GEF-8 PROJECT IDENTIFICATION FORM (PIF)

TABLE OF CONTENTS

General Project Information

Project Title	
Increased Access to Water Supply for Resilience in Comoros (IAWASuR)	
Region	GEF Project ID
Comoros	11522
Country(ies)	Type of Project
Comoros	FSP
GEF Agency(ies):	GEF Agency ID
UNDP	9720
Executing Partner	Executing Partner Type
Directorate General of Environment and Forest (DGEF)	Government
GEF Focal Area (s)	Submission Date
Climate Change	3/19/2024
Project Sector (CCM Only)	
Climate Change Adaptation Sector	
Taxonomy	
Focal Areas, Climate Change, Climate Change Adaptation, Ecosystem-based Adaptation, Climate resilience, Community-based adaptation, Livelihoods, Least Developed Countries, Land Productivity, Land Degradation Neutrality, Land Degradation, Influencing models, Individuals/Entrepreneurs, Private Sector, Stakeholders, Consultation, Type of Engagement, Partnership, Participation, Information Dissemination, Non-Governmental Organization, Civil Society, Community Based Organization, Communications, Awareness Raising, Gender Equality, Beneficiaries, Gender Mainstreaming, Women groups, Access to benefits and services, Gender results areas, Participation and leadership, Capacity Development, Capacity, Knowledge and Research, Knowledge Exchange, Knowledge Generation, Learning, Theory of change, Adaptive management, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Local Communities, Targeted Research	
Type of Trust Fund	Project Duration (Months)
LDCF	60
GEF Project Grant: (a)	GEF Project Non-Grant: (b)
8,932,420.00	0.00
Agency Fee(s) Grant: (c)	Agency Fee(s) Non-Grant (d)
848,580.00	0.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
9,781,000.00	63,000,000.00
PPG Amount: (e)	PPG Agency Fee(s): (f)

200,000.00	19,000.00
PPG total amount: (e+f)	Total GEF Resources: (a+b+c+d+e+f)
219,000.00	10,000,000.00
Project Tags	
CBIT: No NGI: No SGP: No Innovation: No	

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”.(max. 250 words, approximately 1/2 page)

The Union of the Comoros is classified as a Least Developed Country and Small Island Developing State (SIDS) by the UN System. The country is highly vulnerable to the impacts of climate change, particularly due to exposure to climate extremes and limited preparedness for climate risks. The population is exposed to droughts, floods, storms, and heat waves, leading to impacts on natural resources and livelihoods.

Climate change is seriously affecting the country. For instance, over the past three decades, there is an increase of the annual rainfall, but this increase is continuously concentrated in few months of the year, resulting in intense rainy periods on one side and much drier months on the other. Climate-induced water scarcity is thus a major issue, as intense rains result in rapid runoff and land degradation to the detriment of water percolation. The increasing magnitude of drier periods, characterized by over 6 months in a year with less than normal rainfall, is leading to some initial small perennial streams to dry out during the dry season. This makes communities very vulnerable, due to their historical reliance on such streams.

To address these challenges, the Government of Comoros has set a target in its *2019 Plan Comores Émergent* (PCE) to ensure 100% access to safe and resilient water by 2030, from an initial baseline of 15% access in 2018. The proposed project aims to increase the availability of drinking water, aligning with the PCE target. Overall, the project aims to reduce vulnerability to climate change in Comoros by improving access to safe and resilient water supply and enhancing the sustainability and resilience of the water sector, building on previous progress and achievements in the water sector. The project will benefit 74,376 people (51% female and 49% male) and facilitate the improved management of 2600 hectare of land.

Indicative Project Overview

Project Objective

To increase access to high quality, stable, reliable and resilient water supply in order to reduce climate vulnerability in Comoros.

Project Components

1- Institutional Capacity

Component Type	Trust Fund

Technical Assistance	LDCF
GEF Project Financing ($)	Co-financing ($)
978,450.00	2,750,000.00

Outcome:

Outcome 1: Climate informed Water Supply Management is decentralized and based on sound science and stable financing

Output:

Output 1.1: Legal and regulatory texts governing water management and allocation, integrated water management and watershed management, are downscaled and decentralized

Output 1.2: A complete climate sensitive water supply data sharing system is operational and supports reliable EWS

Output 1.3: Sustainable financial mechanisms are in place to ensure stable operation of foundational utilities for water services

2 – Resilient Infrastructure

Component Type	Trust Fund
Investment	LDCF
GEF Project Financing ($)	Co-financing ($)
5,936,349.00	37,000,000.00

Outcome:

Outcome 2: Coverage by adequate, climate resilient water infrastructure is increased

Output:

Output 2.1: 177,13 km of water pipelines, 19 reservoirs,7 water infrastructures, are installed and managed according to the principles of resilient integrated water resources management

3 – Ecosystem Services

Component Type	Trust Fund
Investment	LDCF
GEF Project Financing ($)	Co-financing ($)
1,342,268.00	19,700,000.00

Outcome:

Outcome 3- Watersheds are restored and managed to ensure continued resilient water supply

Output:

Output 3.1:2,600 ha of watershed restored and under sustainable management

M&E

Component Type	Trust Fund
Technical Assistance	LDCF
GEF Project Financing ($)	Co-financing ($)
250,000.00	550,000.00

Outcome:

Outcome 4; Project knowledge is managed, and project results are monitored and evaluated to foster learning, adaptive management, sustainability, and replication

Output:

Output 4.1 Knowledge management and dissemination system, and mainstreaming gender equality for evidence-based decision-making and scaling up of best practices.

Output 4.2. Effective Monitoring and Evaluation Plan implemented.

Component Balances

Project Components	GEF Project Financing ($)	Co-financing ($)
1- Institutional Capacity	978,450.00	2,750,000.00
2 – Resilient Infrastructure	5,936,349.00	37,000,000.00
3 – Ecosystem Services	1,342,268.00	19,700,000.00
M&E	250,000.00	550,000.00
Subtotal	**8,507,067.00**	**60,000,000.00**
Project Management Cost	425,353.00	3,000,000.00
Total Project Cost ($)	**8,932,420.00**	**63,000,000.00**

Please provide justification

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

1. Climate Change Rationale

Comoros is a small island developing state (SIDS) comprised of three islands: Grande Comore, Moheli, and Anjouan. Comoros is being impacted by climate change and projections foresee increasing impacts of climate change felt mainly through water and natural resources. The main island of Grand Comore has no surface water, requiring coastal towns to exploit marginally fresh groundwater resources, whilst the rural upland communities, making up 50% of the island's population, have to rely solely on rainwater harvesting. On the two more remote and poorer islands of Anjouan and Moheli there are no proven groundwater resources and therefore are completely reliant on the seasonally variable streams.

As a SIDS and least developed country (LCD), Comoros' infrastructure is limited and until now, water availability has been highly dependent on rainfall. With observed and projected increases in annual surface temperatures, decreasing annual rainfall and increasing dry season periods, sea level rise, and increasing frequency of extreme hazards (e.g. tropical cyclones, droughts, heavy rainfall, flooding, and heat waves), Comoros' water supply is at risk.

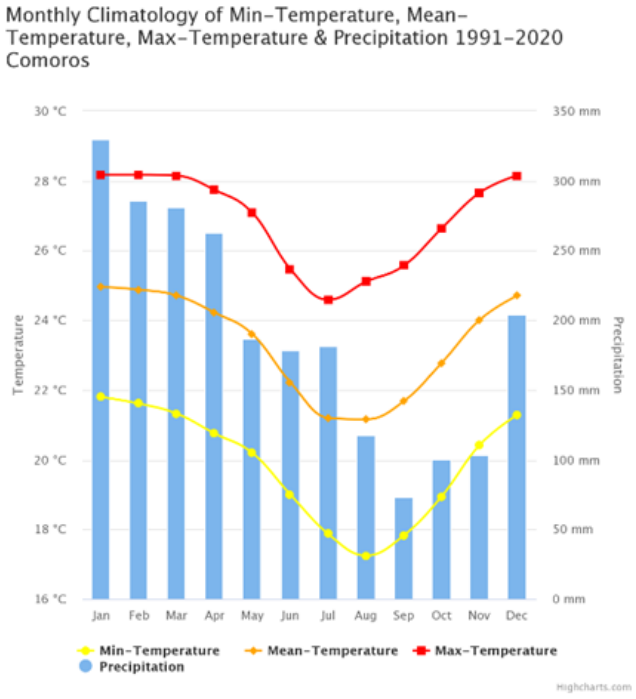
1.1 Historical Climate

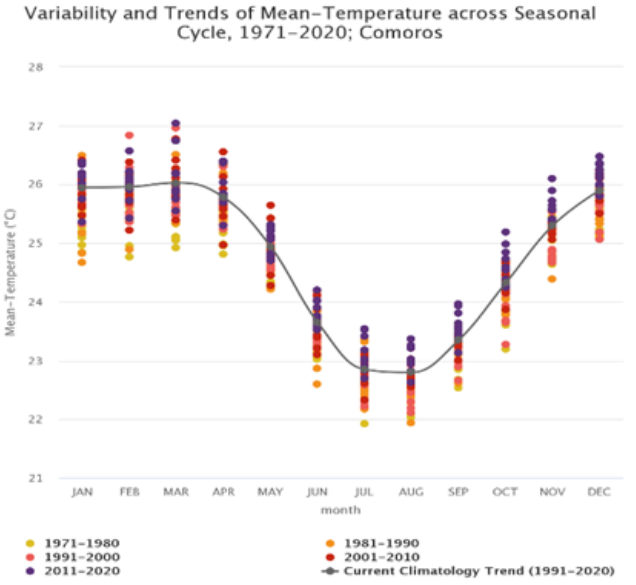
The tropical climate of the Comoros is characterized by a rainy season lasting from mid-November to mid-April, and a dry season that extends from June to October. Annual precipitation varies between 1000 and 5000 mm on the islands due to differences in altitude and winds, with the western regions of the islands generally experiencing the highest rainfall totals due to greater exposure to monsoons. The average monthly precipitation ranges from 200 to 250mm Based on the 1986-2022 precipitation data from World Clim[1][1], average annual precipitation for Comoros is calculated at 2136 mm. From June to October, the dry season's the average precipitation ranges between 50-100 mm per month during this time. The rainy season is also characterized with frequent storms, including tropical cyclones concentrated between January and April.

