Diboini, Mitsamiouli and Fombouni), 2 in Anjouan (potential sites include Sima, Domoni and Mutsamudu) and 1 in Moheli (potential sites include Fomboni and Nioumachoua).
- 1.2.4: Contribute towards the establishment of civil security units at 4 sites in Grande Comore, 2 in Moheli and 2 in Anjouan.
- 1.2.5: Provide emergency response equipment to the DGSC (and DRSCs) to improve first responders' response to climate emergencies.
- 1.2.6: Train local authorities and community groups on disaster risk management, and implement a joint management system of village ambulances to facilitate coordinated responses to disasters.
- 1.2.7: Update and reactivate the Risk Management Platform (PNPRRC) including regular meetings and simulations for better coordination of the various sectors to respond to climate disasters.

Output 1.3: Efficient system for transmission of early warnings for climate-related disasters is implemented in the three islands.

Indicative activities under Output 1.3 include:

- 1.3.1: Develop a modern communication system for the transfer of information between OVK, TDM and the DGSC/DRSC.
- 1.3.2: Develop a telecommunications system (including a telephone switchboard) to increase the capacity to receive and manage emergency calls, and radio communication system for the transmission of early warnings and alerts locally and nationally by DGSC.

Output 1.4: Operational emergency fund for climate-related disasters (to be co-financed by government and the project).

Indicative activities under Output 1.4 include:

- 1.4.1: Investigate options and develop a mechanism for sustainable funding and management of emergency fund.
- 1.4.2: Develop and implement procedures to access and disburse the funds.
- 1.4.3: Identify sources of supplementary funding at the local, regional and national level and pilot the allocation process.

Component 2: Improving and strengthening knowledge and understanding of key climate drivers of natural disasters and their medium to long term influence on disaster frequency and intensity and local communities' vulnerability to disasters

Outcome 2: Knowledge and understanding of medium to long-term climate-related disaster risks and vulnerability are improved

Output 2.1: Upgrade risk and vulnerability assessments and maps of local communities and socio-economic infrastructure are upgraded to integrate more accurate weather, water and climate information.

Indicative activities under Output 2.1 include:

- 2.1.1: Provide equipment to the DGSC for the purposes of data collection (by means of aerial surveys) to inform the development of risk and vulnerability maps.
- 2.1.2: Train local authorities, CBOs and CSOs in the intervention sites on the design of local risk and vulnerability maps. The targeted communities include: Bnguoi, Mvouni, Bndamadji-Mbadjini, Vouvouni-Kafouni, Noumadzaha, Salimani, Moroni, Mitsoudje (Grande Comore); Mirontsi, Mutsamudu, Mahala, Sima, Vassy, Koni Djodjo, Domoni (Anjouan); Hoani, Fomboni, Djoezi, Nioumachoua, Mlabanda, Kangani, Itsamia, and Hagnamoida (Moheli).
- 2.1.3: Support the trained local authorities, CBOs and CSOs to develop risk and vulnerability maps of the medium- and long-term volcanic risks, flooding, and landslides based on the climate scenarios developed under Output 2.2.
- 2.1.4: Support the trained local authorities, CBOs and CSOs to undertake self-capacity assessments to respond to the identified climate risks.

Output 2.2: Climate disasters modelling and scenarios – including hydro meteorological and geological hazards

Indicative activities under Output 2.2 include:

- 2.2.1: Develop a range of climate scenarios of multiple timescales (up to 2025 and 2100) using international and national databases.
- 2.2.2: Develop a model of the future hydro-meteorological and geological hazards based on the climate-change scenario (including floods, landslides, and volcanic eruptions).

Output 2.3: Improved TDM meteorological monitoring network and capacity

Indicative activities under Output 2.3 include:

- 2.3.1: Undertake an assessment of the institutional and technical needs of TDM.
- 2.3.2: Provide equipment to the TDM including *inter alia* 10 synoptic AWS, 80 rainfall and temperature automatic station climate appropriate software, based on the resource needs assessment undertake under activity 2.3.1.
- 2.3.3: Train TDM officers and senior staff on information processing related to disaster forecasts received from the prediction centres of severe climate phenomenon (SAWS and others), and production of seasonal forecasts, climate scenarios and risks models.

Output 2.4: Partnership with research organisations for undertaking research projects on priority climate risks.

Indicative activities under Output 2.4 include:

- 2.4.1: Identify opportunities for partnerships between research organisations and institutions involved in the monitoring and management of climate risks to fill in the knowledge gaps on the links between climate change, climate risks and their effects on local communities.
- 2.4.2: Develop partnerships between OVK and other research institutions researching priority hazards.
- 2.4.3: Identify and implement priority research projects on climate change and climate risks.

Output 2.5: National strategy for sustainable financing of the climate disaster monitoring system and information dissemination.

Indicative activities under Output 2.5 include:

- 2.5.1: Review policies and identify opportunities for strengthening policy support for financing of equipment for institutions such as DGSC, TDM and OVK.
- 2.5.2: Develop a strategy for the integration of equipment expenses (including purchase, installation and maintenance costs) into appropriate policies and budgeting processes.
- 2.5.2: Support the government to develop a public private partnership involving international private companies specialized in weather, water and climate data processing (potential buyers of monitoring data that will be collected by the NHMS) and the end users groups of the industry (potential buyers of climate services)
- 2.5.3: Identify sources of supplementary funding at the local, regional and national level.

Component 3: Sustainable strengthening of community resilience to climate induced disaster risks

Outcome 3: The long-term resilience of the livelihoods and assets of vulnerable local communities against climate disaster risks is strengthened.

Output 3.1: Development of village adaptation investment and action plans informed by the risks and vulnerability assessment and maps developed under Output 2.1.

Indicative activities under Output 3.1 include:

- 3.1.1 Implement awareness raising activities for the communities' members and leaders on climate related disasters and adaptation strategies, in coordination with Component 4. The selected communities include Plateau trelezini, Kiombani-bahani, Vouvouni-Kafouni (Grande Comore), Dimani; Jimlime, Mahale, Vassy and Koni Djodjo (Anjouan); Mlabanda, Kangani, Itsamia, Hagnamoida, Djoezi-Siziroudani, Mirngoni-Wallai, Hamba-Mirongoni (Mohéli).
- 3.1.2: Organize consultations with communities for identification of priorities for Village Action Plan and Investment Plans.
- 3.1.3: Support the communities to develop budgeted climate investment plans.

3.1.4: Implement capacity building program for the local authorities for the mainstreaming of the Village Action Plans in the local development plans and investment frameworks.

3.1.5: Implement training programs on climate finance for building local authorities capacity on resources mobilization for the implementation of the Village Action Plans.

Output 3.2: Reforestation programmes on degraded hillside land areas exposed to landslides and heavy rains.

Indicative activities under Output 3.2 include:

- 3.2.1: Develop and implement reforestation interventions (including the implementation of nurseries) in selected prefectures in Grande Comore (Oichili Dimani and Hamahamet Mboinkou prefectures), Anjouan (Domoni and Sima prefectures) and Mohéli (Djandro prefecture) to protect local communities and selected roads against floods and landslides in collaboration with CRDEs, General Directorate for Environment and Forests and the National Directorate of Infrastructure. An array of local tree species will be used including beneficial tree species which will provide sources of income under Output 3.4 (refer to Annex O for details regarding target sites and maps).
- 3.2.2: Strengthen existing and/or establish new community associations for the sustainable management of natural resources in the selected sites.
- 3.2.2 Support communities to revive and improve traditional and communities' rules and bylaws for preventing the deforestation of critical areas

Output 3.3: Community and individual rainwater collection and redistribution systems to reduce vulnerability to droughts.

Indicative activities under Output 3.3 include:

- 3.3.1: Undertake an assessment of the efficiency and sustainability of prior interventions implemented by the local communities for increasing water availability.
- 3.3.2: Undertake a design study and implement rainwater reservoirs in collaboration with local communities in Grande Comore (Moroni Bambao, Oichili Dimani and Hamanvou prefectures) and Anjouan (Nimakele prefecture) to reduce vulnerability to droughts (refer to Annex O for details regarding target sites and maps).
- 3.3.3: Develop community-based water management systems in targeted local communities.

Output 3.4: Flood prevention measures and climate-resilient, low-cost interventions for the protection of populations and socio-economic infrastructure (including health care facilities, schools and markets in flood prone areas)

Indicative activities under Output 3.4 include:

- 3.4.1: Undertake a national analysis of flood risks based on the models developed under Output 2.2.
- 3.4.2: Identify the most sustainable flood prevention interventions based on international experience including both hard and soft infrastructure to reduce vulnerability in Grande Comore, Anjouan and Moheli.
- 3.4.3: Select the flood prevention interventions to be undertaken based on the Village Action Plans developed under Output 2.2 and the analysis undertaken in Activity 3.3.1.
- 3.4.4: Undertake EIAs (where required) for the selected flood prevention interventions.
- 3.4.5: Implement the selected flood prevention interventions identified including both hard and soft infrastructure under Activity 3.3.2 in Grande Comore (Moroni Bambao prefecture), Anjouan (Mutsamudu and Domoni prefectures) and Moheli (Fomboni prefecture) (refer to Annex O for details regarding target sites and maps).
- 3.4.6: Implement the selected flood prevention activities at selected health care facilities, schools and markets in the targeted flood-prone areas.

- 3.4.7: Complement the flood prevention measures with the establishment of emergency response plans for the selected health care facilities, schools and markets in the targeted flood-prone areas.

Output 3.5: IGAs in the selected intervention sites to sustain the reforestation interventions.

Indicative activities under Output 3.5 include:

- 3.5.1: Undertake a cost-benefit analysis for the development of IGAs in the intervention sites based on the areas reforested under Output 3.1 and Moroni Bamboa prefecture in Grande Comore (refer to Annex O for details regarding target sites and maps).
- 3.5.2: Select the priority interventions based on the results of the cost-benefit analysis (Activity 3.4.1), the Village Action Plans (developed under Output 2.1) and the interventions of partner projects in collaboration with Community Associations and DGEF.
- 3.5.3: Provide equipment and training to local communities to support the implementation and sustainability of IGAs including *inter alia* forest based IGAs such as: i) apiculture; ii) sustainable harvesting of vanilla; iii) improved agriculture; iv) establishment of nurseries for fruit and other beneficial tree species; and v) agroforestry. The implementation of forest-based IGAs by local communities located on degraded hillside land areas will mitigate the expansion of agricultural areas.
- 3.5.4: Pilot the use of alternative sources of energy to fuelwood in ylang-ylang distilleries in selected sites.

Output 3.6: Proposed revisions to existing legislation including penalty provisions and training of civil security personnel – including police and forest guards – for protection of natural resources especially forests.

Indicative activities under Output 3.6 include:

- 3.6.1: Raise public awareness about the existence of legislation and penalty provisions regulating natural resource use and management (including *inter alia* the cutting of trees, bush fires and discharge of waste into rivers) in the intervention sites.
- 3.6.2: Develop and implement training programmes for local authorities including DGSC/DSRC and police on law enforcement measures and penalties.
- 3.6.3: Propose revisions to legislation including stricter penalty provisions in the event of non-compliance with legislation regarding the protection of natural resources.
- 3.6.4: Promote the establishment of a community surveillance system for monitoring of illegal activities (including *inter alia* cutting of trees, slash and burn cultivation and bush fires).

Output 3.7: Measures to promote ecologically sound housing and settlements that are resilient to climate disasters.

Indicative activities under Output 3.7 include:

- 3.7.1: Promote the establishment of Public Private partnerships in the financial, housing, infrastructure and development planning sectors.
- 3.7.2: Identify mechanisms for low-income housing in areas less vulnerable to climate-related disasters (such as flooding).
- 3.7.3: Demonstrate affordable and ecologically sound housing and settlements that are resilient to climate disasters.
- 3.7.4: Assess the barriers for the upscaling of the houses, provide government with appropriate solutions and identify sources of supplementary funding at the local, regional and national level and pilot the process at selected interventions sites most vulnerable to climate-related disasters.

Component 4: Knowledge management, monitoring and evaluation

Outcome 4: Increased monitoring, knowledge-sharing and awareness at local, regional and national levels on: i) climate change; and ii) natural disaster risk management.

Output 4.1: Public awareness-raising campaigns and information programmes conducted in the Grande Comore, Anjouan and Moheli using various forms of media (including print, radio etc.)

Indicative activities under Output 4.1 include:

- 4.1.1: Develop and implement a national communication strategy and action plan for the communication of project information.
- 4.1.2: Develop and implement a project specific communication strategy and action plan to inform consultations with local communities regarding the project.
- 4.1.3: Develop and implement awareness-raising campaigns using national and local media and training programmes for local communities and relevant stakeholders (including hospital staff, teachers, pupils as well as community associations) on: i) the effects of CC and DRR based on the action plan; ii) the sustainable management of reforested and planted areas; iii) the long-term effects of slash-and-burn agriculture and forest fires; iv) lessons learned and best practices based on the action plan; v) legal provisions (including penalties) regarding deforestation and the discharge of waste into rivers.

Output 4.2: Long-term monitoring and evaluation programme including the codification and dissemination of lessons learned and best practices from the project (and other similar ones).

Indicative activities under Output 4.2 include:

- 4.2.1: Develop and implement a system for monitoring and evaluation of interventions for the management of long-term climate risks.
- 4.2.2: Monitoring and evaluation of economic impacts of project activities.
- 4.2.3: Identify and synthesise lessons learned and best practices resulting from the implementation of the project activities.
- 4.2.4: Disseminate lessons learned using existing national and international platforms.
- 4.2.4: Develop a strategy for scaling up and replicating successful project activities throughout Grande Comore, Anjouan and Mohéli.

Output 4.3: Environmental education programmes – with a particular focus on CC and DRR – at primary schools and the University of Comore.

Indicative activities under Output 4.3 include:

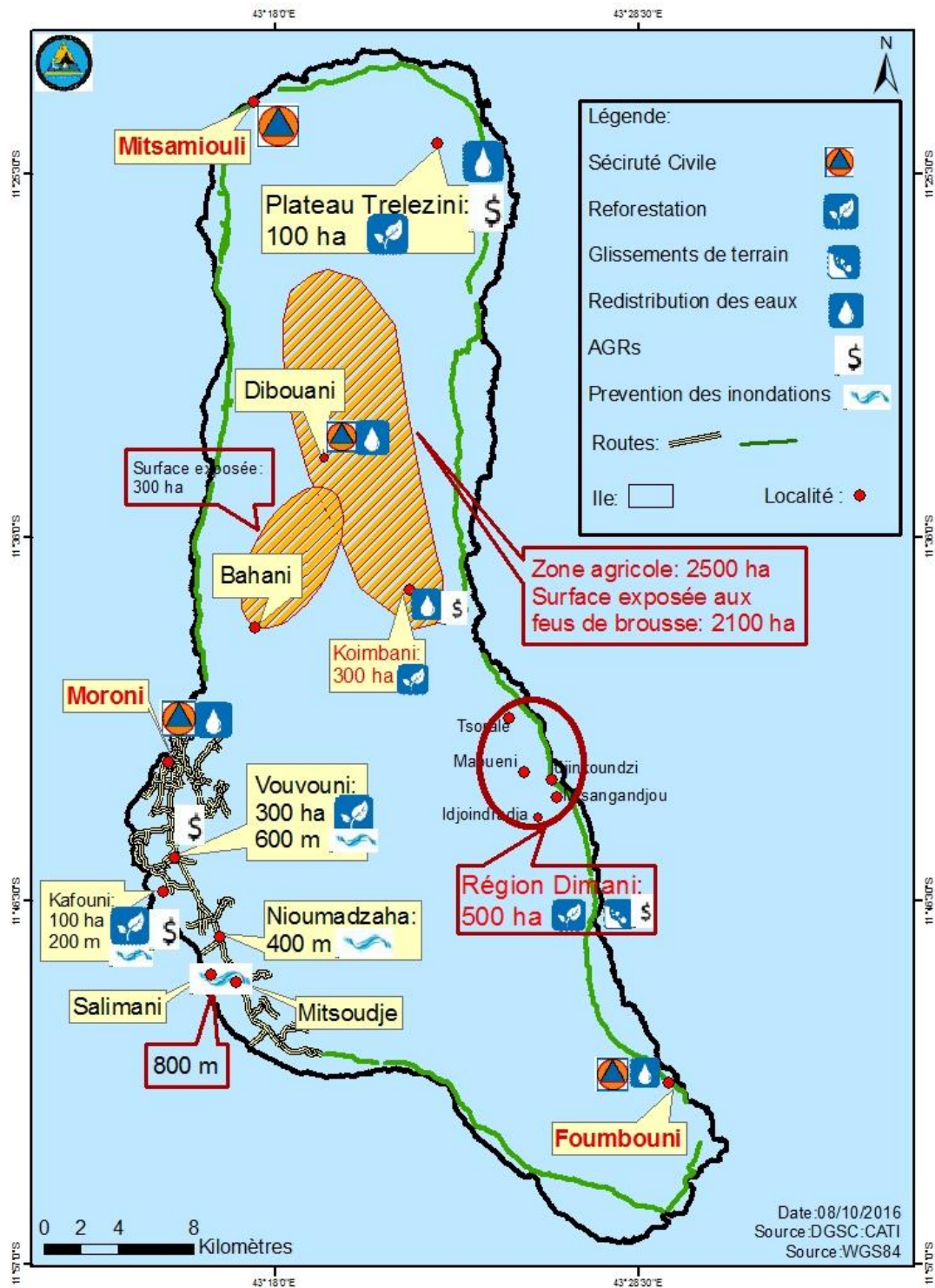
- 4.3.1: Revise the existing environmental education manual developed for and piloted at primary schools (financed by UNDP and other partners) to integrate CC and DRR. Initial steps include assessing the effects of the first manual in schools.
- 4.3.2: Distribute the revised environmental education manual to all primary schools.
- 4.3.3: Provide training on the revised environmental education manual to all teachers at primary school level.
- 4.3.4: Evaluate effectiveness of environmental education programmes on the behaviour of pupils (and parents).
- 4.3.5: Develop, validate and pilot a Master's Programme on the environment, CC and DRR at the University of Comore in collaboration with regional partner institutions.

Output 4.4: A gender strategy developed and implemented, which includes capacity-building and enhancing the participation of women in planning, selecting and implementing CC and DRR measures.

Indicative activities under Output 4.4 include:

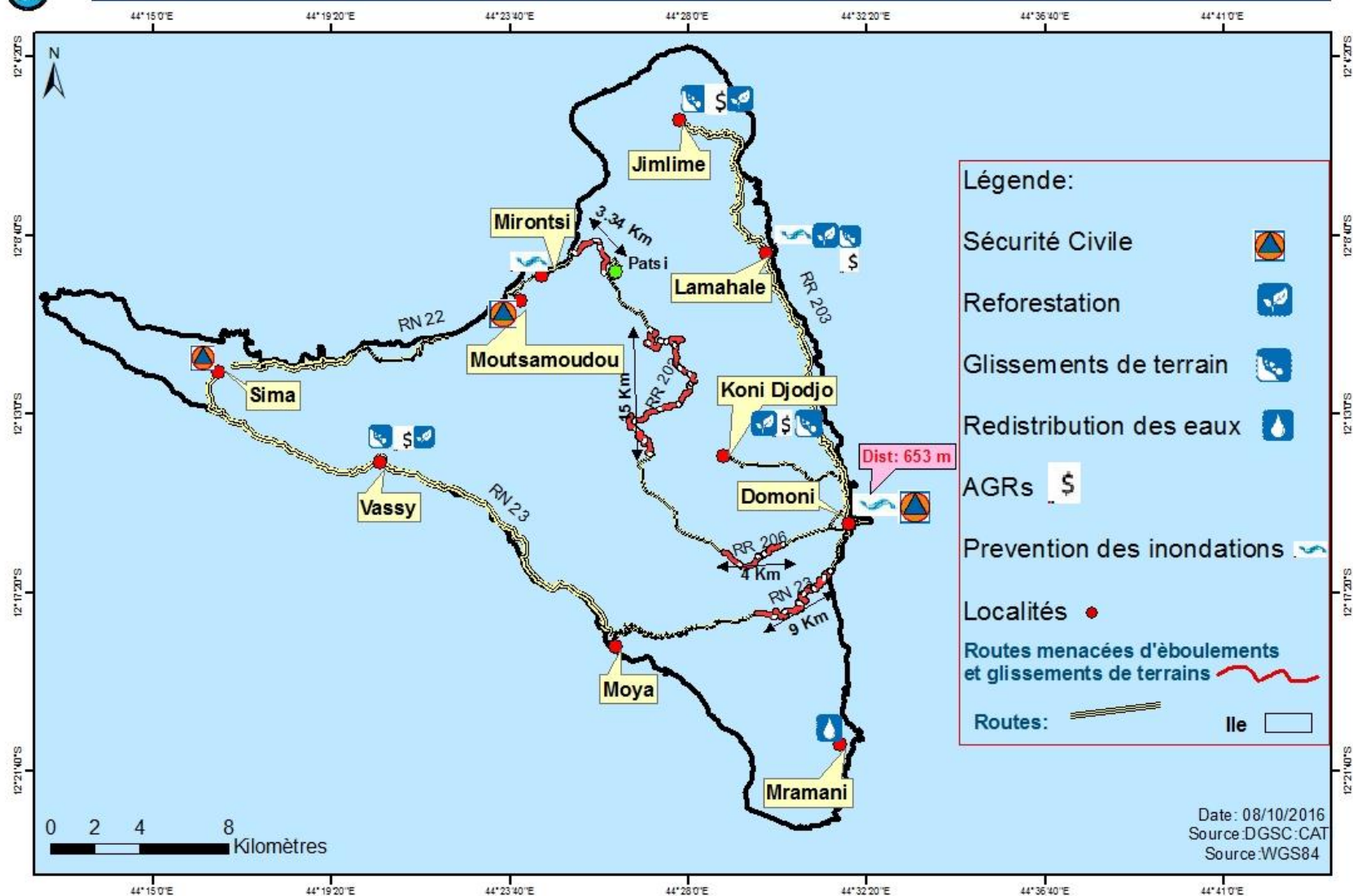
- 4.4.1: Collaborate with the National and Regional Directorates of Gender and Social Protection to develop a gender strategy which will ensure that women's needs and interests are represented in the design and implementation of on-the-ground interventions, particularly IGAs to be implemented under Outcome 3.
- 4.4.2: Create a discussion forum to facilitate dialogue on gender issues between the village associations, local authorities, regional and national administration.
- 4.4.3: Undertake gender appropriate training on good business and management practices and innovative leadership in decision-making.
- 4.4.4: Undertake targeted awareness-raising and outreach campaigns to increase women's participation in the design and implementation of project activities as well as decision-making processes.
- 4.4.5: Propose revisions to the National Policy on Gender Equality (to be used during the next revision process) addressing the vulnerability of women to climate-related natural disasters and promoting interventions to increase their adaptive capacity to the effects of climate change.
- 4.4.6: Document lessons learned on the experiences and coping strategies of women and men to climate change and the implications for future project and program design.

Cartes des zones d'interventions proposées: Ngazidja





Cartes des zones d'interventions proposées & Routes menacées: Anjouan





Cartes des zones d'interventions proposées & Routes menacées d'éboulements et glissements de terrains: Mohéli

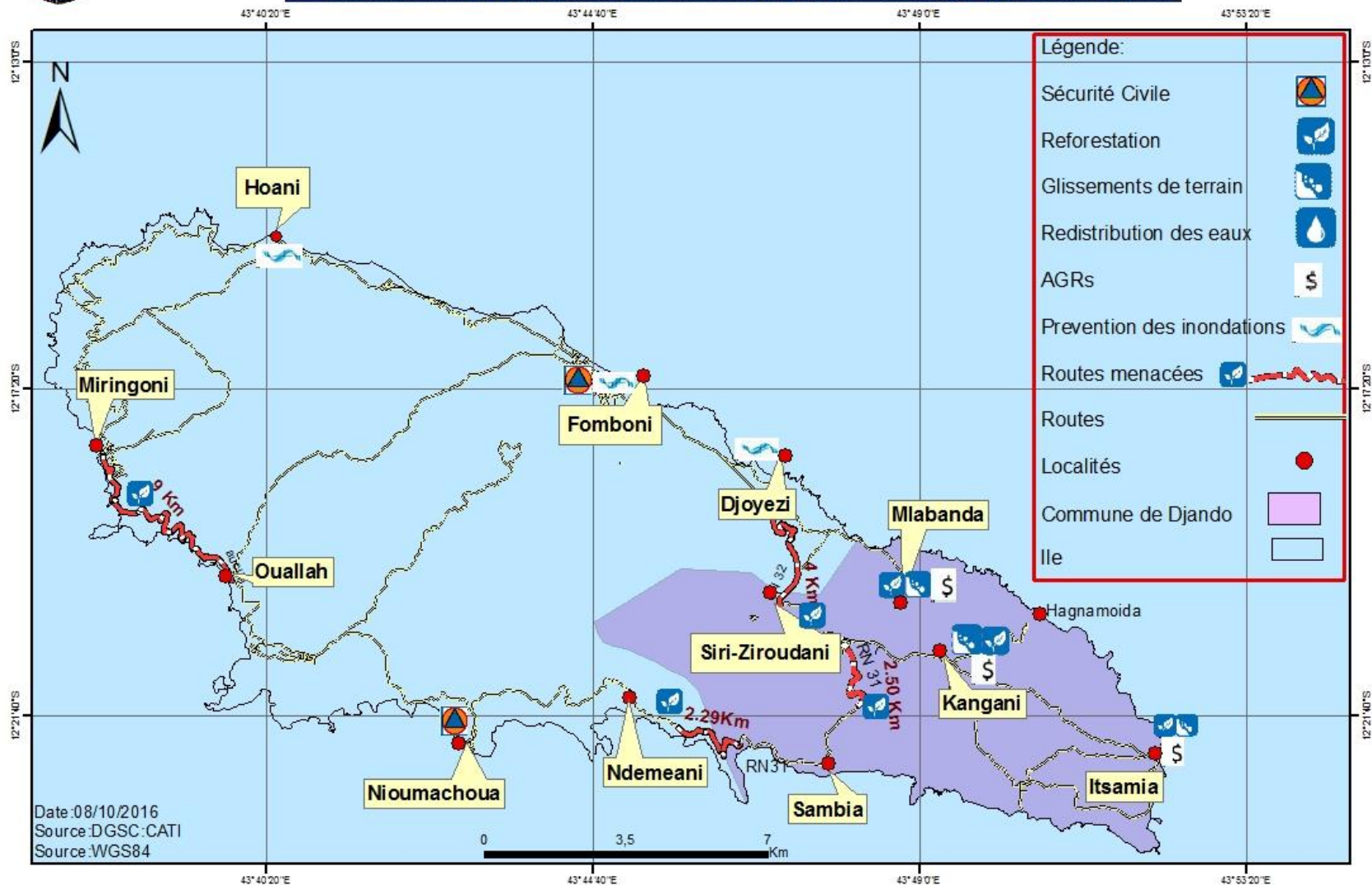


Table of sites and activities

Grande Comore

Site			Outputs				Notes
<i>Prefecture</i>	<i>Commune</i>	<i>Village</i>	<i>3.1 Programmes de reforestation sur les flans de collines dans les zones les plus exposées aux glissements de terrain et pluies intenses</i>	<i>3.2 Des systèmes communautaires et individuels de captage et redistribution des eaux de pluie pour réduire la vulnérabilité a la sécheresse</i>	<i>3.3 Mesures de prévention des inondations et interventions à faible couts pour la protection des infrastructures socio-économiques</i>	<i>3.4 Activités Génératrices de Revenus (AGRs)</i>	
Moroni Bambao -	Moroni	Moroni		X			Water reservoir close to DGSC to fight against fires
Moroni Bambao -	Moroni	Vouvouni, Kafouni			X	X	Lots of reforestation needed because it is bare soil all around the rivers → develop IGAs with it.
Moroni Bambao -	Bambao Ya Hari	Nioumadzaha			X		
Hambou	Tsinimoipangu a	Mitsudje-Salimani (Sites on same river)			X		
Hamanvou	Itsanra Hamanvou -	Diboini		X			For the local civil security office to fight bushfires
Oichili -Dimani –	Dimani	Ntsorale	X			X	
	Oichili -Dimani	Idjikounzi	X			X	
Oichili -Dimani –	Oichili yadjou	Kiombani	X	X		X	Water reservoir for the local civil security office to fight bushfires
Hamahamet Mboinkou	Nyuma Msiru	Telezini	X			X	

Anjouan

Location			Outputs				Notes
<i>Prefecture</i>	<i>Commune</i>	<i>Village</i>	<i>3.1 Programmes de reforestation sur les flans de collines dans les zones les plus exposées aux glissements de terrain et pluies intenses</i>	<i>3.2 Des systèmes communautaires et individuels de captage et redistribution des eaux de pluie pour réduire la vulnérabilité a la sécheresse</i>	<i>3.3 Mesures de prévention des inondations et interventions à faible couts pour la protection des infrastructures socio-économiques</i>	<i>3.4 Activités Génératrices de Revenus (AGRs)</i>	
Mutsamudu	Mirontsy	Mirontsy (river Koni)			X		
Domoni	Domoni	Domoni - Chironi			X		In town, not enough space for actual reforestation activities around the river
Nimakele	Mramani	Mramani		X			Water reservoir for local communities
Domoni	Koni	Koni Djodjo	X			X	
Domoni	Bambao	Mahale	X			X	
Domoni	Jimlime	Jimlime	X			X	
Sima	Vouani	Vassi	X			X	

Mohéli

Location			Outputs				Notes
<i>Prefecture</i>	<i>Commune</i>	<i>Village</i>	<i>3.1 Programmes de reforestation sur les flans de collines dans les zones les plus exposées aux glissements de terrain et pluies intenses</i>	<i>3.2 Des systèmes communautaires et individuels de captage et redistribution des eaux de pluie pour réduire la vulnérabilité a la sécheresse</i>	<i>3.3 Mesures de prévention des inondations et interventions à faible couts pour la protection des infrastructures socio-économiques</i>	<i>3.4 Activités Génératrices de Revenus (AGRs)</i>	
Fomboni	Moimbassa	Hoani			X		Priority 3 for flood interventions
	Mwali Mdjini	Djoezi (rivière de Nyoubeni)			X		Priority 2 for flood interventions, very little space for reforestation
	Fomboni	Fomboni (rivière de Dewa)			X		Priority 1 for flood interventions, very little space for reforestation
Djandro	Commune de Djandro	Mlabanda	X			X	
		Itsamia	X			X	
		Hangnoimoida	X			X	
		N'Kangani	X			X	