The average temperature in the Comoros gravitates around 27°C (with an average annual temperature of 25.59°C between 1901-2016). From June to October, the dry season brings lower humidity and the lowest temperatures of the year, between 18 and 28°C, with average temperatures around 24°C (See Figure 7). The average precipitation during this period varies between 50 and 100 mm per month (See Figure 6).

Figure 1 Comoros Mean Monthly Mean Temp and Precipitation 1991 – 2020; Source: World Bank, 2022

Figure 1:Comoros' Mean Surface Temperature Variability across Seasonal Cycle; Source: World Bank, 2022





According to the INFORM Country Risk Profile[2][2],

Comoros' risk score is 3.9 (on a scale of 10)[3]3 due to extremely limited coping capacity and medium level of vulnerability (see Figure 1 below), ranking Comoros

88 (out of 192 countries)[4]4. The highly ranked physical hazards were documented in relation to tsunamis, epidemics and tropical cyclones. The highest vulnerabilities were related to shocks, development and deprivation issues, and food security. The lack of coping capacities were mostly due to weaknesses in both institutional aspects (disaster risk reduction and governance) and infrastructure aspects (including physical infrastructure).

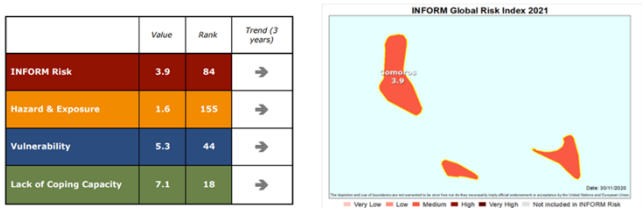


Figure 2 : INFORM COUNTRY RISK PROFILE - COMOROS; SOURCE: HUMANITARIAN DATA EXCHANGE, 2022

1.2 Observed Climate Change

As noted in the Comoros' National Adaptation Programme of Action (NAPA) and corroborated by earthmap data[5]5, from 1979 to 2019, Comoros' annual surface temperature has increased by 0.8^{o}C. This is also accompanied by a strong trend towards an increase in the number of extreme heat days (temperature above 32^{o}C) over the past 20 years.

Figure 3: change in annual mean temperature, 1979-2019, Comoros

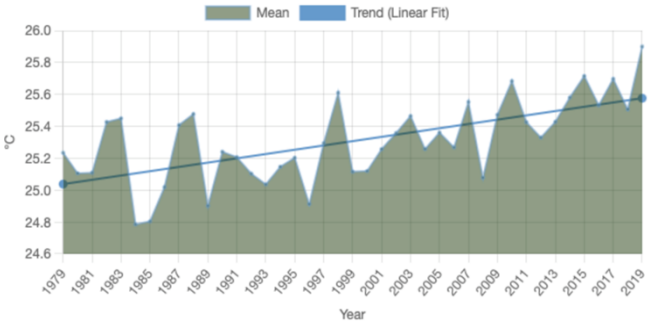


Figure 3: change in annual mean temperature, 1979-2019, Comoros

Rainfall analyses for Comoros reveal that the total amount of rainfall received has been increasing, during the period 1981 to 2022 (Figure 4a). The analysis further shows that there is a trend of reduction in the number of months with above-average rainfall (Figure 4b). This means that the increased annual

rainfall is rather being concentrated in relatively fewer months than before, and there are much more months with below-average rainfall than before. As a result of climate change in Comoros, **dry seasons are becoming drier while rainy seasons experience intense rainfall.**

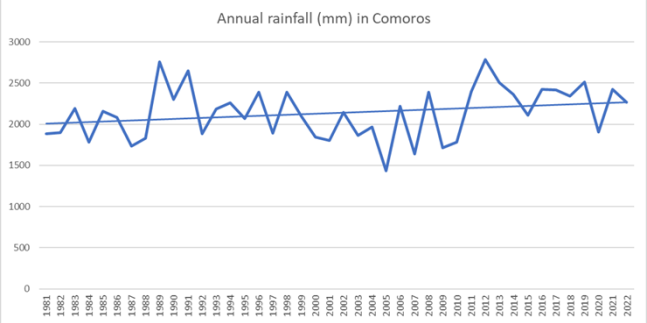


Figure 4a. Annual rainfall in Comoros from 1981 to 2022[6][6]

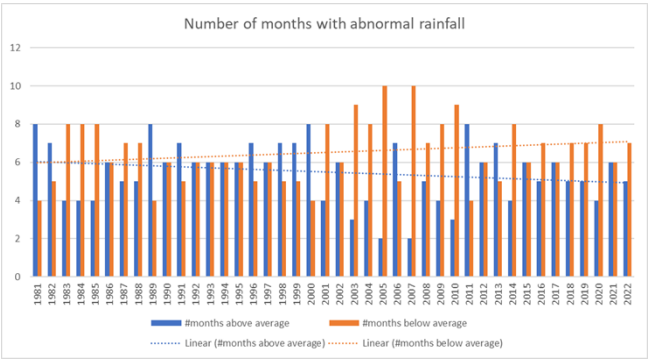


Figure 4b. Number of months with abnormal rainfall from 1981 to 2022

Comoros is exposed to several environmental and climatic hazards: droughts, storms, floods, tropical cyclones, erosion, and sea-level rise. Observed changes in Comoros' climate profile has shown increasing drought periods and intense flooding during the rainy season. For example, heavy rainfall in April 2012 and again in 2019, caused widespread flooding, as the deluge was six times greater than seasonal average.

1.3 Projected Climate Change

Comoros' is likely to experience increasing frequency and severity of storms, accelerated sea-level rise, decreasing annual mean rainfall, and increasing mean annual surface temperatures.

Precipitation

Monthly and mean precipitation projections under SRES B1, SRES A2, and SRES A1B models, project a decline in the dry season rainfall of 2% to 14% by 2090. While projections of mean annual rainfall vary between models, ranging from -15% to +39%, seasonal projections are more aligned, showing decreasing rainfall from June to November (which is the dry season), but increasing rainfall from December to April

(during the rainy season). Another model[7][7] showed that the number of days per year with >20mm and >50mm rainfall are likely to increase. Mean model projections predict less than 1 additional day per year with either >20mm or >50mm rainfall; the 95% percentile scenario projects up to almost 4 additional days with >20mm rainfall per year (2020-2039), decreasing to less than 3 additional days by 2040-2059.

Total rainfall amount from extreme rain days (i.e., annual sum of rainfall when the daily precipitation rate exceeds the local 95th percentile of daily precipitation intensity) is projected to increase to 1190mm (8% increase) and up to 1610mm (45% increase) under the mean and 95% percentile scenarios, respectively. As rainfall concentrates into watersheds, which in Comoros are small and steep, this has the effect of amplifying the damage that rainfall can cause as the 'power' of rainfall is concentrated. A 45% increase in flows will cause considerably more harm and damage than currently, and this could be further exacerbated by concerning trends of watershed degradation, deforestation and erosion.

These results show that rainfall during the wettest 5% of days will potentially increase by >500mm. In addition, changes in the largest single day and consecutive 5-day rainfall amounts are projected to increase by 1-3% under the mean scenario; nevertheless, the 95% percentile scenario suggests both indicators could increase up to 9% from 2020 to 2069.

Using the Revised Universal Soil Loss Equation[8][8], studies project that soil erosion will increase by 2.4% to 4% by 2039, and 3.3% to 5.1% by 2059, which is not insignificant. As erosion occurs, increasing de-stabilization occurs, causing more soil to erode in subsequent storms and heavy rainfall. This has the effect of increasing water turbidity (i.e. 'dirty' water) year-round and reducing its potability.

These observations are supported by research on watershed erosion rates that show a doubling of the rainfall intensity rate increases the erosion rate by an order of magnitude. The same research shows the erosion rate is an order of magnitude higher for poorly vegetated terrains compared to mature vegetation canopy. Therefore, storm damage to steep watersheds which removes mature vegetation canopy during the storm events not only can increase erosion rates rapidly by not one but two orders of magnitude, but then leaves the watershed more erodible, by an order of magnitude, to subsequent non-storm events.

Hence a 45% increase in rainfall intensity due to climate change has the potential to increase erosion within a catchment by almost 200 times because of the climate change initiation/acceleration of the erosion process.
Whilst the GCM predictions report rainfall intensity will increase during wetter months and the IPCC Indian Ocean Synthesis reports a probable increase in cyclonic activity, the GCMs do not specifically model the increase in cyclone activity. It is reasonable to assume that climate change will result in an increase in cyclonic storm events superimposed on already wetter wet seasons, with resulting further increases in rainfall intensity, peak flood flows, erosion, and debris mobilization.

Temperature
Monthly and mean temperature projections under SRES B1, SRES A2, and SRES A1B models project an increase of mean annual surface temperatures from 0.8^{o}C to 2.1^{o}C by 2060, and 1.2^{o}C to 3.6^{o}C by 2090.

Increase is uniform across all three islands. Increased temperatures, combined with the higher frequency of extreme heat events, lead to increased water demand for drinking and irrigation. Increased temperature also contributes to declining water quality, with rising levels of salinity, turbidity and bacteriological content in water.