ANNEX P: Guidance for gender-sensitive and gender-responsive project implementation

Project outcomes	Project outputs	Gender mainstreaming action	Comments/Guidance and Recommendations
Outcome 1: Systemic and institutional capacities for the long-term management and adaptation planning for disaster risks caused by CC are strengthened at local, regional and national levels.	Output 1.1: Proposed revisions to integrate CC and DRR into policies, strategies and other development initiatives at local, regional and national levels in the civil security sector and other priority sectors.	<ul style="list-style-type: none"> • Provide training on the integration of CC and DRR into policies and strategies. • Facilitate the development of land- use plans integrating CC and DRR • Support development of legislative and regulatory frameworks for disaster risk management 	<ul style="list-style-type: none"> • Training must strive for a 1:1 ratio of men and women trainees • Preparation of land use plans must ensure the consideration of women's' activities/needs
	Output 1.2: Technical and operational capacity building programme for DGSC focusing on emergency preparedness and responses to climate-related disasters.	<ul style="list-style-type: none"> • Conduct a needs assessment for DGSC, CATI and CTA, ensuring the assessment properly captures issues and gender, and the Department's ability to provide gender-responsive services. • Ensure the capacity-building programme includes aspects on gender and women's needs. • Develop a strategy to build technical capacity of DGSC, CATI and CTA to enable development of gender-sensitive emergency preparedness and responses to climate emergencies. • Train local authorities and community groups on disaster risk management, including the integration of gender-responsive activities. • Provide support to the Risk Management Platform to improve coordination of various sectors in responding to climate disasters, and address gender dimensions of climate change. 	<ul style="list-style-type: none"> • Assessments must consider the capacity needs of both men and women. • Strategy must ensure a 50/50 ratio in participation by men and women • Support will put in place conditions to ensure that the beneficiaries and recipients are 50% women and 50% men • 50% of trainees must be women. • Membership of platforms must ensure 50% men and 50% women.
	Output 1.3: Efficient system for transmission of early warnings for climate-related disasters is implemented in the three islands.	<ul style="list-style-type: none"> • Provide technical and financial support to facilitate the establishment of early warning systems for climate-related disasters, ensuring that women's needs and priorities are in the operationalisation of the EWS. 	<ul style="list-style-type: none"> • Ensure participation of women in data collection. • Information must be packaged in a from that is accessible to men and women. • Information must be disseminated in forums that are accessible to both men and women. • EWS must provide information that responds to the information needs of men and women.

	Output 1.4: Operational emergency fund for climate-related disasters (to be co-financed by government and the project).	<ul style="list-style-type: none"> Document processes and implement procedures for the disbursement of emergency funds that are gender sensitive and consider the needs and priorities of men and women. 	<ul style="list-style-type: none"> Emergency fund must ensure a 50/50 ratio in participation by men and women. Beneficiaries of the pilot process must include 50% men and 50% women at a minimum.
Outcome 2: Knowledge and understanding of medium to long-term climate-related disaster risks and vulnerability are improved	Output 2.1: Risk and vulnerability assessments and maps of local communities and socio-economic infrastructure are upgraded to integrate more accurate weather, water and climate information.	<ul style="list-style-type: none"> Conduct risk and vulnerability analysis on the livelihoods of both men and women. Assess risk and vulnerability of local communities and socio-economic infrastructure. Support upgrading of risk and vulnerability assessments and maps of local communities and socio-economic infrastructure. Provide training to local authorities, CBOs and CSOs to; i) develop risk and vulnerability maps; and ii) undertake self-capacity assessments. 	<ul style="list-style-type: none"> Mapping and assessments must ensure 50/50 participation between men and women. Provision of technical and financial support must strive for a 50/50 balance between male and female recipients. Membership of CBOs and other committees must include women in decision-making positions Consultations must ensure/facilitate an enabling environment for women's full participation (e.g. timing and location of meetings must allow for women's participation). Training must strive for a 1:1 ration of men and women trainees.
	Output 2.2: CC modelling and scenarios – including hydro meteorological and geological hazards.	<ul style="list-style-type: none"> Support production of climate models and scenarios, which incorporate the gender dimensions of climate change. Develop models of the future hydro-meteorological and geological hazards based on climate change scenarios and the experiences of men and women. 	<ul style="list-style-type: none"> Preparation of climate models and scenarios must ensure the consideration of women's activities and needs. Provision of technical and financial support must strive for a 50/50 balance between male and female recipients.
	Output 2.3: Improved TDM meteorological monitoring network	<ul style="list-style-type: none"> Conduct a needs assessment for DTDM, ensuring the assessment properly captures issues and gender, and the TDM's ability to provide gender-responsive services. Provide training TDM staff on information processing and production of seasonal forecasts, climate scenarios and risk models taking into account the gender dimensions of climate change. 	<ul style="list-style-type: none"> Assessments must consider the capacity needs of both men and women. 50% of trainees must be women.
		<ul style="list-style-type: none"> 	<ul style="list-style-type: none">

	Output 2.4 Partnership with research organisations for undertaking research projects on climate risks	<ul style="list-style-type: none"> • Identification of research needs and activities must ensure the needs and priorities of women and female-headed households inform research. • Facilitate access to international research findings/results on gender and climate change. • Develop a local level research capacity, including on gender and climate change. 	<ul style="list-style-type: none"> • Research activities must strive for equal participation and targeting of informants/interviewees (50/50 ration between men and women). • Support will put in place conditions to ensure that the beneficiaries and recipients are 50% men and 50% women.
	Output 2.5 National strategy for sustainable financing of equipment	<ul style="list-style-type: none"> • Support production and publication of policy briefs on climate change and sustainable financing, including on the gender dimensions of climate change. 	<ul style="list-style-type: none"> • Strategy must ensure a 50/50 ratio in participation by men and women in the identification, implementation and evaluation of supplementary sources of financing as well as finance mechanisms.
Outcome 3: The long-term resilience of the livelihoods and assets of vulnerable local communities against climate disaster risks is strengthened.	Output 3.1: Development of village adaptation investment and action plans informed by the risk and vulnerability assessments and maps developed under Output 2.1.	<ul style="list-style-type: none"> • Facilitate the development of Village Action Plans that are gender sensitive and consider the needs and priorities, as well as the risks and vulnerabilities of men and women. • Measure/assess the levels of awareness among males and females prior to and after awareness and information campaigns through surveys. • Generate Village Action Plans through participation of men and women. • Conduct risk and vulnerability analysis on the livelihoods of both men and women. • Identify the different needs of men and women in land use. • Assess the current differences in land uses between men, women and female-headed households. 	<ul style="list-style-type: none"> • Mapping and assessments must ensure 50/50 participation between men and women. • Preparation of Village Action Plans must ensure the consideration of women's activities/needs, risks and vulnerabilities. • Membership of CBOs and other committees must include women in decision-making positions • Consultations must ensure/facilitate an enabling environment for women's full participation (e.g. timing and location of meetings must allow for women's participation). • Training must strive for a 1:1 ration of men and women trainees. •
	Output 3.2: Reforestation programmes on degraded hillside land areas exposed to landslides and heavy rains	<ul style="list-style-type: none"> • Identify the different needs of men and women in land use. • Assess the current differences in land uses between men, women and female-headed households. • Development and piloting and restoration practices must ensure balance between practices adopted by women and men equally. • Reforestation intervention to be implemented must consider the needs and priorities of women in land use. 	<ul style="list-style-type: none"> • Membership of CBOS and other committees must include women in decision-making positions. • Consultations must ensure/facilitate an enabling environment for women's full participation (e.g. timing and location of meetings must allow for women's participation). • Identification of restoration and management measures must be informed through equal participation of men and women.

		<ul style="list-style-type: none"> • Identification of reforestation methods must ensure equal participation of women in the process. • Activities which will focus on the involvement of women in reforestation include the: i) establishment and maintenance of nurseries of fruit and other beneficial tree species - which will supply the reforestation programme; and ii) revegetation of steep slopes and riverbanks. 	<ul style="list-style-type: none"> • Implementation support must ensure a 50/50 ratio in participation of women and men, and ensure gender parity in the number of beneficiaries. • Training must cover 50% men and 50% women. • Training must be delivered in an accessible manner for both men and women (i.e. timing, location, methods of delivery).
	Output 3.3: Community and individual rainwater collection and redistribution systems to reduce vulnerability to droughts.	<ul style="list-style-type: none"> • Determine current water uses and the differences in water use and demand between men and women. • Determine climate information needs between men and women. • Development and piloting of integrated water management practices must ensure balance between practices adopted by women and men equally. 	<ul style="list-style-type: none"> • Demand/supply projections must ensure the different needs and uses of men and women. • Interventions and technologies proposed must ensure equal benefits for men and women. • Beneficiaries of the technologies piloted must include 50% men and 50% women at a minimum. • Climate-smart practices identified must be accessible to women, female-headed households and poor households.
	Output 3.4: Flood prevention measures and climate-resilient, low-cost interventions for the protection of populations and socio-economic infrastructure (including health care facilities, schools and markets in flood prone areas)	<ul style="list-style-type: none"> • Identification of flood-prevention interventions must ensure equal participation of women in the process. • Flood prevention measures to be developed and implemented must consider the needs and priorities of women in land and water use. • Facilitate the development and implementation of emergency response plans that are gender sensitive and consider the needs and priorities of men and women. 	<ul style="list-style-type: none"> • Preparation of emergency response plans must ensure the consideration of women's activities/needs. • Consultations must ensure/facilitate an enabling environment for women's full participation (e.g. timing and location of meetings must allow for women's participation). • Implementation support must ensure a 50/50 ration in participation of women and men, and ensure gender parity in the number of beneficiaries. • Interventions identified and support must consider the needs and abilities of men and women equally. • Training must be delivered in an accessible manner for both men and women (i.e. timing, location and method of delivery)
	Output 3.5: IGAs in the selected intervention sites to sustain the reforestation interventions.	<ul style="list-style-type: none"> • Identify female-headed and income-poor households. • Ensure >50% participation of women and female-headed households. • Identify gender appropriate and responsive income-generative activities (i.e. those women can participate in culturally). These will include inter alia: apiculture; 	<ul style="list-style-type: none"> • Additional consultation and focus group discussion must be held separately form men and women. • 50% or more women must be identified as beneficiaries of the income-generating activities. • Income-generative activities must consider the priorities and needs of both men and women.