1.4 Expected Impacts from Climate Projections

Water quantity and quality are expected to be affected by the decrease in rainfall during drier months, increased temperatures, and increase in extreme rain days and flooding. For example, predicted rainfall decline during the dry season will reduce soil moisture, affecting crop yields, and reduce runoff and recharge. With reductions in runoff and recharge, seasonal rivers will increasingly dry up, reducing water quantity, while concentrating organic and chemical pollutants, reducing water quality. By lowering the groundwater table and reducing the dilution effect, reduced rainwater infiltration will cause groundwater supply quality to deteriorate. It will also reduce groundwater recharge and therefore accelerate saline intrusion into coastal aquifers.

Conversely, intensifying rainfall, including tropical cyclones, will lead to greater flooding, causing greater soil erosion and higher sediment loads in rivers. This will increase sedimentation, organic and chemical pollutants entering seasonal rivers, and increase water turbidity, reducing water quality. Flooding also has the potential to damage infrastructure (e.g. roads, buildings, water supply infrastructure and housing), increase the spread of water-related diseases, damage or destroy crops and incite landslides, gullies, and rockfall.

Higher temperatures will increase evapotranspiration rates, increasing water demand for crops and forests and impacting the natural ecosystem services related to water quality and quantity, as well as biological productivity of agricultural landscapes.

Multiple sectors will be impacted by a projected 20 cm sea level rise by 2050. Along the Comorian coastline, the possible rise will likely result in: i) increasing levels of salt water intrusion in coastal aquifers; ii) the destruction of 29% of roads and other infrastructure with a damage cost of approximately US$ 400 million (roughly twice the country's GDP (2013) ; iii) a loss of 297 ha of cultivable land; iv) the displacement of at least 10% of the population (PRGS, 2009); and v) reduced functioning of coastal habitats such as coral reefs . All of the above have domino effects.

Salt-water intrusion, for example, will reduce the already limited availability of water by reducing water quality. Furthermore, the reduction in cultivable land will increase pressure on limited land resources and is likely to aggravate deforestation rates, which will have additional impacts on water availability. At present, salt-water intrusion into portions of Grande Comore's coastal aquifers have increased the salinity of 31 of the island's 50 boreholes to exceed drinking water standards.

Current State of Comoros Water Resources
Access to safe, reliable water for drinking varies greatly on the three islands. Urban areas have more supplies of clean, piped water, although service has been unreliable. Access to water is often impacted by climate events, with supply dwindling during dry season and drought. In recent years, the Government of Comoros, with support from UNDP, UNEP, Green Climate Fund and LDC Fund, have launched on a campaign to upgrade, repair and build improved water infrastructure. Thanks to these

efforts, access to water in Comoros is currently estimated at 35% of population[9][9] an increase from only 15% in 2019, but with some areas not served at all. On average, water consumption on the islands is 35 liters per capita per day, which falls short of the recommended consumption of 50 liters per capita per day. Bottled water imports represented 5 million $ in 2021[10][10]. A 1L bottle of water costs 1 Euro, an amount that many families cannot afford.

Coverage by resilient water infrastructure varies between islands. Prior to the start of the GCF Water project (2018), in Anjouan, 44% of urban households had piped water, covering 63% of the population, with public fountains and cisterns covering the rest. In Mohéli, 34% of users accessed running water in their home. In Grande Comore, 55% of users had private rainwater tanks, 21 % of household had running water, and 18% of users used public fountains being fed by pumped groundwater wells and boreholes. The GCF Water project, which is at mid-point, has so far provided 145,000 additional people on the three islands with new and improved resilient water supply.

Most domestic water is not treated. There is little effective water quality treatment in Comoros, the population is currently able to consume the existing water quality within culturally acceptable health consequences, through a combination of natural resilience and household treatment options. Increasing turbidity, rising temperature and microbial loading will collectively reduce water quality to a point where current anatomical resistance and treatment techniques will no longer be adequate. During periods of strong rainfall, high turbidity levels have been shown to cause rhexistasia. Water sources are also impacted by bacterial contamination from pathogens such as Salmonella, e-coli and dysenteric amoeba. On Moheli and Anjouan, rivers are often contaminated by human and animal waste due to the lack of proper sanitation. Water is distributed without any physio-chemical or disinfection treatment (only minimal chlorination in the region of Moroni). Consequently, typhoid fever and diarrhea are the leading sicknesses for children between 3 and 5 years.

1.5 Underlying Drivers and Root causes of vulnerability

As mentioned before, Comoros is one of the poorest African SIDS LDC, with a gross national income per capita of US$ 1,014 in 2024 and an annual GDP growth of 3.5[11][11]. Furthermore, the Comoros has high levels of poverty (45%) and a chronic economic deficit, and is considered a highly indebted poor country (15% of GDP)[12][12]. The Comorian economy is largely an inward-looking, import-based and poorly diversified subsistence economy, with 34.5% of GDP generated in the agriculture sector, 54.4% in the tertiary sector, and the secondary sector accounting for 12%.

Access to energy is another limiting factor in Comoros. With no home-grown energy source, the majority of national infrastructure and public services depend on an irregular influx of imported fuel. Local population relies on diesel and fuelwood for cooking and daily energy needs. The rate of access to electricity in Comoros is 71%[13][13], however only 11% of the population have access to clean cooking. Most of the energy consumption in rural areas is biomass, which accelerates the high rates of

deforestation in the country. Steep terrain and loss of forest cover lead to erosion and run-off, contributing further to flooding and erosion downstream.

Gender and social inclusion: Given the gaps in infrastructure, most households rely on rain harvesting using jerry cans or garbage cans or building cisterns on rooftops[14][14]. During the dry season, many households must travel an average of 195 meters to the closest water source[15][15]. Typically, the responsibility for fetching water falls on women and girls, who repeat this chore 5 times a day. For families having to choose which child to send to school, boys will take priority. Even when able to attend school, fetching water and household chores will take priority, limiting time for study or employment. Economic opportunities for youth, and young women in particular, are very limited, and the unemployment rate is high among the 18-30 year group.

1.6 Baseline situation and associated projects

The government has adopted, in its plan Comores Émergent[16][16] (PCE), an ambitious target of ensuring that 100% of its population have access to safe, reliable and resilient water supply by 2030. To meet this target, a Programme of Action for Resilient Water Supply (PARWS) was agreed among the government and various donor agencies, which is to be implemented through various sources: the GCF supported project expects to reach 41% of the Comorian population with resilient water infrastructure by 2028, and proposals – including this proposed project to the LDCF - are currently being formulated to other donors to fill the remaining gaps.

Many projects have sought to address water supply over the years. The Agence Française de développement (AFD) supported the water sector between 2004 and 2020, providing an estimated 16,000 people with safe water supply and sanitation[17][17]. Between 2012 and 2022, the GEF and LDCF supported projects in Comoros with strong linkages to water: the ACCE project (Adaptation to Climate Change in Water), which rehabilitated damaged water infrastructures, the RGIBV project (Integrated watershed management), and the ACCA (adaptation in the agriculture sector), both of which included mobilization of water for irrigation. These projects, however, were only able to make small dents in the need for water at household level.

Since 2018, the Government of Comoros started a massive reform of its water sector, with funding from the GCF and support from UNDP through the Resilient Water Supply Project[18][18] (ER2C). The main changes were the adoption of the updated Water Code that now includes provisions for climate risk management, along with a series of application regulations; the creation of the Société Nationale des Eaux, a national agency with decentralized offices on each island, whose main responsibility is to manage water supply; and the creation of a system for water tariffs (underway). Since 2018 the ER2C project has invested heavily in infrastructure construction and rehabilitation and has secured water supply for 145,000 people. The project has constructed boreholes, pipelines, reservoirs and ponds and has also initiated the rehabilitation of fragile watersheds that regulate water supply in certain zones. The ER2C

project also supports institutional reforms, as mentioned above, as well as an improvement in the hydro-climate monitoring network. However, it does not on its own fulfil the investment gap in the water sector, particularly in regards to needed infrastructure.

1.7 Gaps and Needs

The gaps that need to be addressed if Comoros is to meet this important sustainable development milestone - in a manner that is consistent with the fight against climate change and social equity and inclusion - include infrastructure and institutional capacity gaps. Many of these gaps were identified during the Interim Evaluation of the ER2C GCF project, which was completed in December 2023.

First, while the GCF project has secured approval for the Water Code and associated regulations, there is a need to downscale the institutional framework to the level of municipalities who, ultimately, will have a crucial role to play in ensuring equity of access, maintenance of infrastructure, monitoring of use and enforcing regulations. Currently, no municipality has yet been capacitated to take on these tasks that have traditionally been left to the central government. As a result of this gap, municipal by-laws, land use plans and development plans do not yet take into consideration the need to ensure proper water management and watershed conservation as part of a climate risk management strategy.

This is also compounded by a serious lack of reliable data on water access, water services and water quality that might inform locally-specific climate informed water management. This is partly because responsibilities for hydro-climate monitoring is shared between the newly established SONEDE and the national meteorological agency (ANACM). Protocols for data collection, data sharing and data conservation related to climate and water are not yet in place. As a result, locally-specific water-related early warnings are also impossible, leaving communities over-exposed to droughts, storms and floods. The harmonization of practices for data collection and water management between ANACM and SONEDE is imperative, in particular since data is required to inform the establishment of socially acceptable climate-sensitive water tariffs, a process which is underway under the GCF project. Furthermore, a stable and reliable supply of data is not yet guaranteed, as the ANACM has not yet secured its own operational financing. Interruptions in data flows due to lack of operational budgets or technical faults in the hydro-climate system create an obstacle to climate informed water management.

Another gap that has been noted recently, which is not currently being addressed by ongoing projects, is the lack of sustainable long-term utility financing systems that would ensure the stable operation of water and energy utilities. Indeed, it was recently noted that stable energy supply was required for the continuity of water services, and this concerns both pumping from rivers or groundwater. There is ample evidence of local interruptions in service due to lack of energy supply for borehole operations, or river pumping. This issue has been concerning for a long time, but it was not addressed because of the need to revise the water code and associated regulations first. The recent reforms that led to the formation of SONEDE also led to the formation of the Société Nationale de l'Énergie et de l'Électricité (SONELEC), which is still a budding organization. Now that this system is in place, and that the Government is working to establish equitable water tariffs, the need for secure long-term financing for energy services that support water, is ever more apparent.

Finally, although much has been done to extend climate resilient water infrastructure to the last mile users, significant coverage gaps remain. So far, ongoing investments and pre-existing infrastructure was extended to reach around 50% of the Comorian population. Past projects such as the LDCF- supported

ACCE project (2012-2016) worked on portions of the Moroni water system, and the GCF supported project expects to reach 41% of the population. Unfortunately, for areas in Grande Comore, the prohibitive cost of infrastructure has prevented further extension of the water network, and in the other islands, water quantity and quality is still being impacted by watershed degradation, which leads to siltation. Past projects have made some strides regarding the establishment of mechanisms for the sustainable management of watersheds and the implementation of integrated water resources management (IWRM), including the LDCF-Supported RGIBV project and the GCF project, but much remains to be done.

The identified alternative to this project's approach include desalination of sea water. In the context of Comoros, energy is still a scarce resource to be resolved in order to support desalination processes.

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[1] http://www.worldclim.org

[2] The INFORM Country Risk Index identifies countries at risk from humanitarian crises and disasters that could overwhelm national response capacity. Natural hazards recorded as part of the risk index include: drought, cyclones, earthquakes, coastal flood, river flood, tsunamis and epidemics. Source: https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Results-and-data/moduleId/1782/id/433/controller/Admin/action/Results

[3] Humanitarian Data Exchange. 2022. INFORM Country Risk Profile. Retrieved from: https://drmkc.jrc.ec.europa.eu/Inform-Index/Portals/0/InfoRM/CountryProfiles/COM.pdf

European Commission. 2022. DRMKC – INFORM: Results and Data. Retrieved from: https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Results-and-data/moduleId/1782/id/433/controller/Admin/action/Results

Note: deeper colors do not represent better outcomes. Higher the value of the category, the greater the risk. For example, Comoros' score of 7.1 for "Lack of Coping Capacity" represents a severe lack in coping capacity. The logic behind the mechanism is that the higher values for each category of "Hazard & Exposure," "Vulnerability," and "Lack of Coping Capacity," collectively produce a greater overall value of risk. I.e., if the total score after adding each category's values for a given **Country A** produces a risk score of 1.1 and for another **Country B**, the risk score is 7.6, then **Country B** is at far higher risk for humanitarian disaster than **Country A**.

[4] https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Results-and-data/moduleId/1782/id/433/controller/Admin/action/Results

[5] Earthmap.org. data derived from processing European Centre for Medium-Range Weather Forecasts (ECMWF) ERA5 atmospheric reanalysis of the global climate product.

[6] Processed from data provided by World Clim: CRU-TS 4.06 (Harris et al., 2020) downscaled with WorldClim 2.1 (Fick and Hijmans, 2017). Fick, S.E. and R.J. Hijmans, 2017. WorldClim 2: new 1km spatial resolution climate surfaces for global land areas.

[7] UNDP. 2023. FP-UNDP-160818-5740-Annex II-Feasibility Study_2_. The GCM uses World Bank Climate Change Knowledge Portal climate indicators, which themselves are derived from the Coupled Model Intercomparison Project, phase 5 (or CIMP 5). The CIMP 5 combines 35 Global Climate Models (GCMs) which can generate different future projects given changes in emissions and land-use.

[8] RUSLE; Renard et al., 1991 (Taken from the UNDP FS)

[9] The baseline level indicated in the PCE in 2019, was 15% of the population which access to clean potable water. The figure is updated to take into consideration the realizations of the GCF-supported Resilient Water Supply project at its mid-term point.

[10] https://oec.world/en/profile/bilateral-product/beverage-waters-sweetened-or-flavoured/reporter/com

[11] https://www.imf.org/external/datamapper/profile/COM

[12] https://www.imf.org/external/datamapper/profile/COM

[13] https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Comoros_Africa_RE_SP.pdf

[14] UNDP. 2024. UNDP GCF Water Eval, pg. 17

[15] UNDP. 2024. UNDP GCF Water Eval, pg. 18

[16] https://nwm.unescwa.org/sites/default/files/2023-04/synthese-du-plan-comores-emergent.pdf

[17] https://www.pseau.org/outils/actions/action_resultat.php?ac[]=1827&tout=1

[18] https://www.greenclimate.fund/project/fp094

B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

Project Description

This project is part of a programmatic approach designed to help the government of Comoros achieve its overarching goal of "ensuring universal access to climate resilient water supply by 2030". It completes and complements efforts underway and in planning to address the full suite of gaps and barriers that are noted in the water sector. The specific objective of this project is to **increase access to high quality, stable, reliable and resilient water supply in order to reduce climate vulnerability in Comoros**.

The project is based on the following theory of change: if integrated water management of water infrastructure and ecosystem services is decentralized and based on reliable data and sustainable finance, then resilient infrastructure can be extended to reach last mile users, which will lead to reduced vulnerability among local communities, enhanced ecosystems resilience and improved protection of water sources despite climate change.

In order to achieve a preferred scenario where every citizen of Comoros has access to reliable, resilient and safe water supply, a number of key **barriers** must be lifted:

- There is a lack of reliable data, and data systems are fragmented, which prevents the coordinated climate risk management in the water sector. For adequate decisions to be made about water services, allocation, quality and quantity, localized data must be available and shared among different partners. This includes data on water extraction rates, water availability at source point according to climate parameters, water use at household level, water quality at different points in the system depending on infrastructure type, all of which should be disaggregated by gender, locality, ability, and age, to ensure equitable access

in all climate conditions. However, the SONEDE currently does not have the capacity to collect the data and the protocols are not in place for sharing among partners (DGEME, ANACM, SONEDE).

- There is a lack of sustainable, predictable finance for the water sector and the other foundational utilities (energy and climate services). This lack of sustainable financing means that energy supply to the water infrastructure and network is sometimes interrupted by SONELEC, or that the climate data is not transmitted in a timely manner by ANACM. The long-term sustainability of the water network requires that all other utilities operate at a minimum level of service to ensure continuity of water supply to vulnerable communities.

- Incomplete institutional frameworks prevent the effective decentralized management of water services, be they built infrastructure or natural ecosystem services. Integrated water resources management and integrated watershed management are nascent approaches in Comoros, but are currently only applied at central government level. There is a need to create structures at municipal and basin level to better manage water and the watersheds that provide water-related services. Planning watershed rehabilitation and land use in accordance with the principles of integrated water management requires coordination and capacity at decentralized levels, given that it is municipal authorities who must enforce laws and rules about land use in fragile watersheds, access to land for the water network (e.g. boreholes), and the protection of spring heads and forest cover.

- In the absence of adequate protection, the destruction of watersheds continues. Deforestation and unsustainable use of vegetation and forest cover in sensitive areas lead to soil erosion, accentuate impacts of flooding, siltation of water bodies, and loss of soil moisture. This destruction is mostly due to deforestation. At municipal and watershed level, ecosystems must be restored so they can continue to provide water-related services in the face of climate change.

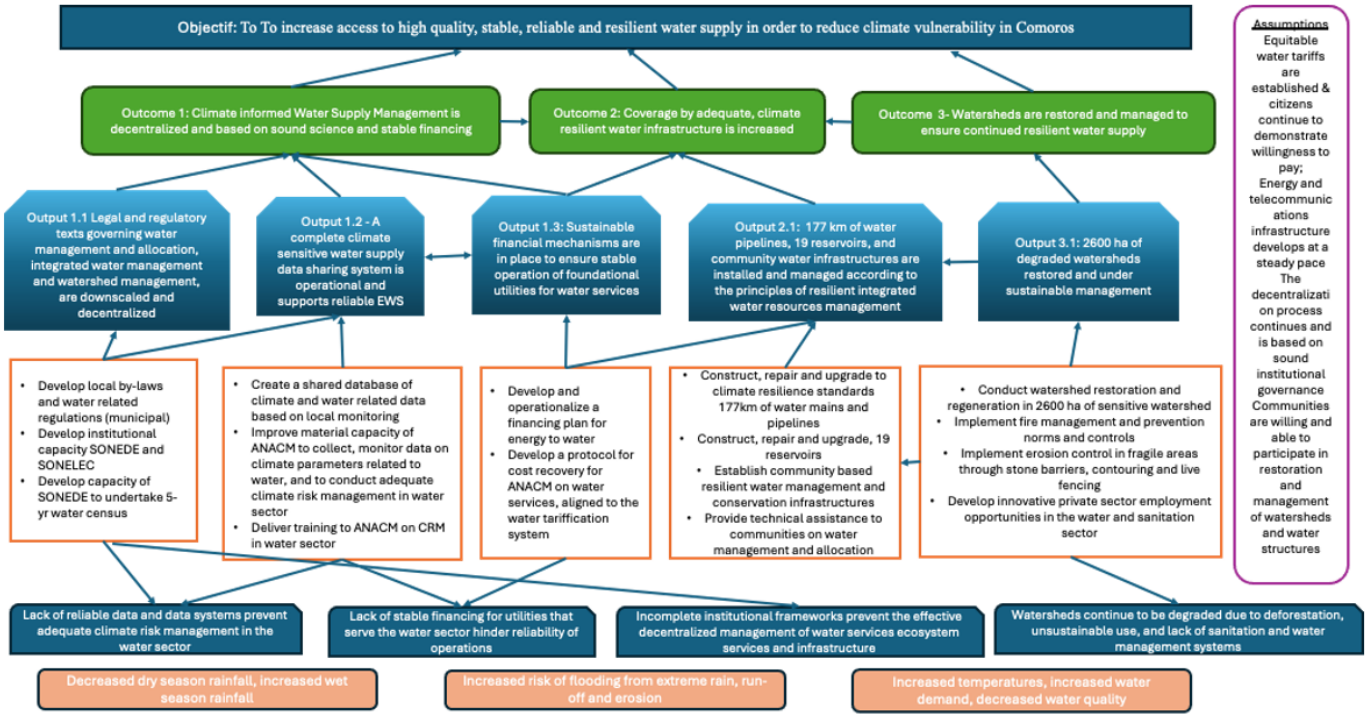

Figure 5: Theory of Change

The proposed project addresses these barriers, and fills some of the gaps mentioned above, to help the Government of Comoros progress towards its overall goal of achieving universal access to water by 2030

regardless of climate change. The project works in the following sites, which have been selected as a matter of priority based on initial plans that were made under the GCF project (see Annex C). The remaining zones are planned for inclusion in other projects that are currently being developed (AfDB, UNEP-AF).