		sustainable harvesting of vanilla; improved agriculture; and agroforestry.	<ul style="list-style-type: none"> Deliberate support must be provided to women and female-headed households and poorer households Training must be delivered in an accessible manner for both men and women (i.e. timing, location and method of delivery)
	Output 3.6: Proposed revisions to existing legislation including penalty provisions and training of civil security personnel – including police and forest guards – for protection of natural resources especially forests.	<ul style="list-style-type: none"> Support production and publication of policy briefs on sustainable natural resource use and management, including the gender dimensions Review and update legislation and regulations to include aspects on gender and women's needs. Train civil security personnel and other stakeholders on sustainable natural resource use and the revised legislation, including the integration of gender responsive measures. 	<ul style="list-style-type: none"> Provision of technical and financial support must strive for a 50/50 balance between male and female recipients. Best practices to be promoted must be acceptable to women and consider women's time and abilities. 50% of trainees must be women. Methods/tools must consider literacy levels among the different groups of informants and consider the ability (i.e. timing and location) of men and women to equally participate.
	Output 3.7: Incentive scheme for relocation of settlements from vulnerable areas	<ul style="list-style-type: none"> Support production and publication of policy briefs on climate change and development planning, including on the gender dimensions of climate change. 	<ul style="list-style-type: none"> Strategy must ensure a 50/50 ratio in participation by men and women in the identification, implementation and evaluation of supplementary sources of financing as well as incentive mechanisms.
Outcome 4: Increased monitoring, knowledge-sharing and awareness at local, regional and national levels on: i) climate change; and ii) natural disaster risk management.	Output 4.1: Public awareness-raising campaigns and information programmes conducted in the Grand Comoros, Anjouan and Moheli using various forms of media (including print, radio etc.)	<ul style="list-style-type: none"> Measure/assess the levels of awareness among males and females prior to and after awareness and information campaigns through surveys. Raise awareness on climate change and on the awareness of the impacts of climate change on women in relation to their traditional and actual roles in the production and in the household and implications of social disadvantages suffered by women. Conduct communication needs assessment for different groups of stakeholders, including men and women. 	<ul style="list-style-type: none"> Methods/tools must consider literacy levels among the different groups of informants and consider the ability (i.e. timing and location) of men and women to equally participate in consultations and assessments. Information/awareness campaigns to target men and women based on their priorities. Assessment must consider the needs and priorities of men and women. Information must be accessible to both men and women equally.
	Output 4.2: Long-term monitoring and evaluation programme including the codification and dissemination of lessons learned and	<ul style="list-style-type: none"> Identify information dissemination methodologies/approaches. Document lessons and experiences of men and women separately. 	<ul style="list-style-type: none"> Strategies must inform gender-sensitive planning at the local and national level. Monitoring strategy must ensure the use of locally available tools to ensure participation of local communities, including women in the informing the monitoring exercises.

	best practices from the project (and other similar ones)		
	Output 4.3: Environmental education programmes – with a particular focus on CC and DRR – at primary schools and the University of Comoros	<ul style="list-style-type: none"> • Review and update environmental education programme to include gender dimension of climate change. • Identification of research needs and activities must ensure the needs and priorities of women and female-headed households inform research. • Facilitate access to international research findings/results on gender and climate change. • Develop a local level research capacity, including on gender and climate change. 	<ul style="list-style-type: none"> • 50% of trainees must be women. • Research activities must strive for equal participation and targeting of informants/interviewees (50/50 ration between men and women). • Support will put in place conditions to ensure that the beneficiaries and recipients are 50% men and 50% women.
	Output 4.4: A gender strategy developed and implemented, which includes capacity-building and enhancing the participation of women in planning, selecting and implementing CC and DRR measures.	<ul style="list-style-type: none"> • Separate meetings with women to ensure their issues and needs are raised. • Scheduling meetings for compatibility with other demands on women's time and providing for care of children so that women can participate fully. • Ensuring that women's ideas and needs are considered for local development plans and investment programmes. 	The gender strategy will focus on <ul style="list-style-type: none"> • Raising the awareness of the overall community of the differential gendered aspects of climate change. • Ensuring and facilitating participation of women and vulnerable groups in all aspects of project implementation. • Specific livelihoods to support poor and vulnerable women.

ANNEX Q: Rapid assessment of the vulnerability of local communities in the Comoros

1. Introduction

The Director General of Civil Security (DGSC) will be responsible for the implementation of the LDCF-financed project entitled, for which the overarching objective will be to strengthen the adaptation and resilience capacities of the most vulnerable local communities in climate change and variability related disaster risks in the Comoros. This objective will be achieved by implementing activities within three main components as described in Table 1 below.

Table 1. LDCF project components and outcomes

Component	Outcome
Strengthening institutional, policy and regulatory framework of integrated climate risks and disaster	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
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 local communities' vulnerability to disasters	Knowledge and understanding of medium to long-term climate-related disaster risks and vulnerability are improved
Sustainably strengthening community resilience to climate induced disaster risks	The long-term resilience of the livelihoods and assets of vulnerable local communities against climate disaster risks is strengthened.

This report will guide project activities by providing an understanding of the current conditions in the project intervention sites.

2. Data collection

The site selection process was informed by maps generated by CATI and extensive consultations with stakeholders regarding natural disasters and the vulnerability of local communities to disasters such as floods, cyclones, landslides and volcanic eruptions. In addition thereto, socio-economic factors were taken into consideration including information regarding poverty levels, sources of income and non-climate related threats. In order to collect the necessary data, a field trip was undertaken by the UNDP project team and implementing partners from DGSC. Thereafter, the national consultant continued to visit the project sites and collect data and information. Stakeholders were consulted at a national level as well as in each of the targeted regions. Approximately 400 household surveys were undertaken, the results of which are included as an annex to the project document (Annex S).

3. Situational and livelihood vulnerability analysis of highly vulnerable areas on Grande Comore, Anjouan and Moheli

Population density in the Comoros is high measuring at 428 inhabitants/km²– with an estimated population of 798,051⁶⁰ – making it one of the most densely populated countries in Africa. Approximately two thirds of the population reside in rural areas, many of whom are reliant upon natural resources for their livelihoods. Despite the predominance of agriculture as a source of income and employment as well as contributor to the country's GDP, almost half of the population of the Comoros lives below the poverty line (US \$1.25 per day)⁶¹.

⁶⁰ <http://www.countrymeters.info/en/Comoros>. Accessed on 10 October 2016.

⁶¹ <http://www.worldbank.org/en/country/comoros/overview>. Accessed on 27 July 2016.

With increasing population growth comes additional pressure on the already limited natural resources. Existing practices related to natural resource management are poor and extensive deforestation for the expansion of agricultural land has negative impacts upon ecosystem services – including many rivers drying up during the dry season. Deforestation has resulted in a loss of 58.3% or ~7,000 hectares of the Comoros' forests between 1990 and 2005. This is a result of the clearing of slopes for agricultural land and cutting of trees for fuelwood for domestic purposes as well as ylang-ylang distilleries

Because of its geographical position and climatic factors, the Comoros is vulnerable to several meteorological and geological hazards, including tropical storms, floods, drought, rising sea level, volcanic eruptions, earthquakes and landslides. The devastating impact of the combined effect of disasters on human populations and on environment is illustrated by the eruption of Karthala volcano in 2005 which released volcanic ash. The land located on the slopes of the volcano has subsequently been rendered more impermeable to rainwater infiltration. As a result of which, the soil's ability to absorb massive and continuous rainfall has been reduced which leads to repeated flooding caused by torrential rains. This is considered as one of the main factors of the recurrent floods that have occurred in recent years in the downhill regions of Dimani and Hambou Bambao. These natural disasters lead to landslides, mudslides, loss or disruption of fauna and flora habitats and soil erosion, which increase sedimentation.