Island	Sites/villages	Number of residents*
Ngazidja	Bangahani, Bibavou, Bouenindi, Diboini, Mbaléni, Mbamban, Milevani, Oussipvo	15,382
Anjouan	Bandrani	5,921
	Moya et Nioumakélé Haut	45,419
Moheli	Mbatsé, Ntakoudja, Hoani	7,654

*51% of the residents are women

The project is structured along three main outcomes and 5 outputs, as follows:

Outcome 1 - Climate informed Water Supply Management is decentralized and based on sound science and stable financing.

Under this outcome, the project seeks to facilitate evidence-based climate risk management in the water sector, linking the key utilities together and ensuring their sustainable operation. As noted earlier, the GCF-funded ER2C project has made progress in ensuring the adoption of the Water Code and its supporting regulations, but it has not decentralized these to local government. In addition, although the GCF project supported the creation of SONEDE and SONELEC, it does not support the energy utility, a challenge that was noted during the Interim Evaluation of ER2C, which prevents the GCF project from reaching its full sustainability potential. Therefore, activities under this outcome fill gaps from the ER2C project and take the next steps in terms of devolution in the water sector. Activities will be implemented with the same partners as those who were mobilized for the ER2C project (SONEDE, ANACM, SONELEC) – indeed most of the activities here are included at their behest.

Output 1.1 Legal and regulatory texts governing water management and allocation, integrated water management and watershed management, are downscaled and decentralized.

The activities under this output take the achievements of past projects, in particular those of the GCF project one step further. Now that the water code and the principles of integrated water management are enshrined into law, the country needs to ensure that local communities, municipalities and villages, can have the means of managing resources in a way that is consistent with the new institutional framework. Therefore, the project will work in the sites listed above to develop local by-laws and water-related regulations at municipal level that also take into consideration gender equity and social inclusion issues in their relation to access to water. This may include provisions for land use and access to land for water infrastructure development, local measures related to water and climate data collection, women's participation in water conservation measures and protocols during extremes (e.g. heat waves, drought, floods) and provisions regarding energy and ecosystem services for water. In addition, the project will build the capacity of the municipalities concerned to participate in the collection of water fees that are being developed by the ER2C project. Specific regulations regarding access to water and sanitation for women could also be adopted, particularly focusing on maternal and child health. The gender specific dimensions and needs of this output will be further developed during the PPG phase. The specific nature of the by-laws

will be developed during the project preparation phase, upon consulting with the leadership and mayors of the targeted sites, according to needs and site-specific challenges. This will also be matched with institutional strengthening of SONEDE to undertake negotiations and develop agreements with municipalities and villages for the future expansion of the water network.

A second key aspect of this output will be to develop the institutional capacity of the SONEDE to collect water related data in a way that enables the climate informed management of water on all three islands. This includes the technical and material capacity for SONEDE to conduct periodical water census that collect gender- and age-disaggregated data on access to water, availability of water, water use, and water quality. This data will be used to inform the evolution of water tariffs, that are currently being established, but also to track progress in access to water aligned to climate parameters. This will require partnership building with ANACM, the DGEME and other institutions to jointly manage and access this data under output 2.

Output 1.2 - A complete climate sensitive water supply data sharing system is operational and supports reliable EWS.

Activities under this output will see the creation of a shared database or system of climate and water-related data that may be geo-localized. Inputs into this system will be collected jointly by municipalities, decentralized water utilities, through the water census developed in output 1, and through ANACM's own network of hydroclimate monitoring stations (currently under development). The GCF project supported the ANACM in developing a Strategic Plan for future investment and sustainability; this project proposes to implement some of the recommendations included in the action plan. Methodologies for sharing, software applications and decision support systems will be developed to enable more adequate early warnings and climate risk management in the water sector. For example, this will require the development of operating procedures for selecting water uses, including uses by women and girls, during extreme heats or drought (drinking vs irrigation) and the technical packets required to disseminate advice to last mile users. The ANACM and other sectoral partners, specifically agriculture partners, CRDE and other decentralized government entities will receive training on climate risk management for water.

Output 1.3 - Sustainable financial mechanisms are in place to ensure stable operation of foundational utilities for water services.

The activities under Output 3 are designed to ensure that the water sector functions in a sustainable manner. The project will provide technical assistance for the SONELEC, in partnership with SONEDE, to develop and operationalize a financing plan to ensure stable energy supply for water. This may require development of MOU, agreements, but also priority allocation plans and contingency plans during energy shortages. Risk management for SONELEC in relation to its supply of energy for water will also be strengthened. This activity will also support the development of plans for SONELEC to expand the supply of renewable energy (e.g. solar) for specific points of the water network.

Similarly, the project will also support the ANACM in the implementation of its Strategic Plan (a plan that was developed with the financing of the GCF project), towards ensuring stable and reliable climate information services for water. A protocol for cost recovery will be developed for ANACM focusing specifically on water services, which will be aligned with and integrated into the water tariffication system that meet the needs of all beneficiaries while addressing the specific vulnerabilities of women and girls.

Plans are underway to also strengthen the ANACM's material capacity to monitor climate information through other projects (AfDB).

Outcome 2: Coverage by adequate, climate resilient water infrastructure is increased

Outcome 2 activities are designed to fill key gaps in terms of resilient water infrastructure and to increase the number of households who have access to safe, reliable and resilient water supply at all times. The project expects to reach at least 74,376 people (51% women). This project acts as a complement to investments made under the ER2C project. The proposed project will follow the same delivery method as those adopted by the ER2C project, including by mobilizing national or regional private sector firms for the delivery of water infrastructure works, as well as other UN organizations present in Comoros. The ER2C project has created a network of service providers that will also be called upon in this project, to build local capacity.

Output 2.1: 177,13 km of water pipelines, 19 reservoirs,7 water infrastructures, are installed and managed according to the principles of resilient integrated water resources management.

Using the pre-feasibility and feasibility studies developed under the GCF project, the project will first complete all detailed technical feasibility and engineering plans for all types of works, including site-specific environmental and social management plans building on the process and template used for the GCF-funded project. Many of the works were identified in the ER2C project. The deployment of works involves negotiating access to land and land leases where relevant, deploying detailed calls for tender for private contractors and undertaking regular in-site supervision with the SONEDE, contractors and all technical project team members (including gender and ESS). The technical team mobilized for delivering quality assurance of ongoing works will be the same as the GCF project, and the Environmental and social management requirements will also be identical.

The project expects to deliver 177 km of piped water mains in Ngazidja, serving the villages of Bangahani, Bibavou,

Bouenindi, Diboini, Mbaléni, Mbamban, Milevani, Oussipvo, which are not currently connected to the water network. For those villages, rainwater harvesting is not always an option as land is densely occupied, slopes are high and the rate of urbanization is high, requiring piped water. In other parts of Ngazidja, the project will upgrade and rehabilitate existing impluviums, in order to ensure adequate water supply for irrigation during droughts and dry seasons, so that residents do not have to resort to using untreated water for drinking, or use drinking water for irrigation. Since there is no surface water in Ngazidja, those are the only alternatives available. All systems and infrastructure will be subject to the establishment of Drinking Water Safety and Security Planning (DWSSP), and community-based management protocols as currently pursued by ER2C project.

On Anjouan and Moheli, the project will build reservoirs (natural ponds) and climate-proof river intakes will be constructed to ensure they are not damaged by flood events or blocked by sediment. This approach was used rather than switching to groundwater supply, since the costs of exploiting groundwater are much higher, there are risks of salinization, and surface water can continue to be available (even under climate change scenarios), provided it is sustainably managed. Each installation and network will be managed

according to the principles of integrated water resources management leveraging local communities, municipalities, village leadership and the national level institutions.

All infrastructure works are subject to detailed environmental and social management plans. Detailed feasibility assessment and plans will be developed during the PPG phase. Specific attention will be paid to how women, children and persons with disabilities access water, making sure that no structural barriers exist to their access and use of safe water at local level. For example, infrastructure may be located in areas that are accessible to people with limited mobility (elders or PLWD). The gender and social inclusion action plan will be developed during the PPG and will make recommendations on how to facilitate access to all groups, as well as facilitating the involvement of women in water management groups.

Outcome 3 - Watersheds are restored and managed to ensure continued resilient water supply

Activities under Outcome 3 are designed to strengthen the resilience of water supply by intervening at the level of watersheds and ecosystems that provide key water-regulating functions. First, healthy watersheds provide livelihoods through agriculture, and also provide flood protection services in Comoros. Previous projects and lessons learned from past initiatives show that the restoration of watersheds in sensitive areas such as springheads, river banks, and the creation of buffer zones in higher altitudes, help maintain a host of ecosystem services including soil productivity, carbon sinks, biodiversity and livelihoods of course. The project builds on the results of the RGIBV and ER2C projects to increase the area of watershed that is sustainably managed and rehabilitated. This option was retained because the combination of natural and built infrastructure is more effective in addressing the impacts of climate change than a built approach alone, particularly in Anjouan and Moheli. Specifically, restored watersheds play a better role in preventing run-off and flooding, retaining moisture in soils, and providing buffers during extreme weather.

Output 3.1 - 2600 ha of watershed restored and under sustainable management

This output is delivered by 5 main activities that take into consideration the high level of dependency on natural resources of local communities and the inextricable links between livelihoods and watershed degradation. Other projects are addressing the links between energy demand and deforestation, therefore this project will focus on the restoration, regeneration and protection of 2600 ha of fragile degraded areas, adding to the 390 ha already restored under ER2C and 3500 under RGIBV. The approach will be the same as the ones followed under ER2C and RGIBV projects, leveraging existing private sector or community nurseries to produce material that can be used for agro-forestry and reforestation. Specific restoration sites will be mapped and assessed during the project preparation phase. The project will also add the implementation of fire management and prevention norms and control in all areas, working with municipalities and villages to ensure that fire-buffer corridors are implemented and that awareness is raised about appropriate land preparation techniques. Watershed restoration will also go hand in hand with the implementation of erosion control in fragile areas, using stone barriers, contouring and live fencing, techniques that have been tested in previous projects (e.g. RGIBV) and proven successful in limiting soil erosion during heavy rainfall.

The project will also work with women and youth groups and disability advocates to develop innovative private-sector employment opportunities in the water and sanitation sector. This can include developing enterprises focused on waste management, recycling, upcycling, nurseries, and sanitation.

Finally, Knowledge Management and Learning are key pillars of this project, through its Output 4.1. Many of the project interventions, particularly under outcome 1, are designed to collect and share data that will support decision making, learning and knowledge sharing among the key water sector partners. Furthermore, the project will be integrated into the overall programmatic Monitoring, Evaluation and Learning (MEL) Framework, which will be developed in partnership with the GCF and other forthcoming projects, so that progress can be shared across key water indicators for all incoming initiatives. This project's gender action plan will also be connected to the GCF project's Gender action plan (which is currently being revised) so that socially differentiated data can be collected across the various interventions (at least gender, age, disability, location-based disaggregation of all indicators and deliverables). The project's MEL framework will include a consolidated dashboard of all indicators for all projects (many of which share similar indicators), and provisions for documenting results and best practices will also be made. The project also establishes a communication action plan, which will be shared with the ER2C project and other forthcoming initiatives, to raise awareness about sustainable water management, the new modalities of access to water, and the benefits of improvements in the service. This effort is led by the Government.

Monitoring and Evaluation (M&E)

An M&E plan will be prepared at PPG stage and it will include gender-specific aspects to allow the project to support gender equity in the water sector.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements. Activities under the M&E component will include the hosting of an Inception Workshop (and development of the associated report); producing annual GEF Project Implementation Reports (PIRs); monitoring of Social and Environmental Safeguards Screening, stakeholder engagement and gender action plans; supervised site visits and on-the-ground assessments; an Independent Mid-term Review (MTR); and a Terminal Evaluation (TE).

Stakeholder engagement and institutional arrangements

A rapid stakeholder analysis was carried out to ensure adequate engagement and participation of all relevant stakeholders, including IPLCs and CSOs, who were consulted at the PIF development stage. Key stakeholders were identified on the basis of their interest, influence and capacity to participate in the project, drawing on lessons learned from ongoing project implementation. This is summarized in Table 1 below, and all the stakeholders listed in the table were consulted. Face-to-face and virtual interviews, village and field meetings were organized with project beneficiaries, including men, women, youth and civil society representatives, to sensitize and prepare them for active involvement in the project's development phase.

The project will be implemented through the National Implementation Modality (NIM), as per UNDP rules for the NIM modality. In this regard, the project will be directed by a Steering Committee involving key stakeholders, notably the Directorate General of Environment and Forest (DGEF) in the Ministry of Agriculture, Fisheries, Environment and Land Use (MAPEATU). UNDP will play an important role of Project Oversight/Assurance.

Table 1: initial rapid stakeholder analysis

Entity	Interest and Ability to participate (ranked from low to high)	Role in the project
General Directorate of Environment and Forests (Direction Générale de l'Environnement et Forêts) -DGEF (DGEF is part of Ministry of Energy, Agriculture, Fisheries, Environment, Country Planning and Urbanism (MEAPEATU) (Ministère de l'Energie, l'Agriculture, Pêche, Environnement, Amenagement du Territoire et de l'Urbanisme)	I: High A: High	The DGEF will provide the staff for the project management team. DGEF will report to the Minister of MEAPEATU, as the **Chair of the project Steering Committee.**
National Agency of Civil Aviation and Meteorology (Agence nationale de l'Aviation Civile et de la Météorologie) -(ANACM)	I: High A: High	The ANACM will be involve in the project steering committee as part of the Users group. Project beneficiaries, with particular involvement in activities under Outcome 1. Ensure adequate flows of climate data for the water sector.
Société Nationale de l'électricité (SONELEC)	I: High A: Low	The SONELEC will have improved capacity to deliver energy services to the water sector. SONELEC will be part of the Users group.
Société Nationale des Eaux (SONEDE)	I: High A: Moderate	The SONEDE is a senior beneficiary of the project, responsible for the delivery of water utilities. SONEDE will be **Senior User** in project steering committee.
Municipality governments (Les communes)	I: High A: Low	The Municipalities will be the Master of Works of the new water supply infrastructures. They will be part of the Users group, and also receive training on decentralized water management.

Water User Associations (WUA)	I: High A: Low	Project beneficiaries. Represent the interest of water users including women. Participate in all IWRM activities
Water sector operators from the Private sector	I: High: A: Medium	Act as service providers for the project (construction of water infrastructure, provision of goods and services).
ÚNDP	I: High: A: High	**Senior Supplier** in the project Steering Committee, and Project Assurance to the Project Management Unit

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

Core Indicators

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

META INFORMATION – LDCF

LDCF **true**	SCCF-B (Window B) on technology transfer **false**	SCCF-A (Window-A) on climate Change adaptation **false**
Is this project LDCF SCCF challenge program? **false**		
This Project involves at least one small island developing State(SIDS). **true**		
This Project involves at least one fragile and conflict affected state. **true**		
This Project will provide direct adaptation benefits to the private sector. **true**		
This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs). **false**		
This project will collaborate with activities begin supported by other adaptation funds. If yes, please select below		
Green Climate Fund **true**	Adaptation Fund **false**	Pilot Program for Climate Resilience (PPCR) **false**
This Project has an urban focus. **false**		
This project will directly engage local communities in project design and implementation **true**		

This project will support South-South knowledge exchange	
true	
This Project covers the following sector(s)[the total should be 100%]: *	
Agriculture	0.00%
Nature-based management	20.00%
Climate information services	0.00%
Coastal zone management	0.00%
Water resources management	80.00%
Disaster risk management	0.00%
Other infrastructure	0.00%
Tourism	0.00%
Health	0.00%
Other (Please specify comments)	0.00%
Total	100.00%

This Project targets the following Climate change Exacerbated/introduced challenges:*

Sea level rise	Change in mean temperature	Increased climatic variability	Natural hazards
false	**false**	**true**	**true**

Land degradation	Coastal and/or Coral reef degradation	Groundwater quality/quantity
true	**false**	**true**

CORE INDICATORS – LDCF

	Total	Male	Female	% for Women
CORE INDICATOR 1 Total number of direct beneficiaries	74,376	36,444.00	37,932.00	51.00%
CORE INDICATOR 2 (a) Area of land managed for climate resilience (ha) (b) Coastal and marine area managed for climate resilience (ha)	2,600.00 0.00			
CORE INDICATOR 3 Number of policies/plans/ frameworks/institutions for to strengthen climate adaptation	1.00			
CORE INDICATOR 4 Number of people trained or with awareness raised	415	215.00	200.00	48.19%
CORE INDICATOR 5 Number of private sector enterprises engaged in climate change adaptation and resilience action	10.00			

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		

Climate	Moderate	Climate extremes are a moderate risk in Comoros as noted above. However contingency plans have been in place to reduce the construction time during rainy season, which is when the most significant impacts may occur.
Environmental and Social	Moderate	There are no major other environmental or social concerns. Environmental and social management plans for any construction will be required of all service providers, a practice which has already begun in Comoros. A redress and complaints mechanism is also already in place.
Political and Governance	Moderate	Elections have just occurred in Comoros and while there is general stability in the country, some uncertainty remains. There may be delays regarding the operationalization of governance structures for watersheds and water in general, though these have been successfully addressed through the GCF project.
INNOVATION		
Institutional and Policy	Low	Some potential reticence regarding water tariffs and issues related to the institutional capacity to enforce them may arise during the course of implementation. This is the reason why the project includes capacity strengthening for SONEDE regarding water financing.
Technological	Low	As a SIDS, inflation is likely to affect construction costs, as most items need to be importes. However, a contingency will be considered in the estimates during the design phase.
Financial and Business Model	Low	While items to be constructed will likely be new in the selected areas, the project will reduce risks by adapting the designs that worked under the GCF project.
EXECUTION		
Capacity	Moderate	The GCF project has noted a number of capacity challenges among key stakeholders. This includes ANACM, SONEDE, and the government partners. The ANACM was the object of a comprehensive capacity assessment, and this project partly addresses the concerns raised in that assessment as they relate to water. Similarly, the SONEDE's own capacity for implementation and sustainability will be strengthened through this project.
Fiduciary	Moderate	The UNDP country office has also worked diligently with the MEAPATU to strengthen execution capacity. Close supervision continues and is also recommended under this project.
Stakeholder	Low	Stakeholder engagement is very actively ongoing through the GCF project. Consultations will take place with local communities in the targeted sites to ensure full buy-in and participation in all activities, including in particular gender and social inclusion measures. Specific measures are proposed in this project to increase local participation in monitoring of water services, and to create economic growth opportunities in the water sector.

Other		
Overall Risk Rating	Moderate	

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

This is project is well aligned with national policy priorities and international commitments made by the Government of Comoros over the years with regard to water and climate adaptation, as articulated in the Plan Comores Émergent (PCE) 2030. The project contributes to the objective of universal access to water by 2030. (PCE *Catalyseur 2: Des infrastructures à niveau pour une économie performante*).