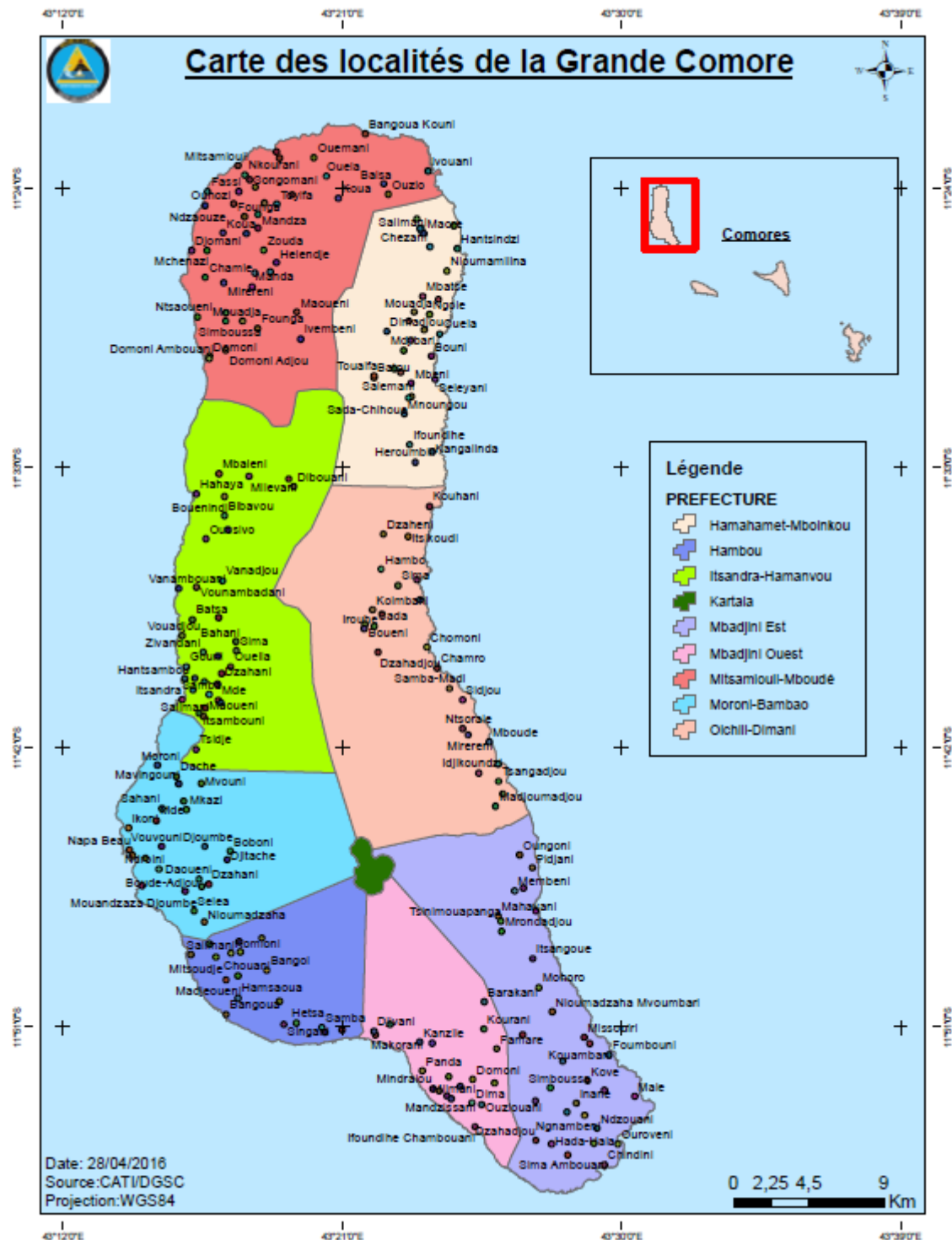
More recently during April 2012, the Comoros experienced unprecedented rainfall with the average annual rainfall falling within a period of 7 days (Moroni recorded 1738 mm of rain during this period compared to its average April rainfall of 267mm). Heavy rains led to severe flash floods and landslides which affected 65,000 people and caused damage worth an estimated \$18-20 million. Extreme weather events such as heavy rains and floods have become a more regular occurrence having occurred in 2009, 2012 and 2013 and affecting approximately 10% of the population. Many of those affected by such events are highly vulnerable because of their socio-economic circumstances, including poverty levels and food insecurity.

According to the surveys undertaken, the average number of people per household is 8 with the majority of households being reliant upon subsistence agriculture. Of those households interviewed, the majority sell less than 10 % of their agricultural produce and indicated that access to financial resources is difficult. In this context, households are therefore unable to implement measures to adapt to climate-related and natural disasters despite the increasing frequency and severity of extreme weather events. Moreover, many households are constructed from sheeting or natural materials – such as timber, palm fronds and adobe – and are easily damaged or destroyed during such events thereby increasing their vulnerability. The limited access to water is also exacerbated during climate-related and natural disasters, with local communities complaining of water pollution and illness⁶². Food security is also affected as the flooding of agricultural land and strong winds destroys crops. Many households indicated that their diet lacks variety, products such as meat and chicken are often lacking in their diets. In addition, they frequently do not have sufficient quantities of food due to financial constraints. Other basic services – such as access to electricity – are also limited and in some areas, absent altogether. Local communities are therefore largely reliant upon fuelwood for cooking and household purposes. The need for fuelwood therefore contributes to the commercial needs of ylang-ylang distilleries and ultimately deforestation of the slopes. The negative consequences of such actions include *inter alia* the loss of vegetative cover, increased soil erosion, increased runoff and flooding.

The following section summarises the climate-related vulnerability of local communities in those areas identified as highly vulnerable to climate change and climate-related natural disasters on the islands of Grande Comore, Anjouan and Mohéli. Both socio-economic criteria – such as poverty, sources of income, community vulnerability and the absence of other projects addressing similar issues within the area and level of awareness – as well as environmental criteria – including location, frequency of natural disasters, climate change exposure and adaptive capacity, ecosystem degradation and vulnerability to climate change – have been assessed. The results of the surveys are presented in Annex S.

⁶² For example, during volcanic eruptions, the volcanic ash emitted pollutes the wells and drinking water reservoirs.

3.1 Grande Comore



The island of Grande Comore is the main economic zone of the Comoros as is evidenced by the highest average income of the respondents surveyed. It is clear from the surveys conducted that the local communities have little understanding and awareness of the effects of climate change. Despite the majority acknowledging having been personally affected by climate-related disasters, few have taken measures to withstand potential disasters in the

future. Local communities therefore have low adaptive capacity making them vulnerable to climate-related disasters.

Grande Comore is characterised by a severe lack of water as there are few sources of water on the island. As evidenced by the results of the survey, many households do not have direct access to water and are required to travel far from home to obtain such water. While others must rely upon community tanks or purchasing water for domestic purposes. The lack of water on the island is exacerbated by the fact that volcanic rocks cannot hold water. This is particularly severe in areas characterised by lava flows which are the most direct volcanic hazard. Moreover, ash deposits on the Grande Comore have made the land more waterproof and consequently resulted in increased runoff and flooding, especially in Dimani and Hambou Bambao.

The Karthala volcano is still active and last erupted in 2005 and 2006. During the period 2005-2007, there were four volcanic eruptions which affected nearly 50% of the population of the Grande Comore and caused significant ash deposits – up to five metres thick at the top and 50cm to one metre within the villages. The areas most affected by lava flows are surrounding the International Prince Said Ibrahim Airport at the southern end of the island and surrounding Koimbani. These deposits affect the hydrology of the Grande Comore and contribute towards soil sealing and the resurgence of rivers⁶³. Evidence suggests that the rising sea level will likely result in increased seismic activity and therefore more frequent earthquakes and volcanoes⁶⁴. According to the surveys conducted, seismic activity has resulted in structural damage to water tanks and the collapse of several houses' roofs.

The rising sea level will also negatively impact upon highly populated areas close to the sea as well as critical infrastructure which is also located in such areas. Many local communities along the coast have already experienced coastal flooding during spring equinoxes and high tides. An increase in sea level and tidal action also gives rise to coastal erosion, which is undermining the foundations of various buildings along the coastline, as well as washing away several stretches of the road network. The local communities of Koimbani and Bandamadji have been identified as being particularly vulnerable to volcanic eruptions – as well as sea level rise in respect of the latter.

During April 2012, torrential rains resulted in severe flooding throughout the country. This resulted in damage and destruction to property – including the Mitsoudje District Health Centre – and persons. Approximately 2250 people were affected and 500 people displaced in Vouvouni, and a further 1200 people affected and 20 persons displaced in Mitsoudje⁶⁵. Consequently, flooding was recognised as a climate risk by all of the respondents surveyed in these areas. More recently in February 2016, flooding in Moroni affected 76 families and left 22 families homeless. Activities have been undertaken to divert the flow of rivers during extreme weather events. However, despite the construction of hard infrastructure such as walls and canals to divert rivers and prevent flooding⁶⁶, certain areas such as Vouvouni continue to be flooded. Infrastructure has been poorly maintained and the walls have regularly been breached or damaged by rubble brought downstream during the floods, which gives rise to overflows and consequently landslides. Vouvouni and Mitsoudje have subsequently been identified by the DGSC as areas most exposed to flooding on the island. Notwithstanding the above, local communities continue to build in such flood prone areas. In addition to flooding from heavy rains, Vouvouni is also subject to Lahars-related floods⁶⁷ and is considered a high risk area. The lack of clean water once flood waters have receded continues to affect the population for several days thereafter⁶⁸ with 80000 people left without water after the main water distribution network at Vouvouni was destroyed and a further 3900 people without water in Mitsoudje.

In contrast to the above, the Dimani Oichili Prefecture and the villages of Koimbani, Ntsorale and Idjikounzi in particular are vulnerable to droughts. A consequence of which is that families do not have access to running water

⁶³ Flooding has become a regular occurrence since 2005.

⁶⁴ <http://www.yalescientific.org/2015/11/icelands-volcanic-activity-to-increase-from-climate-change/> Accessed on 27 July 2016.

Sea level rise results in change in tectonic pressure and an increase in seismic activity

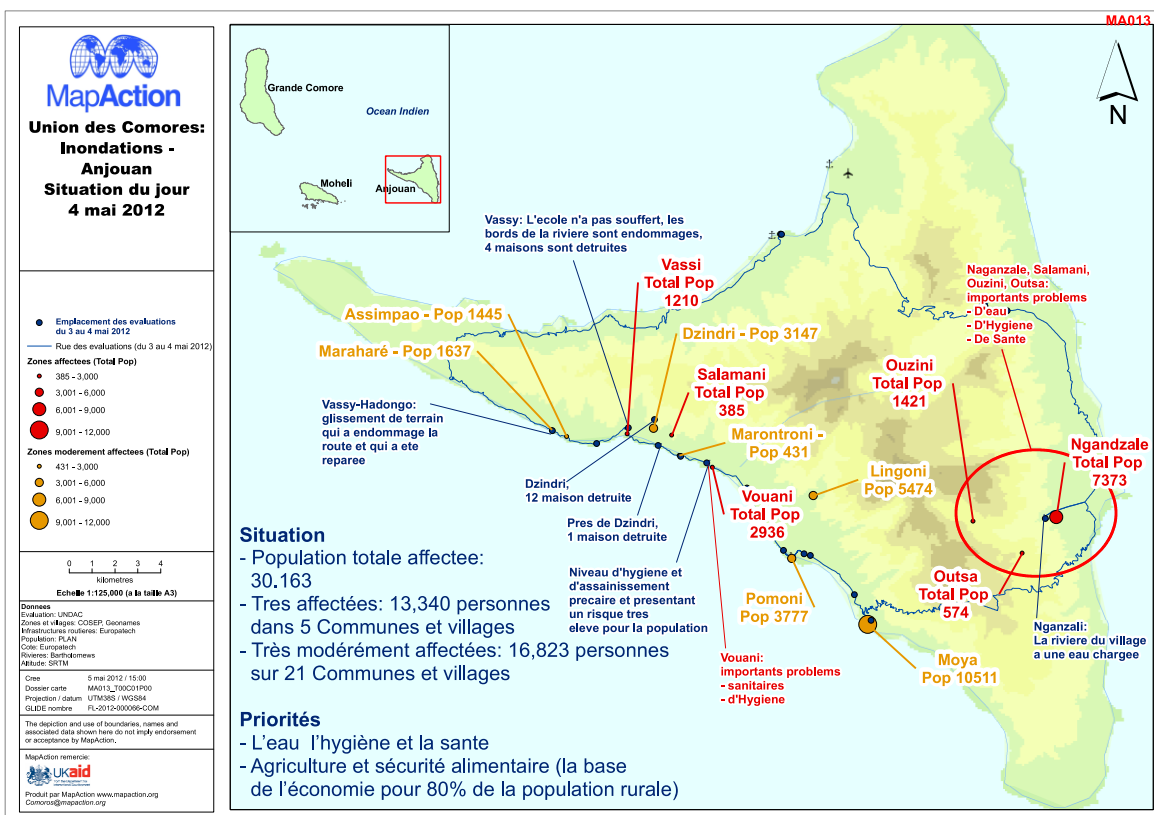
⁶⁵ The flood also affected 1566 people and displaced 86 in Nioumadzaha and an additional 700 people were affected and 20 displaced in Salimani. UNDAC, 2012.

⁶⁶ These interventions are considered emergency measures and therefore no environmental impact assessments were required to be undertaken in advance of the construction thereof.

⁶⁷ mud flows as a result of volcanic eruptions – these can be delayed and occur several months after volcanic eruptions when heavy downpours disturb the ash deposited.

⁶⁸ Comoros Environmental Emergencies, June 2013.

and 399 in Vassi⁷⁰. The coastal location of Domoni makes it particularly vulnerable to flooding. Low walls have been built to prevent flooding, but flooding has continued to affect households in this area since 2011. Mahale is another site which is vulnerable to flooding because of its coastal location. In addition to the coastal flooding of homes, coastal erosion is causing significant damage to road networks – particularly from Pomoni Page and Domoni – and unstable riverbanks. The widening of the river in Mahale has in fact resulted in the disappearance of several homes as the riverbanks collapse.

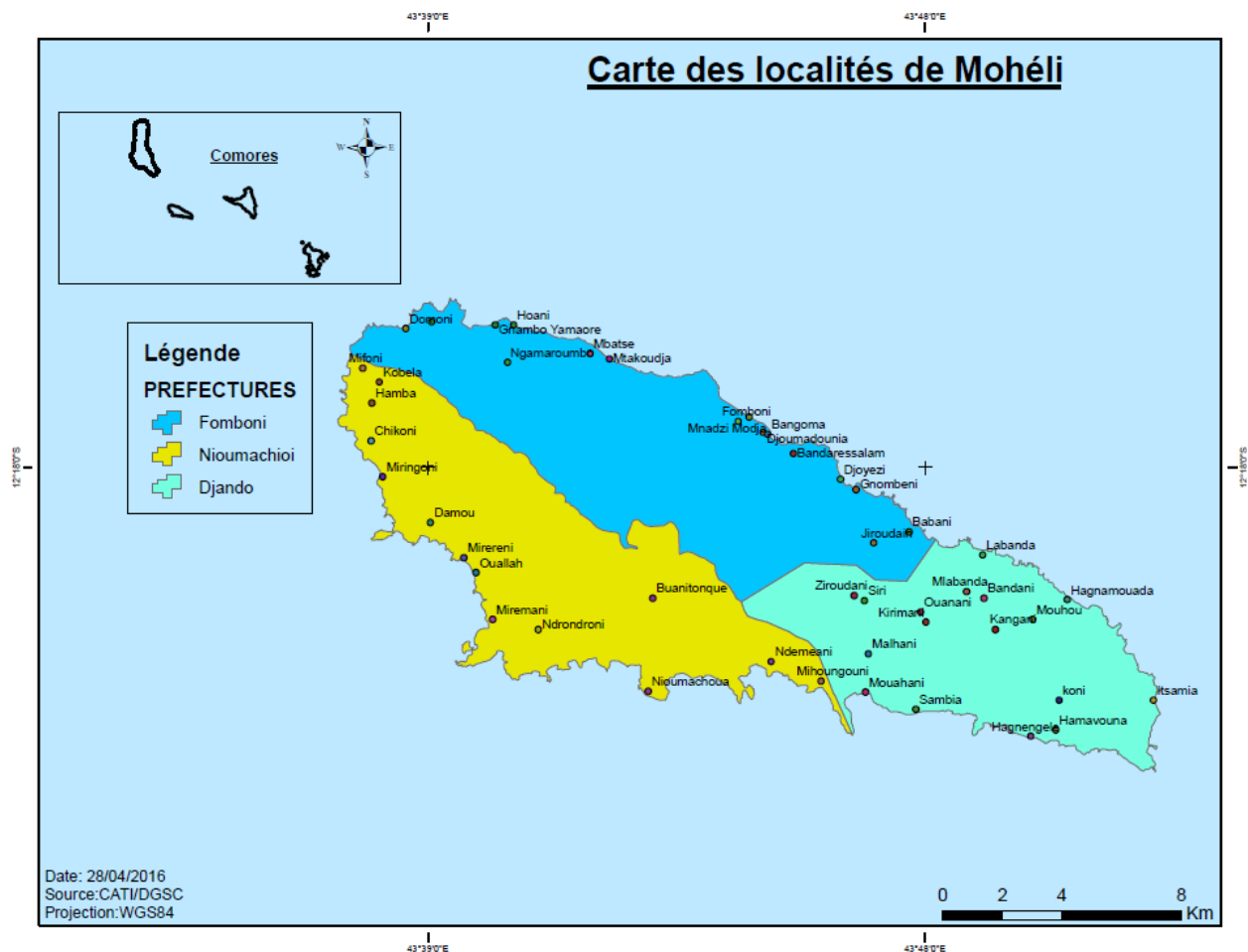


In addition to floods, several areas are affected by cyclones and landslides. Cyclones have been responsible for causing extensive damage on the island, particularly within Koni Djojo and Jimlime – where 60% of homes were destroyed by Cyclone Elina in 1983 and sections of the road network have been washed away. During 2013 and 2014, landslides resulted in the displacement of over 3000 people in Mirontsi and a further 3000 people in Mahale. For 4-6 weeks, the inhabitants of Mahale affected by the landslide were housed in temporary accommodation. Mahale has subsequently been identified as one of the most vulnerable areas to landslides because of its steep morphology, extensive erosion and the occurrence of seismic activity. Attempts have been made to relocate the local communities exposed to landslides. However, no suitable land has been identified and households have expressed their willingness to remain in Mahale, despite their vulnerability. Landslides are also being observed in the areas of Koni Djojo, Hadjoho Bazimini and Moya (located within the Domoni Prefecture)⁷¹ and are one of the most widely recognised climate-related disasters by the respondents. Small-scale intervention measures have been undertaken to address landslides, including deviating smaller river channels back into the main flow. However, these measures have proven insufficient to date. The problem of deforestation and subsequent soil erosion is one of the contributory factors to landslides, particularly in Koni Djojo.

⁷⁰ UNDAC 2012.

⁷¹ Situation Analysis of Disaster Risk Reduction Comoros, September 2012.

3.3 Mohéli



According to the results of the survey, the inhabitants of Mohéli are predominantly between the ages of 17 and 35 and earn the lowest income of the three islands. They have a moderate understanding and awareness of the effects of climate change, however, have low adaptive capacity. Financial constraints affect food security and prevent local communities from implementing measures to reduce their vulnerability to the changing climatic conditions.

Despite a drastic reduction in the flow of rivers on the island, the DGSC recognises Mohéli as being the worst affected by flooding – including coastal flooding. Local communities on Mohéli have observed the effects of climate change, which includes an increase in temperature and a longer dry season – allowing for the production of crops during this period. The eastern part of Mohéli is considered particularly vulnerable because of the big/steep slopes, poor soils and strong winds. Various sites have been identified as being particularly vulnerable to flooding including Hoani, Fomboni, Mirongoni, Itsamia, Mlabanda and Hagnoimoida – with the floods in 2012 affecting: i) 480 people in Hoani; ii) 1700 people in Fomboni; iii) 560 out of a population of 700 in Itsamia; iv) 360 people out of a population of 450 in Mlabanda; and v) 675 people out of a population of 900 in Hagnoimoida. More recently in January 2016, heavy rains and winds resulted in the overflow of water from the Msoutruni and Ouemani rivers in Fomboni, as well as the Dewa River which affected 1049 people – including 574 school children – and left 5 families homeless⁷². Fomboni's socio-economic vulnerability arises due to the concentration of strategic economic infrastructure – including oil depots, power stations, telecommunication stations and hotels – within this area/site⁷³.

⁷² DGSC, 2016.

⁷³ Soule and Abdoulkarim 2011

Rivers identified as priorities include the Hoani, Dewa and Msoutruni rivers. The reason that these rivers have been identified as priority sites is because they are adjacent to the highest number of buildings (including homes, schools and health centres) and flood events are likely to affect the most number of people. Although preventative measures have been implemented previously to reduce the damage caused by floods – including the construction of gabion walls – these measures have proved ineffective. Trees that have been uprooted further upstream have caused extensive damage to walls and gabions downstream. Further measures are therefore required to slow down the flow of the river during flood events, protect and stabilise the riverbanks from collapsing.

4. Summary of results

The vulnerability of local communities to the effects of climate change is a pertinent matter for their selection. The environmental conditions of the sites in Grande Comore, Anjouan and Mohéli are primarily regulated by precipitation associated factors, with a particular emphasis on floods and droughts, linked to climate change. Although several environmental and socio-economic reasons support the implementation of the proposed project activities in the targeted areas, the major aspects regarding these sites are: i) the increasing frequency and intensity of extreme weather events; ii) location of local communities within areas most vulnerable to climate-related and natural disasters; iii) the low adaptive capacity of the local communities to reduce their vulnerability to climate-related disasters; and iv) the limited emergency response capabilities of such local communities. For further details regarding the environmental and socio-economic vulnerability of the local communities, please refer to the results of the surveys (Annex S).