The project contributes to the Government of Comoros' high-priority commitment to provide access to safe drinking water to 100% of its population by 2030, as outlined in the INDC. The project is also well aligned with the National Adaptation Plan and the Comoros' National Action Programme of Adaptation to Climate Change (NAPA).

The project closely aligns with the AU Agenda 2063 and the Sustainable Development Goals (SDG) (contributing to the delivery of SDGs 6 and 13, and slightly contributing to SDG 7), because it promotes Integrated Water Resources Management, and access to resilient water-related infrastructure. The project is expected to generate benefits for the health and well-being of targeted populations as well as economic resilience.

The project aligns with the GEF-8 programming directions and the LDCF priority areas, and it cuts across all three main Themes the LDCF[1][19] programmatic priorities, since it focuses on water (outcome 2), nature-based solutions (outcome 3) and climate information systems (outcome 1). The project also makes a contribution to the transformation of “strengthened governance for adaptation” by helping decentralize some of the key aspects of resilient water management to the local level. The project supports the achievement of a “whole-of-society” approach to water security, strengthens key aspects of institutional capacity and also supports key innovations (particularly engaging the private sector in water initiatives).

It is also worth emphasizing that this project is unique in the way it builds concrete synergies with a GCF project, thus establishing complementarities between the GEF and GCF funds. The project is also part of a portfolio approach towards climate-resilient water development in Comoros, ensuring a proactive, progressive, multi-funds approach towards the attainment of the country’s goals on climate resilience in the water sector. A programmatic results framework of the portfolio was developed and anticipatively establishes synergies while avoiding duplications between this project, the GCF project and other prospective projects under discussion. The steering committees of

both projects are also likely to be the same members, which will provide further opportunities for joint steering committee meetings of both projects as another major opportunity for enhanced coordination.

The Government of Comoros has thus endorsed this project as a priority for funding by LDCF (please see attached letter).

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[1] https://www.thegef.org/sites/default/files/documents/2022-06/EN_GEF.LDCF_.SCCF_.32.04.Rev_.01_GEF%20Programming_Strategy_Adaptation_Climate_Change_LDCF_SCCF_GEF8_July_2022_June%202026_Operational_Improvements.pdf

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities: Yes

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

A series of consultations were undertaken on the margins of the interim Evaluation of the GCF Resilient Water Supply project on 9-20 October 2023. Local communities, project beneficiaries in target zones, as well as island and union-level officials were consulted to better understand the baseline and gaps to address.

Civil society organizations were consulted during the sessions of analysis of water sector regulations under elaboration through the GCF project in the last quarter of 2023.

Further consultations within DGEF, UNDP, UNEP and African Development Bank occurred in December and January 2024 to finalize the overarching framework for the programmatic approach, which was approved by the DGEF in January 2024.

A final workshop was held in March 2024, to discuss and validate this project concept, which brought together main stakeholders at Union level.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant($)	Agency Fee($)	Total GEF Financing ($)
UNDP	LDCF	Comoros	Climate Change	LDCF Country allocation	Grant	8,932,420.00	848,580.00	9,781,000.00
Total GEF Resources ($)						**8,932,420.00**	**848,580.00**	**9,781,000.00**

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount ($)

200000

PPG Agency Fee ($)

19000

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG($)	Agency Fee($)	Total PPG Funding($)
UNDP	LDCF	Comoros	Climate Change	LDCF Country allocation	Grant	200,000.00	19,000.00	219,000.00
Total PPG Amount ($)						**200,000.00**	**19,000.00**	**219,000.00**

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total($)
Total GEF Resources					**0.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
CCA-1-1	LDCF	8,932,420.00	63000000
Total Project Cost		**8,932,420.00**	**63,000,000.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
GEF Agency	UNDP	Grant	Investment mobilized	2000000

Recipient Country Government	Government of Comoros (DGEF)	Grant	Investment mobilized	61000000
Total Co-financing				**63,000,000.00**

Describe how any "Investment Mobilized" was identified

The UNDP cofinance is from its TRAC resources. From the Government of Comoros, the investment has been mobilized through a GCF-funded project (of which 41 million is from GCF) and the difference is cofinanced by the Government and other partners.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Nancy Bennet (Officer-in-Charge)	3/19/2024			nancy.bennet@undp.org
Project Coordinator	Mulengera Bahal'okwibale	3/19/2024			mulengera.bahalokwibale@undp.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

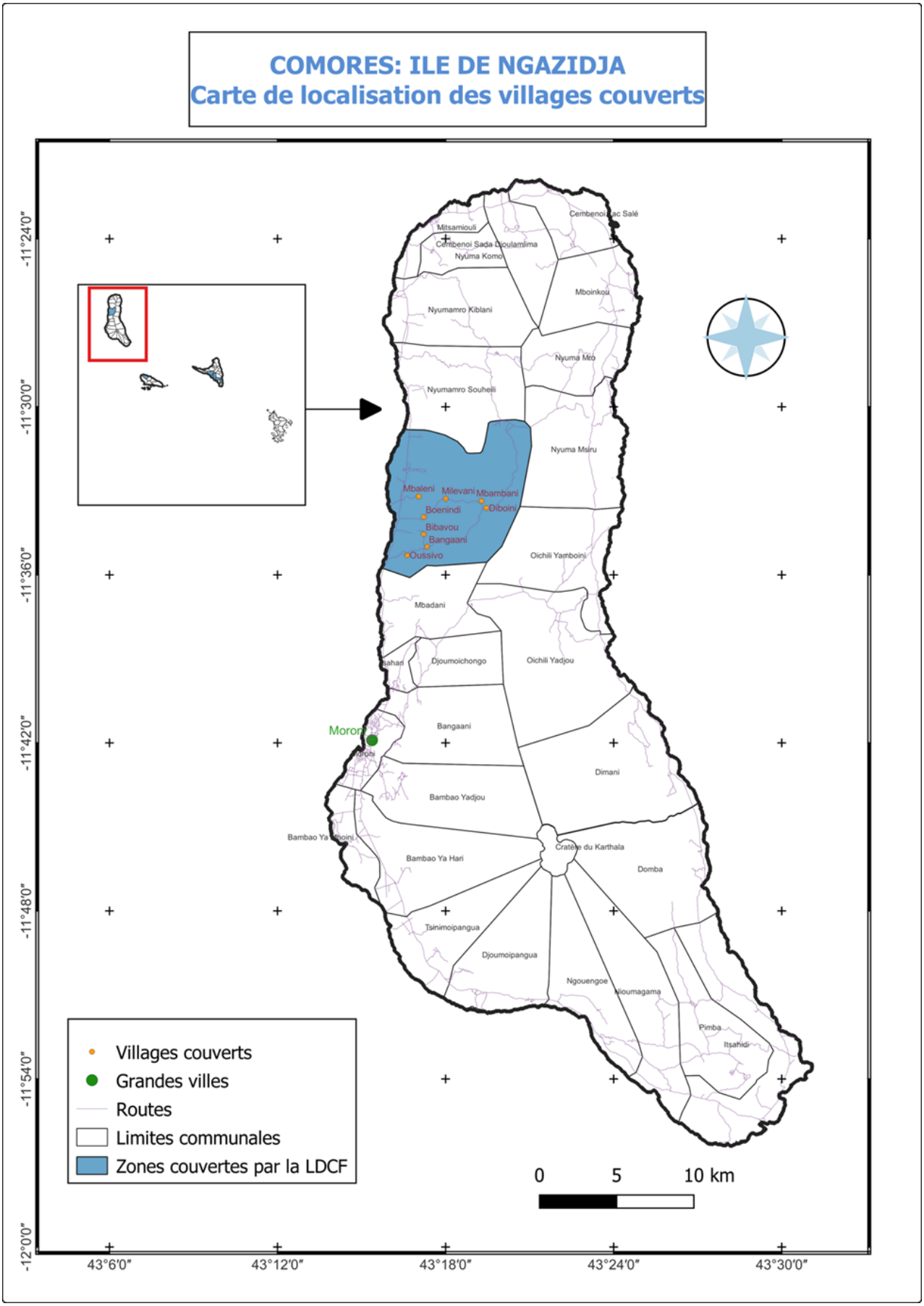
Name	Position	Ministry	Date (MM/DD/YYYY)
Youssouf Elamine	GEF Operational Focal Point and Director of Environment and Forests	Ministere de l'Agriculture , de la Peche et de l'Environnement, du Tourisme et de l'Artisanat	4/24/2024