It is clear from the surveys conducted that flooding is a widespread problem in Anjouan and Mohéli, which frequently leads to landslides. Flooding is particularly pronounced on these islands because of the advanced state of land erosion and degradation – which is partially attributable to extensive deforestation – resulting in increased runoff and a decrease in infiltration. As a result thereof, complementary on-the-ground activities – including both hard and soft infrastructure – should be implemented to address both flooding and deforestation. Furthermore, measures should be implemented on-the-ground to deviate, harvest and store water in those local communities that have identified access to water as a significant problem

In addition to addressing concerns related to the effect of climate-related disasters on the availability of water, measures should be introduced to decrease poverty and alleviate the pressure on natural resources. In this context, alternative income-generating opportunities should be identified to reduce the dependence of local communities upon natural resources for their livelihoods. This will increase the adaptive capacity of local communities, particularly the subsistence farmers on Mohéli and those reliant upon ylang-ylang distillation – which exacerbates deforestation and land degradation – on Anjouan.

The limited level of understanding and awareness of climate change on all of the islands has an adverse effect upon the ability of local communities to implement measures to adapt to climate change. In conjunction with the limited effectiveness of the current early warning systems, these factors increase the vulnerability of local communities to climate-related disasters. To enhance the local communities' knowledge and understanding of climate change, targeted awareness raising and training needs to be undertaken on all three islands. In addition, these measures should focus on empowering women, who are considered more vulnerable to the effects of climate change and are traditionally excluded from decision-making. As a result of such activities, the capacity of local communities to adapt to the effects of climate change will increase. No projects have been implemented in these local communities, therefore the recommended activities will result in significant environmental – including adaptation – and socio-economic benefits.

ANNEX R: Rapid assessment of institutional capacity for the main sectors affected by climate change in the Comoros

A capacity assessment survey was undertaken in June 2016 to establish a scorecard that describes the baseline situation for the capacity building interventions integrated in the LDCF-financed project, and refine these activities based on main capacity limitations and existing initiatives.

This capacity assessment survey was undertaken with representatives of the sectors that are the most vulnerable to climate change. Therefore, the following sectors have been surveyed:

- Civil Security (National Director, and Regional Directors of Anjouan and Moheli);
- Environment (National Director, and Regional Directors of Anjouan and Moheli);
- Health (National Director);
- Solidarity, Gender and Social Protection (National Director);
- Transport (National Director); and
- Planning (National Director).

This survey comprised 17 questions focusing on:

- level of integration of climate change and climate-related disasters into sectoral policies (one question);
- technical capacity on climate change and climate-related disasters of the staff within the sector (one question);
- access to information on climate change and climate-related disasters, and use of this information in planning (five questions);
- existence of partnerships/collaborations with other government institutions, non-government institutions and international networks to plan, implement and/or monitor climate change adaptation, and/or preparedness for and response to climate-related disasters (three questions);
- availability of financial resources to respond to CCA issues and climate-related disasters (two questions);
- existence of research programmes to increase the knowledge base on climate change and climate-related disasters (one question);
- existence of M&E systems for climate change and climate risk management interventions (one question);
- existence and reach of awareness-raising campaigns on climate change and climate-related disasters (two questions); and
- level of integration of climate change and climate-related disasters into education programmes (one question).

The scoring scale used is as followed:

Score	Level of capacity
1	No evidence of capacity/No initiatives
2	Anecdotal evidence of capacity/Some sparse initiatives
3	Partially developed capacity/Some operational and adequate initiatives but still insufficient
4	Widespread, but not comprehensive capacity/Systems are in place and operational, but still need to be strengthened
5	Fully developed capacity/Systems are in place and working efficiently

This is a rapid assessment that is intended to provide a snapshot of the baseline situation regarding institutional, technical and financial capacity for CCA and climate risk management. It is not intended to provide a statistically relevant, numerical capacity score. A more comprehensive capacity assessment will be undertaken at project inception as part of the baseline study if deemed necessary.

A summary of the answers received is presented below for each category of questions.

Category	Responses	Average score (1 to 5)
<i>Level of integration of climate change and climate disasters into sectoral policies</i>	The majority of the strategies, plans and laws in the targeted sectors do not integrate climate change and climate disasters. Some documents do mention climate change and climate disasters briefly (e.g. ASCA2D, National Policy on Social Protection, Road Master Plan) but it is insufficient according to the surveyed representatives. Contingency plans for disasters do not integrate the current and future effects of climate either.	2
<i>Technical capacity on climate change and climate disasters of the staff within the sector</i>	The representatives of the targeted sectors all pointed out the absence of training received by their staff on climate change and climate-related disasters.	1
<i>Access to information on climate change and climate disasters, and use of this information in planning</i>	<p>Except for the Environment sector, the sectoral representatives declared having access to weather forecast information only. They do not have access to information on climate change, climate scenarios and climate-related disaster risks. The use of the Second National Communication (2012) as a source of information on the current and future effects of climate change was mentioned within the Environment sector at the central level, not at the regional level.</p> <p>As a result, this information is not used for national or regional development planning in the targeted sectors.</p>	1
<i>Existence of partnerships/collaborations with other government institutions, non-government institutions and international networks to plan, implement and/or monitor climate change adaptation, and/or preparedness for and response to climate disaster</i>	<p>A National Platform for Prevention and Response to Climate Risks was created to gather the relevant sectors when a disaster occurs. This platform includes representatives from various sectors – including Environment, Health, Solidarity Gender Social Protection (SGSP), Transportation and Civil Security –as and when needed. For example, a meeting was organised in May 2016 to coordinate the response to the flooding events of May 2016. However, the representatives of these sectors pointed out that instead of meeting only during crisis periods, regular meetings are needed to discuss the occurrence of disasters and improve preparedness and response.</p> <p>There is a strong partnership between the Civil Security and the Red Cross/Red Crescent NGO in responding to disasters, including climate-related disasters. Similarly, the Health sector works closely with the Red Cross/Red Crescent to address health risks. However, none of the other sectors mentioned partnerships with national NGOs or with the private sector.</p> <p>Most of the sectors are members of international partnerships. These include <i>inter alia</i> the International Platform for Social Protection (SGSP sector), international environmental conventions, World Health Organisation and Indian Ocean Commission. Despite these partnerships, access to sources of expertise on climate change and climate-related disaster management is very limited. The partnership between Madagascar, Mozambique, Malawi and Comoros on Disaster Risks Management, Sustainability and Urban Resilience that was recently established is expected to increase access of the Civil Security</p>	2

	in the Comoros to international experience on adaptation to climate change.	
<i>Availability of financial resources to respond to climate change adaptation issues and climate disasters</i>	<p>A Budget Line for disasters was created two years ago to respond to emergencies. 5% of the national budget is allocated to this fund. To date, the allocation and access processes for this fund have not been defined thereby preventing the efficient use thereof. This budget aims to support the response to disasters. However, no government funds are allocated to reduce vulnerability to climate change.</p> <p>Most of the representatives were not aware of the existence of this government fund for disasters. They responded that no government budget is set aside to respond to disasters. At the sectoral level, the transport sector receives some funds from the national taxes system to support the response to emergencies such as landslides damaging or blocking portions of the road network. Some support from international organisations is also received to help respond to major disasters.</p> <p>Overall, according to the surveyed representatives, the budget allocated to respond to disasters is insufficient, even to fund small interventions.</p>	2
<i>Existence of research programmes to increase the knowledge base on climate change and climate disasters</i>	<p>There is currently no partnership with research institutions to undertake research studies to increase the knowledge available on climate change and climate-related disaster risk management within the relevant sectors.</p> <p>Brainstorming activities on climate change issues are organised approximately every three months between the Environment sector and the National Institute of Research on Agriculture, Fisheries and Environment (INRAPE). The SGSP ministry also collaborates with the National Centre of Documentation and Scientific Research (CNDRS) to store and access data. However, to date, no research programmes have emerged from these partnerships to fill in knowledge gaps on climate change and climate-related disasters.</p>	1
<i>Existence of M&E systems for climate change and climate risk management interventions</i>	<p>The Civil Security sector is in charge of compiling a database of the number of people affected and economic loss for each disaster. The database generated is made available to the relevant stakeholder via DESINVENTAR, a multi-sectoral platform recently created (2016). However, this monitoring system focuses on post-disaster data collection. There is no M&E system to evaluate the short- to long-term efficiency of adaptation interventions and climate risk management interventions in reducing the vulnerability of local communities to climate change and climate-related disasters.</p> <p>In the other targeted sectors, no M&E systems on the efficiency of adaptation interventions and climate risk management interventions have been mentioned.</p>	1
<i>Existence and reach of awareness-raising campaigns on climate</i>	At the local scale, awareness-raising activities are undertaken in targeted local communities to meet specific needs. For example, the Environment sector implements awareness-raising campaigns at the local scale in particularly vulnerable areas on specific environmental or	2

<i>change and climate disasters</i>	<p>climate risks. Within the Health sector, awareness-raising events are organised as part of each programme on specific health issues. Lastly, the Civil Security sector organises awareness-raising days in schools in the most vulnerable areas of each island. The number of sites reached every year depends on the funding available. No awareness-raising campaigns were mentioned by the other targeted sectors.</p> <p>At the national scale, the SGSP sector organises awareness-raising campaigns but they do not address climate change. For example, in June 2016, a campaign on early marriages was under implementation. National TV and newspapers are used by the Environment sector to raise awareness on environmental and biodiversity issues. Climate change issues are occasionally discussed as part of these campaigns. Similarly, awareness-raising events are organised yearly for the World Environment Day. When funding is available, the Civil Security sector uses radio, TV talks and pamphlets in Comorian to raise awareness on preparedness and response to disasters.</p> <p>No awareness-raising campaigns on climate change and climate disasters are being implemented at the national or at the local scale.</p>	
<i>Level of integration of climate change and climate disasters into education programmes</i>	<p>The school curricula do not integrate environment, climate change or climate-related disasters. Several initiatives have been undertaken to integrate environmental education into the curricula. First, environment programmes were in place for a few years but ended with a change in the islands' governance systems. The Environment sector also worked with the Regional Project to Promote Education on Environment Management (ARPEGE) to integrate environmental education into the school curricula but the programme was not finalised because of a shortage of funds.</p>	1

The project interventions will contribute to increasing the capacity score of each of the nine categories described above. For more information on the interventions to be implemented, please see Section IV of the project document, as well as Annex N.

ANNEX S: Surveys

[SEPARATE ATTACHMENT]