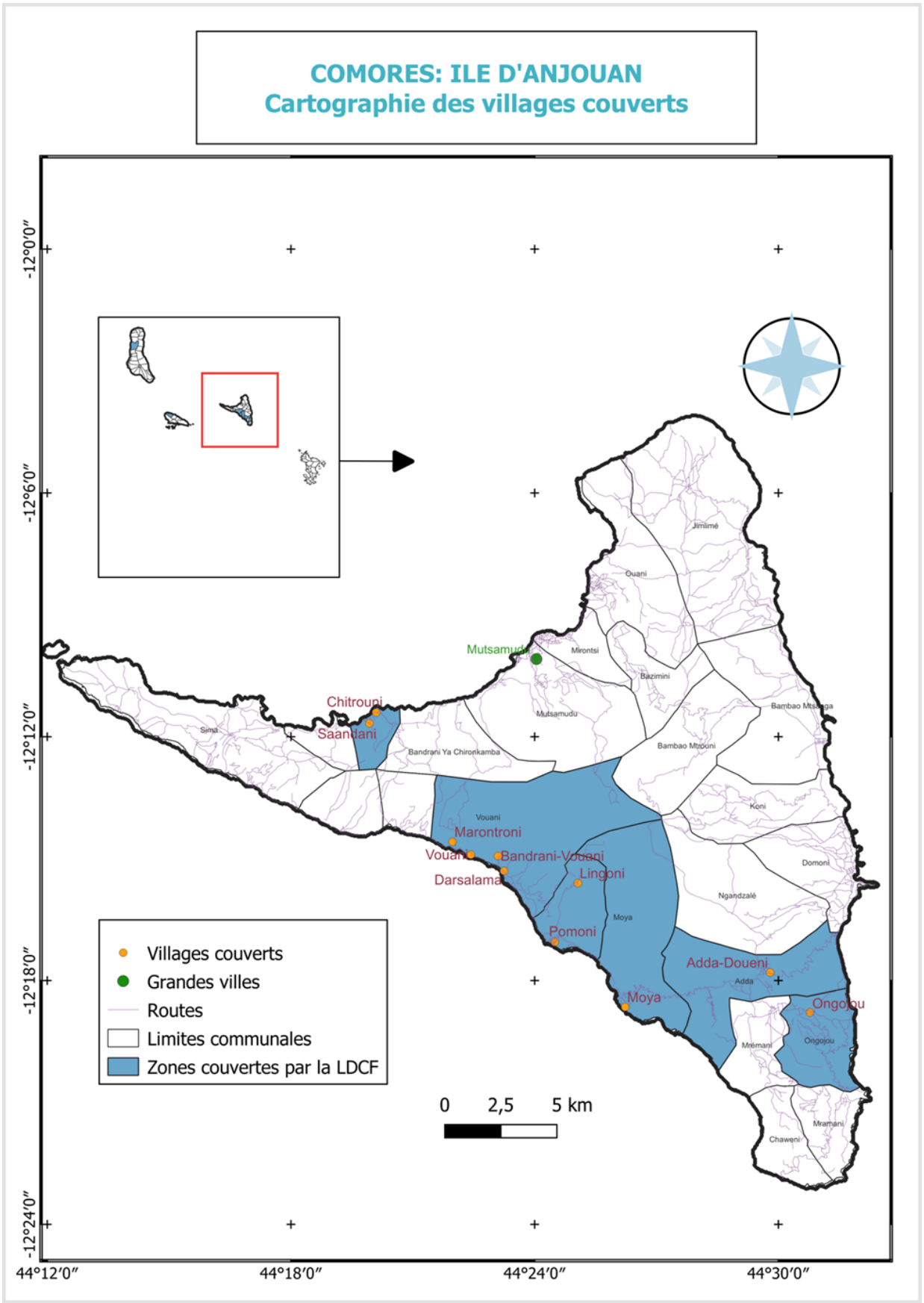
ANNEX C: PROJECT LOCATION

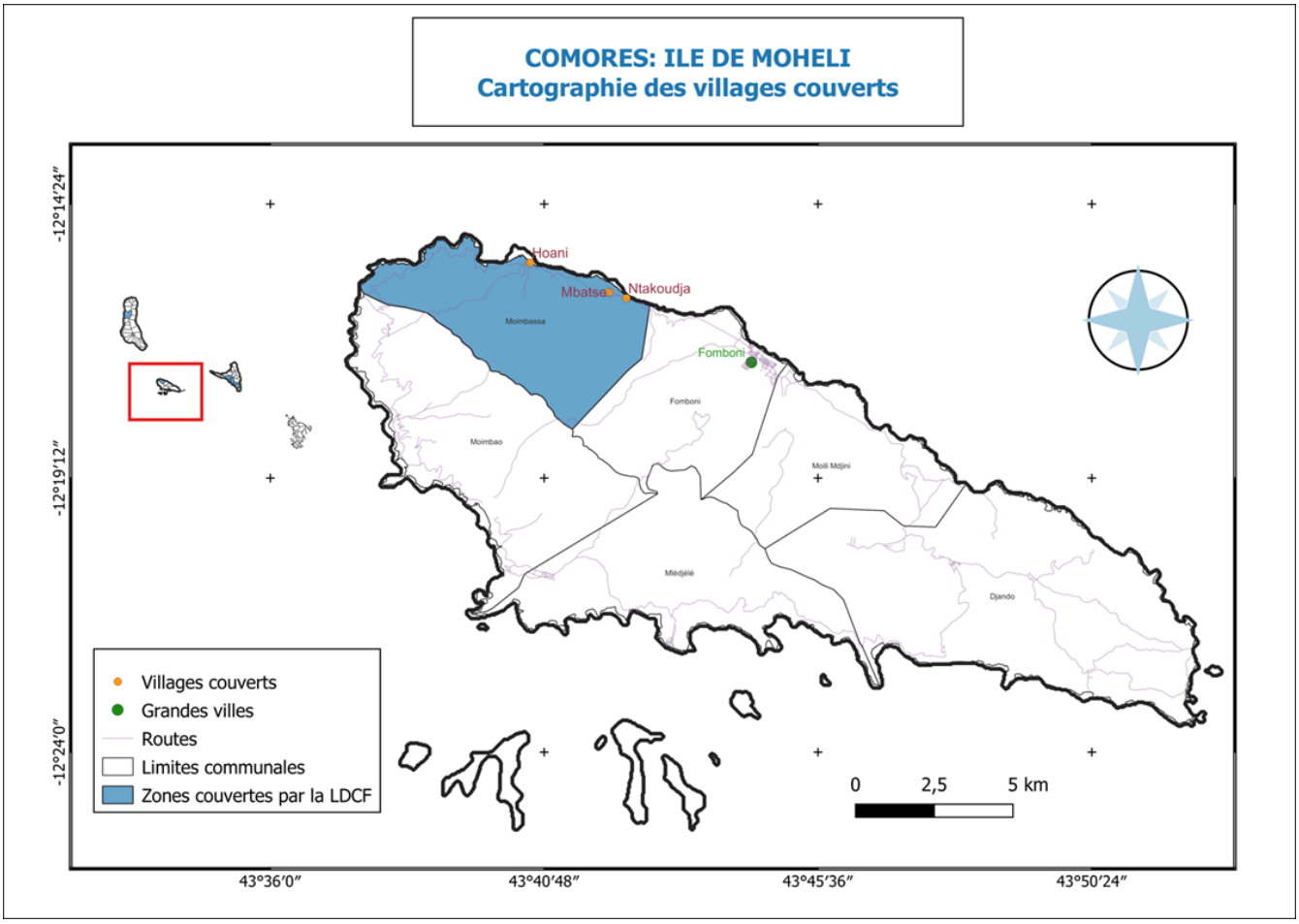
Please provide geo-referenced information and map where the project interventions will take place

The maps of project sites are indicated below.

Geolocation coordinates are as follows:


COMORES: ILE DE NGAZIDJA
Carte de localisation des villages couverts
Mitsamiouli
Nyuma Komo
Mboinkou
Nyumamro Kiblani
Nyuma Mro
Nyumamro Souheili
Nyuma Msiru
Mbaleni
Milevani
Mbambani
Diboini
Boenindi
Bibavou
Bangaani
Oussivo
Oichili Yamboini
Mbadani
Djoumoichongo
Oichili Yadjou
Moroni
Bangaani
Dimani
Bambao Yadjou
Bambao Ya Hari
Domba
Tsinimoipangua
Djoumoipangua
Ngouengoe
Pimba
Itsahidi
Villages couverts
Grandes villes
Routes
Limites communales
Zones couvertes par la LDCF
0
5
10 km
-11°24'0"
-11°30'0"
-11°36'0"
-11°42'0"
-11°48'0"
-11°54'0"
-12°0'0"
43°6'0"
43°12'0"
43°18'0"
43°24'0"
43°30'0"


COMORES: ILE D'ANJOUAN
Cartographie des villages couverts
-12°0'0"
-12°6'0"
-12°12'0"
-12°18'0"
-12°24'0"
44°12'0"
44°18'0"
44°24'0"
44°30'0"
Mutsamudu
Chitrouni
Saandani
Marontroni
Vouani
Bandrani-Vouani
Darsalama
Lingoni
Pomoni
Moya
Adda-Doueni
Ongojou
Villages couverts
Grandes villes
Routes
Limites communales
Zones couvertes par la LDCF
0 2,5 5 km
Jimilimé
Ouani
Mirontsi
Bazimini
Bambao Mtsanga
Bambao Mtrouni
Koni
Domoni
Ngandzalé
Adda
Mréman
Mramani
Chaweni
Sima
Bandrani Ya Chironkamba



Island	Sites/villages	Locations
Ngazidja	Bangahani,	11°34'51'S 43°17'27'E
	Bibavou,	11°34'32'S 43°17'32'E
	Bouenindi,	11°33'58'S 43°17'13'E
	Diboini,	11°33'02'S 43°20'35'E
	Mbaléni,	11°32'39'S 43°16'28'E
	Mbamban,	11°51'09'S 43°20'31'E
	Milevani,	11°33'17'S 43°17'58'E
	Oussipvo	11°35'17'S 43°16'36'E
Anjouan	Bandrani	12°11'39'S 44°20'30'E
	Moya et Nioumakélé Haut	12°18'27'S 44°26'17'E
Moheli	Mbatsé, Ntakoudja, Hoani	12°16'04'S 43°42'05'E

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title
PIMS_9720-Comoros_clean_ SES

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	Principal Objective 2	No Contribution 0	No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4
Influencing Models			
		Individuals/entrepreneurs	
		Community Based Organisation	
		Non-Governmental Organisation	
		Information Dissemination	
		Partnership	
	Communications	Consultation	
		Participation	
		Awareness-raising	
Capacity, Knowledge and Research		Knowledge Management	
		Capacity Development	
		Adaptive management	
		Knowledge management	
		Theory of change	
	Knowledge and Learning		
Gender Equality		Beneficiaries	
		Women groups	
		Access to benefits and services	
		Participation and leadership	
		Capacity development	
Focal Areas/Theme			Land productivity
		Climate Change Adaptation	Least developed countries
			Climate resilience
			Ecosystem-based Adaptation
			Community-based adaptation
			Livelihoods

	Climate change Adaptation 1		